KING CEASOR UNIVERSITY

ASSESSMENT OF HEALTH STAFF RESPONSE TO PHYSICAL TRAUMA PATIENTS IN UGANDA A CASE OF MULAGO NATIONAL REFERRAL HOSPITAL

BY

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DECLARATION

I, **REBECCA FRIDAY**, hereby declare that this research proposal is my original work and has not been submitted before for any academic award either in this or other institutions of higher learning for academic publication or any other purpose. The references used here from other journals or materials are indicated in the referenced section

REBECCA FRIDAY

SIGNATURE…… DATE……25…/…03…/2024



DEDICATION

This study is wholeheartedly dedicated to my beloved parents Mr. Jackson Baturwa and the late Mrs. Ruth Baturwa and who have been my source of inspiration and gave me the strength whenever I thought of giving up, continually provided their moral, spiritual, emotional and financial support.

To my Lecturers, friends and classmates who shared their words of advice and encouragement to finish this study.

Lastly, I dedicate this dissertation to the Almighty GOD, thank you for the guidance, strength, power of mind, protection and skills and for giving me a healthy life.

APPROVAL

I acknowledge that, this research proposal titled "Assessment of health staff response to physical trauma patients in Uganda" has been compiled by Rebecca Friday, a student at King Ceasor University, registration number 2021AP/BNS/1135 and is ready for submission

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LIST OF ABBREVIATIONS

CT scans	Computed Tomography Scan
PET scan	Positron Emission Tomography
EMTs	Emergency Medical Technician
LMICs	Low and Middle Income Countries
VICOBA	Village Community Banking
ABCDE	Airway, Breathing, Circulation, Disability and Exposure
RTAs	Road Traffic Accidents
MNRH	Mulago National Referral Hospital
MO	Medical Officer
NO	Nursing Officer
R/N	Registered Nurse
E/N	Enrolled Nurse
ICU	Intensive Care Unit
PT	Physical Therapist
OT	Occupational Therapist
ROM	Range Of Motion
T/W	Trauma Ward
APA	American Psychiatric Association
SPSS	Statistical Package for the Social Sciences
MoH	Ministry of Health
WHO	World Health Organization

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DEFINITION OF TERMS

Trauma: This is an emotional response to a terrible event like an accident, rape, or natural disaster

Physical trauma: This is a serious injury to the body

Blunt force trauma: This is when an object or force strikes the body, often causing concussion, deep cuts or broken bones

Penetrating trauma: This is when an object pierces the skin or body usually creating an open wound.

Emergency Medical Technician: Is medical personnel who first responds to the patient to perform the initial examination and assess the impact and easily locate the injured site and also predict the kind of physical trauma.

Injury: This is damage to your body and can be cause by accidents, falls, hits, weapons and more.

Brain Injury: this is the damage to the brain tissue caused by an external force resulting into loss of consciousness like amnesia and coma.

Concussion: this is the temporary unconsciousness resulting in confusion, altered mental state or other effects from a blow to the head or a sudden jolt of the head.

CT scan/ Computerized Axial Tomography: a series of X-rays taken at different levels of the body

Physiotherapy: This helps to restore movement and functioning when someone is affected by injury.

Whiplash injury: an injury to the neck from a violent back and forth movement of the head and neck such as in a rear end car collision.

Mortality rate: this is the proportion of deaths to the population

Rehabilitation: these are services that seek to return a trauma patient to the fullest physical and psychological level of functioning.

ABSTRACT

Physical trauma being a leading cause of disability and mortality worldwide, data characterizing the response of health staff towards physical trauma patients in Uganda is limited. This study aims to characterize the responses of health workers towards physical trauma patients presenting to Mulago National Referral Hospital (MNRH) in order to identify opportunities for quality improvement and policy development. The study used a cross-sectional survey design and 96 questionnaires were administered to both health staff and patients to collect data and SPSS was used to analyze the data. The response rate was 92.7% and 7.3% as the non-response rate. From November 2023 to March 2024, data was prospectively captured on injured patients and health workers using a properly designed questionnaire and also conducted some interviews. Information was analyzed in line with the three objectives which were;

i) To find out the impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital.

ii) To find out the responses of health staff towards physical trauma patients at Mulago National Referral Hospital in Uganda.

iii) To find out the consequences faced by patients due to physical trauma at Mulago National Referral Hospital at the Trauma ward.

Descriptive and bivariate statistical analyses were conducted. A total of 89 respondents were chosen of which 63 injured patients were treated during the study period by 23 health workers. The study established that majority of the respondents were male (59.6%), the occupation most affected by physical trauma injuries were students (33.7%)and people within the age group of 30-40 years at 29.2%. The health workers gave first aid to patients on arrival to the hospital and recommend a professional in case of a serious injury. It was also found out that the medical equipments used in the treatment and care of the victims are not enough. 88.4% of the health workers offer counseling services to the patients who obtain any type of disability and also 76.9% do not follow up on the patients after discharging them. Falls (44.4%) and road traffic injuries (RTIs, 31.7%) were the leading causes of injury. Over three quarters (71.4%) of all patients had a temporary disability. The lower body extremities were the most recorded body injuries at 55.6%

followed upper body extremities (30.2%) and the head/neck and face at 14.3%. And it took about 30 minutes to one hour for most patients to arrive to the hospital where ambulances were used to transport severely injured victims and motorcycles (68.3%)were the most used to arrive to the hospital. In Uganda, there is a significant need for injury prevention efforts to protect vulnerable populations such as children and women from physical trauma on roads/streets and in the home. Specialized professionals like Orthopedics and neurosurgeons are important targets for the strengthening of health systems. The comprehensive data provided by the researcher will continue to inform such efforts and provide a way to monitor their progress moving forward.

Key Words: ***Physical trauma, Health worker responses, Injury prevention***

CHAPTER ONE: GENERAL INTRODUCTION

1.0 Introduction

This chapter consists of; the background of the study, problem statement, rationale of the study, significance of the study, objectives of the study, research questions, conceptual frame work, scope and the significance of the study.

1.1 Background of the study

According to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), trauma is defined as when an individual person is exposed "to actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association [APA], 2013).

"Trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects on the individual's functioning and physical, social, emotional, or spiritual well-being" (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012).

In medical term, "physical trauma" refers to a severe and often life-threatening injury that suddenly develops when the entire body or a part of it has been hit by a blunt object or due to sudden impact. This kind of injury is dangerous since the body can go into systemic shock, and vital organs can easily shut down rapidly. Thus, medical intervention is not only necessary but must also be given in a timely manner to improve the chances of the patient surviving the condition.

Traumatic injuries are currently responsible for more than 120,000 deaths annually and blamed for over 80% and 60% of teen and childhood deaths, respectively. More than 50 million injuries per year, meanwhile, are classified as traumatic, and half of them are serious enough to require hospitalization.
Aside from coma or death, trauma can also leave a patient disabled, as in the case of around 8 million people worldwide. (docdoc, 2020)

There are many different types of physical trauma and are classified according to the body parts that have been affected and the extent of the condition. Some of the most common ones are injuries

to the brain, spine, abdomen, and chest. They may also be categorized as closed or penetrating. The injury is considered closed when the trauma happens inside the body. For instance, a traumatic brain injury can develop due blunt force trauma to the head. On the other hand, it's considered as penetrating such as in the case of a stab wound with a knife or scissor.
Fractures and burns are also traumatic injuries, as well as contusions, especially when they affect vital organs such as the heart.

One of the biggest dangers of physical trauma is that it doesn't always show any outward symptom. It's possible that the person looks fine on the outside but is already suffering from internal bleeding or organ damage on the inside.
Although the traumatic injury itself happens suddenly, symptoms may take a while to manifest. By then, however, the damage has already become significant, making the treatment more difficult and complicated as well as less effective.
First responders such as EMTs perform the initial examination in a case of trauma. With the goal to quickly assess the cause and nature of the impact, these medical professionals are trained to multitask to easily locate the injured site, predict the kind of physical trauma, take vital signs, and in some cases, revive the patient.
If the patient has been revived or if the condition has been stabilized, the team of EMTs will bring the patient to the emergency room or trauma Centre where the patient can receive immediate treatment. A trauma center is a special unit in health care facilities that is fully equipped to conduct a wide variety of tests including imaging using X-ray, CT scan, and PET scan and in handling different types of traumatic injuries, from brain to burns and fractures.
Different types of physical trauma require the specialty of different doctors. For instance, a fracture requires an orthopedic specialist while an injury to the brain requires a neurologist. For this reason, trauma Centres are composed of a group of medical professionals who are specializing in different fields.
The main goal of doctors is to keep the vitals of the patient as stable as possible.

If there's massive blood loss, blood transfusion must be carried out as soon as possible. Internal bleeding can be handled by opening the site and closing the wound. Certain medications can also be provided to release excess fluid or prevent seizures as in the case of a brain injury.

When the injuries are severe, it's common for doctors to place the patient in an induced coma. In this procedure, the brain function is essentially shut down to give it enough time to heal properly. At this point, the vital signs of the patient are closely monitored using the machines attached. Any succeeding treatments including surgeries will be provided once the patient's condition has stabilized.

Physical Traumatic injuries happen for many reasons and some of the most common are; Falls, Accidents, Blunt force trauma to the head or anywhere in the body, Burns and Stab wounds
If the injury is severe, the organs tend to shut down. This is the body's natural mechanism of defending these organs. They try to keep as much of the energy as possible in order for the body to heal. However, blood loss, among other factors, can complicate the recovery process, and thus, immediate medical intervention is strongly needed.

1.2 Problem statement

Trauma is a leading cause of morbidity and mortality worldwide. Data characterizing the burden of injury in rural Uganda is limited. Hospital-based trauma registries are a critical tool in illustrating injury patterns and clinical outcomes. In rural Uganda, there is a significant need for injury prevention efforts to protect vulnerable populations such as children and women from trauma on roads and in the home. Orthopedic and neurosurgical care are important targets for the strengthening of health systems. The comprehensive data provided by a trauma registry will continue to inform such efforts and provide a way to monitor their progress moving forward. (One, 2021)

The most common mechanisms of injury were falls (35.7%) and road traffic injuries (RTIs; 34.9%). Penetrating mechanisms including stabbing/cuts, animal bites, and gunshot wounds were relatively infrequent (6.8%). Falls were significantly more common among women ($p < 0.001$) and patients age 0–19 ($p < 0.001$), while RTIs were significantly more common among men ($p < 0.001$) (Fig 1). Most injuries occurred at home (46.8%) or on roads/streets (40.9%), and they were predominantly unintentional (81.9%). Mob justice was a factor in just 1% of cases (One, 2021)

During the first six months of the study period, the registry recorded an average of 265 patients per month, for a total 1592 patients (38.7% of the entire study population). Rates of data capture over months 7–12 were 134 patients per month, or 805 total (19.6% of the total population). The registry recorded 102 patients per month, or 1224 total (29.8% of the total population) in months 13–24, and 54 patients per month, or 488 total (11.9% of the total population) in months 25–34. (One, 2021)

This study demonstrated the significant burden of trauma in patients seeking care at SRRH, as well as the effectiveness of a prospective trauma registry in documenting trends of injury over time. Primary data regarding the causes of trauma, its associated risk factors, and subsequent therapies are vital components in the strengthening of health systems in LMIC settings. The detailed examination of local epidemiology provided by this study highlights the potential of hospital-based registries to guide injury prevention and quality improvement efforts throughout sub-Saharan Africa. (One, 2021)

Study shows that injuries are an important public health problem in Kenya. This is the first national study in Kenya that explores the risk factors for injuries thereby providing valuable information for targeted prevention initiatives. The information from this study speaks to both policy makers and the public on the significant injury burden in the country. Priority accorded to injury prevention and control remains low with weak national institutional frameworks as in most developing countries that are experiencing a triple burden of physical trauma. Our data supports the need for multiple interventions including actions outside the health sector that are needed to reduce the injury burden in the country. Continued monitoring and enhanced research on injuries are key strategies that should be employed in addressing the injury problem in the country. (Gladwell Koku Gathecha, 2018)

Little is known about injured patients who require hospitalization in Uganda. No data are available regarding the surgical needs and outcomes of injured patients in this setting. Mulago National Referral Hospital is government-run with 1500 bed tertiary care facility that has the only 24-hour public emergency unit for trauma in Kampala and treats approximately 6000 injured patients every

year from the city's population of 3.6 million. This study aims to assess the response of health staff towards needs of physical trauma patients who are admitted to Mulago Hospital.

1.3 Rationale of the study

Globally, trauma is a major contributor to mortality and morbidity with a notable difference between low income countries and high to moderate income countries. The modality of trauma differs globally; however the most notable cause is pedestrian versus vehicle and road traffic collision respectively. It is imperative that patients who have sustained a traumatic injury are managed in an appropriate manner. (Parker & Magnusson, 2016)

Global terrorist activities have increased significantly over the past decade. The impact of terrorism-related trauma on the health of individuals in low- and middle-income countries is under-reported. Trauma management in African countries in particular is uncoordinated, with little or no infrastructure to cater for emergency surgical needs. This article highlights the need for education, training and research to mitigate the problems related to terrorism and surgical public health. (Maryam Alfa-Wali, 2015)

The response of health workers towards physical trauma patients is not only vital but it promotes awareness to the general public where the citizens can administer first aid to the physical trauma victims before the ambulance arrives and they are admitted to the trauma ward. This will also sensitize the health workers including nurses, physiotherapists and psychologists about the need to support physical trauma patients all the way to post- trauma period.

Therefore, this study shall explore the roles of the health workers during the assessment of physical trauma patients and the results will create awareness to the individuals, caretakers, health workers and the communities on how to act when they encounter a victim due to accidents, domestic abuse or any other incident that can cause physical to injury to a person.

Findings of this study will help policy makers and health workers to find solutions to mitigate barriers affecting their response towards physical trauma patients. The study will provide a platform for further studies on the participation of the assessment of physical trauma among patients and the response of the health staff.

1.4 Objectives of the study

1.4.1 Main objective

To investigate the assessment of health staff response towards physical trauma patients in Uganda at Mulago National Referral Hospital.

1.4.2 Specific objectives

i) To find out the impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital.

ii) To find out the responses of health staff towards physical trauma patients at Mulago National Referral Hospital in Uganda.

iii) To find out the consequences faced by patients due to physical trauma at Mulago National Referral Hospital at the Trauma ward.

1.5 Research questions

1. What is the impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital?
2. What are the responses of the health staff towards physical trauma patients in Uganda?
3. What are the consequences faced by patients due to physical trauma at Mulago National Referral Hospital?

1.6 Significance of the study

1) The research contributed to existing knowledge of other researchers and opened up areas of discussion on various issues of physical trauma among patients and responses of the health workers.
2) People in the academia are also beneficiaries of the findings of the study as the study added up to the existing stock of literature on physical trauma.
3) The study contributed knowledge on how to sensitize the general public with first aid response to victims who are injured.

4) This study greatly assisted the MoH as well as the DHO and the health workers at the health center to restructure their services appropriately and ensure adequate facilitation of the hospital with equipments that can be used by physical trauma patients.
5) The study was used as partial fulfillment for the award of Bachelor's Degree in Nursing Science for the researcher.

1.7 CONCEPTUAL FRAME WORK

Figure 1: Conceptual frame work

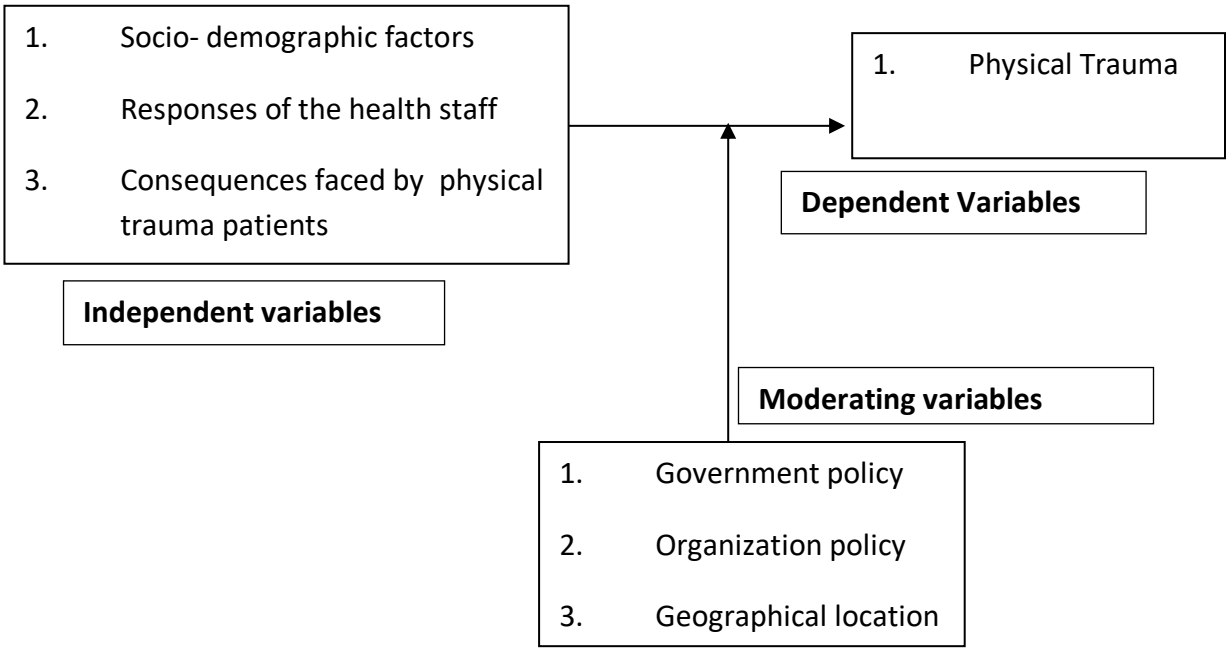


Figure 1 provides a conceptual framework relating to Physical trauma and the responses of health staff towards the physical trauma patients.

The independent variable being;

- Socio demographic factors like age, gender, education, employment position, length of service and occupation.
- Responses of the health staff towards the physical trauma patients.
- Consequences faced by patients due to physical trauma.

Moderating variables like Government policies, organizational policies and geographical location.

The dependent variable in the study is “PHYSICAL TRAUMA”. All conceptualized to have an effect on the responses of the health staff towards the physical trauma patients.

1.8 Scope of the study

1.8.1 Geographical scope

The study was conducted at Mulago National Referral Hospital located in Hospital Zone Village, in Mulago I Parish, Kawempe Division Sub County, in Kampala District, Central Uganda.

1.8.2 Subject scope

The study was focused on finding out physical trauma among patients and the responses of health staff in Uganda.

1.8.3 Time scope

The research and study started in November 2023 and ended in March 2024.

CHAPTER TWO: LITERATURE REVIEW

This chapter outlays the literature review done by other researchers and also from journals and conference materials and mostly the internet.

2.0 Literature Review

2.1 The impact of physical trauma on the socio-demographic characteristics of patients

Traumas are ranked fifth among the causes of death in patients over the age of 65 (Spaite, John, Elizabeth, & Valenzuela, 2010)Geriatric patients are more prone to risk of trauma due to age-related motor and cognitive impairments as well as the more active lives they nowadays lead (Michael, J, K, & C, 2019)Even minor traumas can cause severe injuries in geriatric patients, and when compared with other age groups, the mortality and morbidity rates are higher (Goris, 2016).

Children incur trauma frequently from various causes. Although children are also affected by road traffic accidents and falls common causes of trauma in this group for rural and semi-urban regions is burns. Most of the burn injuries to children in these regions happens in the kitchen during cooking but may occur in other activities. There are also accounts of children falling from poorly constructed balconies and windows of which the majority dies and the remaining suffering serious injuries with potential for a long-term disability. (Grivna, 2017)

Although every job entails some risk of injury, the magnitude of risk varies widely across jobs, sectors, geographical regions and individuals. Occupation injury rates have been rising in low and middle- income countries but declining in high income countries like Australia, Western Europe where temporary work and other forms of flexible employment have risen including contingent work, home based work, part time contracts, unregulated work and nontraditional work. (Abdalla, Apramian, F, & Cullen, 2015)

As for the road accidents, men are the most affected as compared to women. Most especially the motorcyclists (boda boda men) who are well known for their reckless driving and causing chaos on traffic. And still motorcyclists and drivers are stabbed, gunshot most especially at night when thieves steal their motorcycles. (Kamulegeya, 2015)

As a whole, women do not go through traumatic experiences more often than men. In fact, men have a slightly higher risk for lifetime trauma exposure. However, women are disproportionately affected by certain kinds of trauma such as sexual assault, as adults or children and domestic abuse. Traumatic experiences such as these often have a particular damaging long term effect and it explains why women have heightened post-traumatic stress disorder (PTSD) risks. For every man with PTSD, two women are affected. (WOMEN'S RECOVERY, 2021)

Though rarely reported, physical trauma remains one of the major causes of mortality and disability in the rural and semi-urban regions of the low and middle income countries (LIMCs). Unlike in the high income countries, where most occupational injuries happen in the formal sector and transportation, trauma in LMICs particularly rural regions occurs in informal occupations that are seldom monitored by occupational health laws and regulations. For example, a majority of the working class in the developing rural regions are informally self-employed in agricultural and entrepreneurship activities that are not governed by any occupational health and safety regulations. It can fairly be perceived that there are more factors for physical trauma in LMICs, as compared with developed regions, and so prevention is multifarious. (Haleluya, 2018)

2.2 The responses of the health staff towards physical trauma patients

There is evidence that pre-hospital mortality can be reduced significantly by good emergency services following trauma which includes first aid and timely and safe transport to health facility. (Henry & Reingold, 2014). In most countries, reporting and life supporting systems to sustain the injured person and transportation to health facility are unreliable and indeterminate (Mulwafu, 2017). It is common for injured person in rural and semi-urban regions of the country to be handled haphazardly at the trauma scene and transported by laypersons to the health facility by any means possible. In this way, there is a significant delay to get to a health facility and increased risk of secondary trauma and mortality. In most cases, an injured person is given what is regarded as “first aid” by laypersons who happened to be at the incident scene. While such effort to save life is with good intention, this could be of more harm than helpful especially when handling delicate cases such as severe visceral, chest, head, and spinal cord injuries. Noting this danger, some programs to train laypersons on assisting and transporting a trauma victim have yielded convincing results (Callese, 2014)

While training civilians to help trauma victims seems to be the best option for countries where emergency services are immature or unavailable, there are still issues on the package of training and the population coverage. Trauma varies in type, severity, and complexity of management. Even with good training on basic life support to laypersons, it would be difficult to major life threatening injuries such as those involving head, pelvis, and multiple viscera. Another limitation is that such training of skills requires practical session which may not be that feasible to a big group of learners (population).

Furthermore, basic tools and equipment necessary for evacuation, first aid, and transportation of injured person are normally not readily available to complement the acquired knowledge and skills. For this reason, there ought to be a political will to facilitate not only the acquisition of basic knowledge and skills to manage a trauma victim, but also sustainable provision of basic tools for such a task. One useful approach would be inclusion of such information and skills training in school curriculums simultaneously with provision of practical tools. This will to create awareness and orient children with skills for safe handling of an injured person at basic level. This also means that elementary school teachers and school environment will be equipped to deliver such education and skills. There are other opportunities in the country to train laypersons on this regard. For example, women cell groups, village community banking (VICOBA) meetings, and faith based gatherings such as churches and mosques. However, as civilian services are hardly standardized and rarely sustainable, governments should be encouraged to plan for paramedic services which will ensure that a seriously injured person is handled by well trained personnel from incident scene.

Health staff's knowledge of emergency care of road traffic accident victims and on asking participants when they would suspect a spinal cord injury, a large proportion responded incorrectly citing multiple trauma. In response to a question whether a victim is severely injured, the majority of participants correctly reported that the victim would not be awake, would not follow commands and have a change in heartbeat. (Busisiwe, Nshutiyukuri, & Gishoma, 2020)

To recognize whether the victim is breathing, a large majority correctly reported that they would check if the chest is moving up and down. A large majority reported correctly that rapid pulse would let them know if the victim had circulatory shock. ABCDE (Airway, Breathing, Circulation,

Disability and Exposure) was reported correctly by the majority as what to assess during quick assessment of the injured victim of RTA.

Nurses were asked to identify some equipment used in an emergency and their usage from the pictures. The majority identified correctly the hard board used to support the back when injured while few were unable to name it called it a ‘hand band'. Among them reported the purpose of the hard board correctly. The majority identified the cervical collar correctly while few were not able to name it. A large majority reported that this equipment (cervical collar) is used to support the neck when injured, while others reported that the equipment is used for neck weakness. A big majority identified the oxygen cylinder correctly. The total of participants reported correctly that it is used to assist breathing by giving oxygen. The vast majority identified a bag valve mask correctly and reported correctly that it is used to assist breathing, a big percentage identified the oropharyngeal airway correctly knew its use as for avoiding the tongue blocking the respiratory airways. (Busisiwe, Nshutiyukuri, & Gishoma, 2020)

Head injury was the clinical diagnosis most associated with death in the study population. Contributing factors in SRRH include associated injury severity, the absence of diagnostic capabilities beyond X-ray, and a lack of local neurosurgical specialists. Patients suffering any significant injury to the brain or spinal cord in Soroti are typically transferred to Mulago Hospital, the national tertiary care center located more than six hours away, where mortality rates associated with traumatic brain injury have been found to reach up to 55%.A recent review of trauma registry data generated across five hospitals in the neighboring country of Tanzania, where access to specialized neurosurgical care is similarly restricted to a single national center, noted that intracranial injury accounted for over 80% of all trauma-related deaths. (One, 2021)

This study highlighted major challenges in the delivery of trauma care services across Kabul, Afghanistan. Systematic improvement in the workforce training, structural organization of the trauma care system and implementing externally validated clinical guidelines for trauma management could possibly enhance the functions of the existing trauma care services. However, an integrated state-run trauma care system will address the current burden of traumatic injury more effectively within the wider healthcare system of Afghanistan. (Umerdad Khudadad, 2020)

2.3 Consequences faced by patients due to physical trauma

Trauma is costly in terms of evacuation, transportation, and management, and it is even worse when the individual has to remain permanently disabled. In the LMICs, this cost is normally borne by the individual and or immediate family as most countries have weak social support for a disabled person. Bearing in mind that rural and semi-urban regions of the country are residences for the poorest, this cost is unbearable in most cases. This unmet cost could explain the reported unavailability and unaffordability of transport services for trauma victims in these regions (Mowafi, 2016)Delays and mismanagement of a traumatized person due to lack of appropriate equipment adds to the risk of secondary injury and death. Poorly managed and or rehabilitated victim of any physical trauma is at higher risk of health complications, dependency and in the worst case scenario, death.

Injuries resulting from traumatic forces may recover fully or leave the individual with either a temporary or permanent disability. Of these three possible outcomes, permanent disability is most costly to the individual and immediate family. This cost is due to the fact that persons with permanent disability require health-sustaining and rehabilitation services including assistive devices throughout life. Such devices are necessary for them to carry out activities of daily living, pursue a career, and engage in their communities. (Thrush & Hyder, 2014)

2.3 Physical trauma injuries

Causes of physical trauma in the rural and semi-urban regions are as diverse as the diversity in geographical, cultural, and socioeconomic features of these areas. For this reason, even within the same country, strategies to prevent and manage physical trauma ought to consider these variations. Furthermore, rural traumatic causes of physical injuries are significantly different from those dominating big cities even though they may be in the same country. For example, activities that involve climbing trees (from which one may fall) or working in the farmyard, hence a risk of being bitten by venomous insects or animals, are rare in big towns and cities of the high income countries but common in rural areas. Furthermore, individuals living in these regions continuously face danger of being attacked by either a domestic or wild animals which may charge and cause injuries. In one study in Ethiopia, both hospitalized and non-hospitalized persons who had suffered a dog

bite were enrolled, and it was shown that more than 655 persons had suffered such injuries in a period of 1 year only (Beyene, 2018).

Furthermore, environmental and socioeconomic activities that add to the risk of trauma to the inhabitants of the rural areas are living in unsafe buildings, cooking in open fires, frequent head loading, working with sharp cutting objects, and working up or under trees. Head loading is the act of carrying heavy load on the head as means of transferring objects over a considerable distance. Head loading is a very common act among LMICs rural inhabitants in their crucial attempt to collect water, firewood, cattle feed, and crops to the homes or market place. In one of the centers for rehabilitation for persons who are paralyzed in Bangladesh, it was shown that for 3 years at least 84 persons had suffered cervical spinal cord injury as a result of falling while carrying heavy load on the head (Hoque, 2012).

Road traffic accidents are reported to be the leading cause of trauma and death globally due to the resulting fatal injuries, worse in most parts of urban areas. A novel cohort study carried out in sub-Saharan Africa reported that most of serious injuries in rural and semi-urban regions were due to road traffic accidents (Diamond, 2018)

Violence of any scale in which force and weapons are involved leads to enormous physical injuries and death. LMICs are disproportionally affected by armed conflicts due to rivalry between particular ethnic groups within or between countries. Although armed conflicts and wars are global, such incidents are predominantly more pronounced in the LMICs though now days even developed countries are having high rates due to low gun enforcement laws thus school shootings. (Haleluya, 2018)

Other causes of trauma are less common when compared to road traffic accidents and falls but are of a relatively high incidence in the low and middle than in the high income countries. These other causes include; burns, assaults (either by human or animals), being fallen over by heavy load such as injuries due to a collapse of a wall, tree, or landslide. These causes make a big distinct epidemiological difference between LMICs and high income countries. Burns are among the most common cause of severe injuries, mortality, and disability which affects children than adults.

In contrast, patients stated that feelings of helplessness and being dependent of others were difficult experiences to cope with. Especially severely injured patients discussed that they were motivation to recover, because they wanted to be autonomous instead of feeling helpless. Cognitive dysfunction resulted in problems with resumption of work. To deal with psychological consequences (e.g., anxiety, changes in subjective personality, and cognitive dysfunction, some patients described to use an avoidance coping strategy during hospitalization and/or rehabilitation. As they avoided trauma-related physical activities, they had a fear of falling. Patients tended to tone down the impact of their trauma by thinking: 'It is just an injury'. However, looking back on the trauma procedure, they acknowledged that they should not underestimate the impact of their trauma. (ONE, 2021).

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that shall be used during the study. It involves the research design, study population, sample size and selection, sampling techniques, data collection methods, data collection instruments, procedure of data collection, reliability and validity of instruments, data analysis and ethical considerations.

3.1 Study size

The study consisted of patients and health staff of Mulago National Referral Hospital mainly at the trauma ward.

The study size consisted of 96 people that represented the required population.

3.2 Sample size Determination

The sample size was determined using Kish and Leslie's formula, which states that;

Sample size **n= K/I + K/N**

Where N is the study population

$K= z^2pq/d^2$

Where z= confidence level (1.96)

P= proportion of population at risk considered by this study to be 20%

q= percentage of population of which the characteristics is not known (100-p=80%)

d= precision or minimum error that can be tolerated (0.08). However, where N is infinite k=n therefore,

$n=k = [1.96^2 *(0.5)*(1-0.5)]/0.1^2=96$

(Kish & Leslie, 1965)

The sample size therefore was 96 both clients and health staff.

3.3 Sampling procedure

A systematic sampling technique was used to select respondents; the researcher counted four clients then interviewed every fifth one. Thus the researcher selected respondents from different

levels, such as management and medical staff in the wards, patients and their care takers like relatives and friends who were consulted in the study.

3.4 Research Design

An explanatory research design refers to an analytical research design that aims at identifying the casual links between the variables that pertain to the research problem**.**

A descriptive cross sectional survey design involving quantitative and qualitative methods of data collection was employed. The researcher used survey to collect information from respondents by asking questions in order to describe the characteristics of the population sample. There was direct administration of questionnaires to ensure that respondents who need assistance in answering the questionnaires get help. Both qualitative and quantitative methods are used. The quantitative method with well-structured questions was used. This helped to quantify attitudes, opinions, behaviors and other variables by way of creating statistical data that can be changed into useable statistics. The qualitative method with semi structured questions was used to provide insight into the stated problem. It also helped to develop ideas or hypothesis to help support the qualitative method**.**

This design was chosen because it helps to create a clear description of the study variables. This method is often used to make inferences about possible relationships amongst the selected sample (Burton & Cherry, 2020)

3.5 Study setting

The study was conducted in Mulago National Referral Hospital at the trauma ward.

3.6 Data sources

3.6.1 Primary data

Primary data ensures the most up-to-date information and realistic view to answer the hypothesis and research questions (Saunders, Lewis, & Thornhill, 2009).In the research, the primary data is collected via survey questionnaire technique which requires less skill and sensitivity (Jankowicz, 2005) To increase the response rate, the researchers distribute and collect the self –administered questionnaires to and from the target respondents after they answered the questionnaires immediately.

3.6.2 Secondary data

This is the source of information which is collected elsewhere for some purposes. The researcher reviewed literature which was already conducted by some other people that is relevant to the researcher's topic of the study that was relevant for instance, magazines, journals, text books, newspapers and articles was used as sources.

3.7 Research instruments

A semi structured questionnaire was developed and discussed with the supervisor for approval before data collection.

3.8 Data collection procedure

Data was collected using self-administered questionnaires and interviews.

3.8.1 Data management

The data collected was verified by reading through the questions and the answers to find out whether they are all well answered and those with missing gaps will be collected immediately even when it means going back to the field to collect another data.

3.9 Data analysis

After collecting data, each question was analyzed by tallying and errors were eliminated. Qualitative analysis was employed, editing and coding of research results was done using SPSS and presenting in figures. This helped to identify inconsistencies raised during data collection.

The quantitative data involved information from the questionnaires only. Data from the field was too raw for proper interpretation. It was put it into order and structured so as to drive meaning and information from it. The raw data obtained from questionnaires was cleaned, sorted and coded. The coded data was entered into the Computer, checked and statistically analyzed using SPSS to generate descriptive statistics. Descriptive analysis was applied to describe the primary variable and associated indicator items related to the study objectives. Data was presented in form of tables, frequencies, percentages, and bar graphs where necessary.

3.9.1 Univariate analysis

Univariate analysis is for one variable. This is done for categorical and non -categorical variables. Data was summarized by use of frequencies and percentages inform of tables.

3.9.2 Bi-variate analysis

Under bi-variate, analysis is for two variables at a time. The researcher established the relationship between independent and dependent variables using techniques like cross tabulation which involves chi-square tests.

Chi-square formulae

Chi-square formulae;

$$\chi^2 = \sum \frac{(o-e)^2}{e}$$

X^2 - chi- square test

O - Total number of observed frequencies

e - The number of expected frequencies

3.9.3 Multivariate analysis

Under multivariate, analysis is for more than two variables at a time. Logistic regression was used to establish independent variables that explain the outcome of the dependent variable (physical trauma)

Where

$PT= \alpha+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\mu$

PT – Physical Trauma (Dependent variable)

α – constant

μ - error term

$X_{i \quad (i = 1, 2, 3)}$ – independent variables

3.10 Validity and Reliability of Research Instruments

3.10.1 Validity

Validity refers to the degree to which results obtained from analysis of the data actually represent the phenomenon under study. The validity of the research instrument is determined by pre-testing. Pre-testing ensures clarity and accuracy of results so that data collected gives meaningful, reliable results representing the variable in the study. It also helps in estimating the time taken to fill the questionnaires. Validity also helps to indicate the degree by which an instrument measures what is supposed to measure. Pre-testing was done by administering to ten (10) respondents within the study population but outside the sample. The questionnaires were structured to ensure that it remained focused, accurate, and consistent in the course of study.

3.10.2 Reliability

Reliability refers to the measure of the degree to which a research instrument yields consistent results or data after repeated trials. The structured questions in the questionnaire are relevantly answering the topic and objectives such that the instrument produces results that are needed by the researcher. The instrument used to collect data can consistently measure what it is intended to measure like respondents give answers consistently of what is asked of them. (Denzin & Lincoln, 2014)

3.11 Ethical consideration

An introductory letter was obtained from the University to introduce the researcher to Mulago National Referral Hospital in the emergency and accident ward. The in- charge of the department was informed and the respondents were explained to so that participation in the study had no effect and did not affect the confidentiality of the patients.

3.12 Limitations of the study

In the process of carrying out this research, a number of limitations were met. These limitations obstructed the speed at which the study was to be carried out. These included;

I. The COVID-19 pandemic affected the way I worked and conducted my research since most of the respondents were not following the SOPs whereby some had their masks under their chin.

II. It was not easy to get enough information since the researcher was denied access to certain company records.

III. The researcher faced financial challenges while carrying out the research because she had no sponsor. Therefore, getting funds was necessary yet quite hectic.

3.13 Solutions to the above mentioned problems

The researcher practically adjusted the estimated budget by minimizing expenses as much as possible to do all the research by herself without employing any research assistant.

The researcher tried as much as possible to be polite and confident in order to reach each and every respondent and respecting them in order to get the required data.

The researcher tried to get enough data through acquiring a number of literature data to solve the problem.

CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF RESEARCH FINDINGS

4.0 Introduction

This chapter involves the data presentation, analysis and interpretation of the research findings on the assessment of health staff response to physical trauma patients in Uganda, a case study of Mulago National Referral Hospital. Major research questions were answered in the study based on the objectives of the study. The questionnaires distributed and interviews conducted ninety six (96) samples to obtain data to answer research questions. The data was analyzed from both primary and secondary sources of data. This chapter consists of different sections presenting the general information of the respondents regarding the study topic.

The chapter presents findings in line with the three objectives of the study and these are;

1. What is the impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital?
2. What are the responses of the health staff towards physical trauma patients in Uganda?
3. What are the consequences faced by patients due to physical trauma at Mulago National Referral Hospital?

4.1 Respondent rate

A total of 96 questionnaires were administered to the people in the Trauma ward at Mulago National Referral Hospital. And by the end of the exercise only 89 questionnaires were collected posing a response rate of 92.7% and a non-response of 7.3% as shown in the Table 1 below.

Table 1: Respondent rate

Category		**Frequency**	**Percentage**
Valid	Returned	89	92.7
	Not returned	7	7.3
	Total	**96**	**100.0**

Source: primary data

4.2 The impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital

The respondents were classified according to their gender, age, education, occupation, and their rank

Table 2: **Impact of Socio demographic factors on physical trauma**

	0 – Male 1 – Female **Total**	53 36 **89**	59.6 40.4 **100.0**
	0– Below 18 1 – 19-29 2- 30-40 3- Above 41 **Total**	17 25 26 21 **89**	19.1 28.1 29.2 23.6 **100.0**
	0 – no formal education 1 - primary 2- secondary 3- Tertiary **Total**	7 10 30 42 **89**	7.9 11.3 33.7 47.1 **100.0**
	0–Medical staff 1 - Patient **Total**	26 63 **89**	29.2 70.8 **100.0**
	0-Driver 1-Student 2-Medical worker 3-Casual worker **Total**	23 30 26 10 **89**	25.8 33.7 29.2 11.2 **100**

Source: primary data

The gender distribution as presented in Table 2 indicates that, male slightly dominated female respondents. The male respondents comprised of 59.6%, while the female comprised of 40.4% indicating that male are the most affected by physical trauma injuries.

From the Table 2, the respondents who were aged between 19-29 yrs and those between 30-49 yrs formed the biggest percentages of the respondents with 28.% and 29.2% respectively followed by those above 42yrs with 23.6% and lastly the ones below 18yrs with 19.1%.

For the education of respondents, it was observed that, the respondents with a degree dominated the study with a 50.5% and those with no formal education were very few with a percentage of 3.2% and also those with primary, secondary and postgraduate education level were 5.4%, 21.5%, and 19.4% respectively.

From Table 2, it shows that most of the respondents were patients with a 70.8% and the medical staff with by 29.2%.

From table 2, the students were the dominant respondents with 33.7% followed by medical workers with 29.2%, drivers with 25.8% and lastly casual laborers with 11.2%.

4.3 The responses of the health staff towards physical trauma patients in Uganda

Table 3: Response of the health staff

RESPONSE OF HEALTH STAFF	OPTIONS	FREQUENCIES	PERCENTAGES (%)
Did you give first aid immediately the patients get to the hospital?	0 – YES 1 – NO **Total**	26 0 **26**	100 0.0 **100.0**
Do you recommend a professional immediately you find out that a patient has a serious injury that needs a specialized professional?	0 – YES 1 – NO **Total**	26 0 **26**	100 0.0 **100.0**
Is there enough equipment to move	0 – YES 1 – NO	8 18	30.8 69.2

or assist the victim in anyway like oxygen cylinder and carriers?	**Total**	**26**	**100.0**
Do you offer counseling services to patients who get permanent disabilities before discharging them?	0 – YES 1 – NO **Total**	23 3 **26**	88.4 11.5 **100.0**
Do you do a follow up on the patients after discharging them?	0 – YES 1 – NO **Total**	6 20 **26**	23.1 76.9 **100.0**
Do you give physiotherapy services to the patients before fully discharging them from the hospital?	0 – YES 1 – NO **Total**	0 26 **26**	0.0 100.0 **100.0**

Source: primary data

From the Table 3 above showing the response of the health staff toward physical trauma patients, 100% of the health staff agreed that they give first aid to the patients immediately they are brought to the hospital and also recommend a professional when they find out that the patient has a serious injury that needs a specialized professional.

From table 3, the health staffs were asked whether there is enough equipment to move or assist the patients in anyway like oxygen cylinders and carriers and the highest percentage of 69.2%

disagreed saying that when the trauma ward is full and all the beds are occupied, some patients sleep down on the floor and the oxygen cylinders are only given to the critically injured patients. While 30.8% of the health staff who agreed, their reason was that most patients were treated and sent back home while others were referred elsewhere.

From table 3, health staffs were asked whether they give counseling services to patients who get permanent disabilities and 88.4% agreed while the lowest percentage of 11.5% disagreed saying they refer the patients to the physiotherapy ward where they find professional counselors who talk to them.

Still from table 3, health staff were asked whether they do a follow up on the patients after discharging them and 76.9% disagreed saying that when they only discharge a patient who is completely fine while 23.1% agreed saying that they do and also recommend possible references to the patients.

Lastly from table 3, health staffs were asked whether they give physiotherapy services to the patients before fully discharging them and 100% of them disagreed, saying that they refer them to the physiotherapy ward where they are rendered the necessary treatment.

4.4 The consequences faced by patients due to physical trauma at Mulago National Referral Hospital

Table 4: Consequences faced by patients due to physical trauma

CONSEQUENCES FACED BY PATIENTS	OPTIONS	FREQUENCIES	PERCENTAGES (%)
What was the nature of injury?	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots **Total**	28 20 10 5 **63**	44.4 31.7 15.9 7.9 **100.0**
What was the time between arrival to the hospital and receiving attention?	0- 0-30 minutes 1- 30- 1hr 2- >1hr **Total**	13 27 23 **63**	20.6 42.9 36.5 **100.0**
What was the severity of your injury?	0- Severe 1- Moderate 2- Mild **Total**	18 20 25 **63**	28.5 31.7 39.7 **100.0**
What was the place where the injury occurred? Injury occurred?	0- Home 1- Road/ street 2- Public building 3- Farm **Total**	15 38 3 7 **63**	23.8 60.3 4.8 11.1 **100.0**
Which body area that was injured?	0- Head/ neck/ face 1- Upper body 2- Lower body **Total**	9 19 35 **63**	14.3 30.2 55.6 **100.0**
What is/was the major outcome after the physical trauma injuries?	0- Permanent disability 1- Temporary disability **Total**	18 45 **63**	28.6 71.4 **100.0**
Did you receive any social support from family members/ community/ workmates?	0- Yes 1- No **Total**	60 3 **63**	95.2 4.8 **100.0**

	0- motorcycle 1- Ambulance 2- foot **Total**	43 12 8 **63**	68.3 19.0 12.7 **100.0**

Source: primary data

Nature of injury

From table 4, the most common mechanisms of physical trauma were falls (44.4%) and road traffic injuries (RTIs; 31.7%). Penetrating mechanisms including stabbing/cuts, animal bites, and gunshot wounds were relatively infrequent (7.9%). Most injuries occurred on the road/street (60.3%) or at home (23.8%), followed by the ones at the farm(11.1%) and the least at public building (4.8%) like fall from the stairs and being hit by electric doors.

Mode of arrival to the hospital

Table 4 shows that (68.3%) of patients arrived at the hospital using motorcycle, while only 19.0% had been transported via ambulance and the rest (12.7%) had come on foot. Those arriving by ambulance were significantly more likely to have a moderate (31.7%) or severe (28.5%) injury compared to those arriving via other means whereby 39.5% of them had mild injuries. The most duration of time from time of injury to arrival at hospital was between 30 min to 1hour (42.9%), with only 20.6% arriving below 30minutes and 36.5% arriving after an hour of suffering their injury.

Outcomes of the injury

The most common anatomic locations of injury were the lower (55.6%) and upper extremities (30.2%), followed by the head/neck (14.3%), whereby most of the patients acquired a temporary disability (71.4%) and the rest (28.6%) got permanent disabilities. When the patients were asked whether they get social support from family, friends and the community, 95.2% agreed and only few at 4.8% said they had no one to help them or family to go to for support.

4.5 Bi-variate analysis

Table 5: Cause of injury in each age group

Age	Number (%)	Nature of injury
Below 18	8 (28.6) 4 (20.0) 5 (50.0) 0 (0.0)	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots
19-29	6 (21.4) 8 (40.0) 2 (20.0) 3 (60.0)	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots
30-40	4 (14.3) 5 (25.0) 2 (20.0) 2 (40.0)	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots
Above 41	10 (35.7) 3 (15.0) 1 (10.0) 1 (20.0)	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots
TOTAL	28 (44.4) 20 (31.7) 10 (15.9) 5 (7.9) **63 (100)**	0- Fall 1- Traffic 2- Burns 3- Cuts/ stabs/ gunshots

Source: primary data

From table 5 above, it was found out that falls were the major cause of the physical trauma injuries among people above 41 years 35.7% followed by children below 18 years 28.6%. Traffic was mostly common among people between 19-29 years. Half of the respondents (50%) who were below 18 years were affected by burns and for cuts/stabs/gunshots; the age group of mostly affected were between 19-29 years.

CHAPTER FIVE: DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.0 Introduction

This chapter presents the discussion, recommendations and conclusion basing on research findings on the response of the health staffs towards the physical trauma patients, a case study of Mulago National Referral Hospital, Kawempe Division. Major research questions were answered in the study basing on the objectives of the study.

According to (Hess, 2004), the purpose of the discussion section is to explain the meaning of the results to the reader. The discussion shows the importance of the study and how the study relates to previous studies.

5.1 Discussion of the Results

5.1.1 The impact of physical trauma on the socio-demographic characteristics of patients and health staff at Mulago National Referral Hospital.

Basing on Table 2, the researcher used demography of the respondents (Gender, age, Education, Occupation, and Rank) as the independent variables and physical trauma as the dependent variable. After the analysis, it was found out that, the male dominated the female with 59.6% in the trauma ward, and the most common occupation affected was the students with a quarter of the population at 33.7%. This finding was similar to another study by (Dicker, 2020) where he found out that roughly two-thirds (62.7%) of the study population were male, and the median age was 26 years. The leading occupations of injured patients were student (32.7%) or peasant farmer (30.8%).

5.1.2 The responses of health staff towards physical trauma patients at Mulago National Referral Hospital in Uganda.

From the Table 3 above showing the response of the health staff toward physical trauma patients, 100% of the health staff agreed that they give first aid to the patients immediately they are brought to the hospital and also recommend a professional when they find out that the patient has a serious

injury that needs a specialized professional, meanwhile a study by (Vietnam, 2020) says that some patients reached the hospital after getting first aid from the community while all those that were transported using an ambulance were given first aid by the emergency health workers.

The health staffs were asked whether there is enough equipment to move or assist the patients in anyway like oxygen cylinders and carriers and the highest percentage of 69.2% disagreed saying that when the trauma ward is full and all the beds are occupied, some patients sleep down on the floor and the oxygen cylinders are only given to the critically injured patients but that most patients were treated and sent back home while others were referred elsewhere.

Health staffs (88.4%) said that they give counseling services to patients who get permanent disabilities while the lowest percentage of 11.5% disagreed saying they refer the patients to the physiotherapy ward where they find professional counselors who talk to them.

Still from table 3, health staff were asked whether they do a follow up on the patients after discharging them and 76.9% disagreed saying that when they only discharge a patient who is completely fine while 23.1% agreed saying that they do and also recommend possible references of specialized medical personnel to the patients.

From this study, it was found out that the health workers in the trauma ward don't give physiotherapy services to the patients before fully discharging them and instead they refer them to the physiotherapy ward where they are rendered the necessary treatment.

5.1.3 The consequences faced by patients due to physical trauma at Mulago National Referral Hospital

From table 4, the most common mechanisms of physical trauma were falls (44.4%) and road traffic injuries (RTIs; 31.7%). The substantial rates of injury associated with boda bodas in Uganda are well-documented, due in part to the country's poorly enforced speed limits and traffic safety laws.

And similar studies by (Vaca SD, 2020) also confirmed. Penetrating mechanisms including stabbing/cuts, animal bites, and gunshot wounds were relatively infrequent (7.9%). Most injuries occurred on the road/street (60.3%) or at home (23.8%), followed by the ones at the farm(11.1%) and the least at public building (4.8%) like fall from the stairs and being hit by electric doors. An original article by (O C Kobusingye, 2019) stated that the majority of injuries happened on roads/streets (58%), and homes (29%). Other places were public buildings (4%) and factories (3%). More women were injured at home (41%) compared to males (25%), $p<0.001$.

From Table 4 shows that (68.3%) of patients arrived at the hospital using motorcycle, while only 19.0% had been transported via ambulance and the rest (12.7%) had come on foot. Those arriving by ambulance were significantly more likely to have a moderate (31.7%) or severe (28.5%) injury compared to those arriving via other means whereby 39.5% of them had mild injuries. The most duration of time from time of injury to arrival at hospital was between 30 min to 1hour (42.9%), with only 20.6% arriving below 30minutes and 36.5% arriving after an hour of suffering their injury. A similar study by (Dicker, 2020) also showed that motorcycles were the most used mode of transport to the hospital upon arrival to the hospital.

The most common anatomic locations of injury were the lower (55.6%) and upper extremities (30.2%), followed by the head/neck (14.3%), whereby most of the patients acquired a temporary disability (71.4%) and the rest (28.6%) got permanent disabilities. When the patients were asked whether they get social support from family, friends and the community, 95.2% agreed and only few at 4.8% said they had no one to help them or family to go to for support.

From table 5 above, it was found out that falls were the major cause of the physical trauma injuries among people above 41 years 35.7% followed by children below 18 years 28.6%. Traffic was mostly common among people between 19-29 years. Half of the respondents (50%) who were

below 18 years were affected by burns and for cuts/stabs/gunshots; the age group of mostly affected were between 19-29 years. And this not being dissimilar to other studies by (Dicker, 2020) where his findings stated that the most common mechanisms of injury were falls (35.7%) and road traffic injuries (RTIs; 34.9%).

5.2 Recommendations

1. The government of Uganda needs to develop programs for counselling of people who have suffered permanent disability to give them hope that they can start over in life in order to reduce on psychological problems like anxieties, stress and depression.
2. Mulago National Referral hospital being the biggest referral hospital in Uganda, the government should provide enough medical equipment like beds, carriers and ambulances so that the patients can get where to rest and get treatment while at the hospital premises and not to sleep on the floor.
3. The high burden of orthopaedic injuries in Kampala requires that government and external funders support efficient delivery orthopaedic trauma care at Mulago Hospital to improve resource utilization, streamline care and address long hospital stays.
4. Preventive measures, especially for traffic injuries, are urgently needed and should have resources that reflect the magnitude of the problem. A pre-hospital emergency service should be implemented, as this suggests that salvageable patients are dying before reaching hospital. Injury management requires coordination, so that the large volume of minor injuries receives care without impeding the care of the seriously injured, who should be rapidly triaged to tertiary centres. This is particularly crucial for head injuries.
5. Conduct of information dissemination and awareness campaign activities to the communities on common first aid techniques for physical trauma victims. Close

collaboration with Ministry of Health (MoH) in carrying out education program on first aid techniques in the entire school system of the country of which health workers in the grass-root levels will serve as lecturers.

6. Consolidation of statistics, recording and reporting system on physical trauma victims of the whole country wherein data on health system will be integrated with the national statistical system to effectively manage and monitor the physical trauma prevention master plan.

5.3 Conclusions

The study established that majority of the respondents were male, the occupation most affected by physical trauma injuries were students and people within the age group of 19-29 years. The health workers give first aid to patients on arrival to the hospital and recommend a professional in case of a serious injury. It was also found out that the medical equipment used in the treatment and care of the victims are not enough. The lower body extremities were the most recorded body injuries followed upper body extremities and the head/neck and face. Falls and traffic were the most common injuries recorded and it took about 30 minutes to one hour for most patients to arrive to the hospital where ambulances were used to transport severely injured victims and motorcycles were the most used to arrive to the hospital. Some of the patients who got some kind of either temporary or permanent disability were referred to the physiotherapy ward. Social support from families, friends and community was rendered to the victims.

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