DISABILITY EPIDEMIOLOGY POST-TRAUMA IN WORKING ADULTS: CASE STUDY AT OSHAKATI HOSPITAL ORTHOPAEDIC WARDS

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ABSTRACT

This mixed-methods study included 325 randomly selected questionnaire participants and 10 in-depth interviews to examine trauma-related disability. The findings sought to (1) identify disability patterns in working-age adults discharged from the Orthopaedic Department at Intermediate Hospital Oshakati, (2) examine participants' perceptions of their disabilities' causes, and (3) examine trauma-related disability experiences. Based on the Biopsychosocial model, the study shows major patterns that require focused health and safety education and prevention. This concept emphasises how biological, psychological, and social aspects affect health. Many individuals indicated concern about brain and nerve damage, indicating significant polarisation in opinions of their importance. Muscle injuries were considered less serious, highlighting the need for a balanced teaching approach. Comprehensive support systems that include mental health services were needed due to the severe emotional and psychological effects. Strong family and friend relationships helped healing by helping people adjust to new reality. Disabilities presented considerable economic obstacles, requiring employment support and vocational retraining. Variable access to healthcare and rehabilitation services affected recovery and quality of life. The study shows how different aspects of living with impairments interact, emphasising the need to understand these relationships to create more inclusive societies and effective support systems. The findings underscore the varied character of disability within the Biopsychosocial framework and call for increased awareness and education to improve trauma survivors' well-being.

Key Terms: Disability, Trauma, Epidemiology, Rehabilitation, Socio-demographic Factors.

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DEDICATION

This study is dedicated to our beloved parents, who have been our source of inspiration, guide and give us strength, when we thought of giving up, who continually provide their moral, spiritual, emotional and financial support.

To our friends who became our supporter and help us to any problem we faced. They encourage us to finish this important research in time. They also give us inspiration message every time. To our teachers who believed that we will be finish this research

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And lastly, we dedicated this book to our Mighty God that guides us, give strength, power of mind, protection and skills. All of this, we offer to you.

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CHAPTER ONE INTRODUCTION

1.1 Introduction

In contemporary healthcare, understanding the epidemiology of disability resulting from trauma is paramount, particularly among the working-age adult population.

Disability, defined as a long-term physical or mental condition that limits a person's movements, senses, or activities, can arise from various traumatic incidents, including accidents, falls, and violence. These incidents not only pose immediate health threats but can also lead to profound and lasting consequences, affecting individuals during their productive years and subsequently impacting their families, communities, and economies.

Globally, the burden of disability due to trauma is significant, with millions of individuals experiencing debilitating conditions that hinder their ability to work and engage in daily activities. The World Health Organization estimates that over one billion people live with some form of disability, with injury and trauma being leading contributors. Understanding these patterns is crucial to developing effective prevention and rehabilitation strategies that can mitigate the impact of trauma on individuals and society.

This study directs its attention to the Intermediate Hospital Oshakati Orthopaedic Wards, seeking to unravel the intricate patterns and implications of trauma-induced disabilities among working-age adults within this specific healthcare setting. The focus on orthopedic wards is essential, as these units

typically manage various traumatic injuries leading to long-term disability, thus providing a poignant context for this investigation.

Chapter one serves as the gateway to the exploration of disability epidemiology following trauma in the specified orthopedic wards. It sets the stage by delineating the background and context of the study, defining the key concepts and variables related to trauma and disability, articulating the problem statement, outlining the research objectives, justifying the significance of the research, and providing an overview of the structure of subsequent chapters. Through this comprehensive framework, the study aims to contribute valuable insights that can enhance understanding, inform policy, and improve outcomes for affected individuals.

1.2 Background of the study

Traumatic injuries can have profound and lasting effects on individuals' physical and mental health, as well as their ability to work and engage in their communities. Understanding the epidemiology of disability following trauma is crucial for developing effective prevention and rehabilitation strategies. This becomes especially pertinent in the context of working-age adults, where disability resulting from trauma can lead to significant economic and social consequences.

Intermediate Hospital Oshakati is one of the key healthcare facilities in Namibia that plays a crucial role in managing traumatic injuries. Located in the Oshana Region, this hospital serves a large population and acts as a referral

center for smaller clinics and healthcare outposts in the northern part of the country (1).

Given the statistics from the 2014 study, which highlight the significant impact of injuries on the country's mortality rate, Intermediate Hospital Oshakati is vital in providing necessary medical care, particularly for road traffic injuries, which are the leading cause of injury-related deaths. The hospital is equipped with various departments and medical professionals specializing in trauma care, which are essential in addressing both the immediate and long-term healthcare needs of

patients.

The hospital's contribution extends beyond immediate injury care, considering the broader implications of injuries on the working-age population. It plays a critical role in rehabilitation and recovery processes, helping individuals regain their ability to work and support their families, thus mitigating the economic burden that injuries impose. The support and services provided by Intermediate Hospital Oshakati are instrumental in addressing the healthcare challenges posed by traumatic injuries in Namibia.

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Global studies, such as the one by (2) emphasize that injuries are among the leading causes of death and disability worldwide. The statistics from 1998 indicate a staggering 5.7 million people globally died from injuries, contributing to approximately 15% of the global burden of disease. Moreover, around 973 million people worldwide required healthcare for injuries, and 4.8 million people succumbed to trauma-related complications, with an average of 140

million developing various forms of disabilities cite. In the specific context of Oshakati Intermediate Hospital (IHO), trauma cases constitute 16% of all hospital admissions cite. Unfortunately, patients with trauma cases often face prolonged waiting times for surgery, up to 72 hours or even 2 weeks, leading to an increased risk of secondary disabilities due to trauma cite.

Globally, especially in middle and low-income countries, the need to strengthen rehabilitation services is evident. Accessible and affordable high-quality rehabilitation services within both hospital and community settings are crucial to preventing disabilities and upholding human rights, thereby improving health and providing social and economic benefits.

Intermediate Hospital Oshakati not only serves as a critical center for managing traumatic injuries but also aligns with the broader national strategies aimed at disability management and support. Recognizing the importance of effective disability management, Namibia has implemented the Disability Action Mainstream Action Plan to ensure that individuals with disabilities receive comprehensive care and integration into society. At the national level, the National Disability Council Act of 2004 serves as a legislative framework to oversee the implementation of the National Policy on Disability. This act emphasizes the importance of accessibility, inclusivity, and equality for people with disabilities, ensuring that healthcare facilities like Intermediate Hospital Oshakati are equipped and mandated to cater to these needs.

In addition to national efforts, Namibia draws inspiration from regional initiatives such as South Africa's Integrated Disability Strategy (ASIDS). This

strategy emphasizes a holistic approach to addressing the medical and social needs of people with

disabilities, advocating for their rights and facilitating their full participation in society.

Intermediate Hospital Oshakati, in this context, plays a significant role in not only treating traumatic injuries but also in supporting the ongoing rehabilitation and integration of patients with disabilities. The hospital's services are thus aligned with national and regional objectives to provide comprehensive care, support recovery, and promote the well-being of individuals living with disabilities, contributing to their overall quality of life and economic productivity. Through these efforts, the hospital reinforces Namibia's commitment to disability management and equity in healthcare access.

This study focuses specifically on the Orthopaedic wards of Oshakati Hospital, a specialized unit catering to individuals with musculoskeletal injuries. The planned 2year follow-up of survivors aims to provide valuable insights into the long-term impact of musculoskeletal injuries on socio-economic conditions and overall quality of life.

The references provided offer a comprehensive foundation for understanding the global landscape of disability following trauma, emphasizing the significance of effective rehabilitation strategies and the need for a holistic approach to trauma management.

Additionally, research in this field has highlighted the importance of long-term followups and comprehensive rehabilitation services. Studies such as those by (3) (4)underscore the need to address the multifaceted challenges that

individuals with disabilities face after trauma. The economic implications of disability resulting from trauma are further explored in studies such as those by (2,5) and Whiteneck and (6) These investigations shed light on the disproportionate impact of disability on certain households and emphasize the need for targeted interventions and support mechanisms.

Furthermore, the intersectionality of disability with factors like gender, cultural diversity, and educational levels, as mentioned by (7), calls for more in-depth exploration. The gaps identified in the literature, particularly the limited representation from African contexts, as noted by the (8), highlight the need for context-specific research to inform tailored interventions. The complex interplay of factors contributing to disability following trauma demands a comprehensive and nuanced understanding.

This study seeks to contribute to the understanding of the epidemiology of disability following trauma among working age adults and their livelihood experiences following trauma. It will be by focusing on the Orthopaedic wards of Oshakati Hospital and conducting a rigorous 2-year follow-up.

1.3 Problem Statement

Intermediate Hospital Oshakati (IHO), located in the northern region of Namibia, serves as a vital referral center for patients from both the northern regions of Namibia and the southern part of Angola. Despite its strategic importance, there remains a significant gap in understanding the disability statistics within the orthopedic ward of Oshakati Hospital. This gap creates considerable uncertainty regarding the prevalence and nature of disabilities

resulting from trauma in this specific healthcare context, impeding efforts to develop targeted interventions and improve the quality of care for individuals recovering from musculoskeletal injuries (7,9)

Statistics from the past three years indicate a notable upward trend in reported trauma cases within the orthopedic ward. In 2021, approximately 200 patients were admitted with traumatic injuries, which rose to 270 in 2022 and reached 320 by 2023 (10). Despite this increase in trauma admissions, data on long-term disability outcomes remain scarce and poorly documented, highlighting a critical knowledge gap in understanding how these injuries impact patients' lives over time (11).

Additionally, delays in surgical and conservative management exacerbate the situation. A recent evaluation indicated that over 40% of patients awaited surgery for more than six weeks following their injury, significantly affecting recovery outcomes (6). Furthermore, the shortage of rehabilitation professionals within the public healthcare system has been identified as a leading factor contributing to the increasing rates of disability. The existing number of physiotherapists and occupational therapists at IHO is inadequate to meet the rising demand, with a documented ratio of one therapist for every 85 patients in need of rehabilitation (12).

Moreover, adult trauma leading to disabilities has not been the primary focus of research in Namibia. Previous studies have explored various aspects of trauma and injury characteristics, but there is a conspicuous absence of a comprehensive examination of the epidemiology of disabilities resulting from trauma among workingage adults (12,13). The lack of attention to this

demographic is concerning, particularly considering that trauma-related mortality and morbidity constitute significant public health issues.

This study aims to fill this critical research gap by investigating the epidemiology of disability following trauma among working-age adults in Namibia and exploring their livelihood experiences after trauma in the orthopedic unit at IHO. Given the alarming trends in trauma-related admissions, which have consistently increased over the past three years, there is an urgent need for comprehensive data collection and targeted interventions in the healthcare system (14). Trauma-related mortality accounts for a significant percentage of fatalities, ranking just below communicable diseases, maternal health issues, and cardiovascular diseases (14,15)

In understanding the epidemiology of disability following trauma and the associated livelihood experiences of affected individuals is essential for informing strategies to enhance rehabilitation services and improve patient outcomes in Namibia's public healthcare system. Addressing this issue is critical to developing effective interventions that can ultimately reduce the burden of disability within the population.

1.4 Aim of the Study

The main aim of the study is to investigate the epidemiology of disability resulting from trauma among working-age adults at Intermediate Hospital Oshakati's orthopaedic ward in Namibia.

1.5 Objectives of the Study

The objectives of the study are to:

1. Establish the patterns of disability among working-age adults discharged at intermediate hospital Oshakati orthopaedics department
2. Assess the perceptions of patients regarding the causes of their disabilities following trauma.
3. To explore the livelihood experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at
   Intermediate Hospital Oshakati

1.6 Significance of the study

This study carries profound significance with far-reaching implications for various stakeholders, encompassing policymakers, healthcare practitioners, disabled individuals, and the broader community. The findings of this research have the potential to influence policymakers in shaping regulations and guidelines. By shedding light on the prevalence and nature of disabilities resulting from trauma among workingage adults, policymakers can develop targeted measures to safeguard the rights and well-being of this demographic. This, in turn, may lead to the establishment of comprehensive policies that provide a roadmap for the day-to-day operation and protection of people living with disabilities.

The study's outcomes may contribute to the expansion and refinement of Standard Operative Procedures (SOPs) within healthcare settings. Insights into the specific challenges faced by disabled, aged working adults can inform the development of tailored SOPs for the effective management and

rehabilitation of this population. Such procedures can facilitate the smooth resumption of job roles, fostering a conducive environment for sustained employment post-trauma. The research findings hold the promise of significantly improving the quality of life for disabled, aged working adults. Through the identification of effective multidisciplinary rehabilitation approaches, this study can pave the way for interventions that enable individuals to not only resume their previous job roles but also re-enter the workforce under the employ of other organizations. This, in essence, empowers post-traumatic survivors to actively participate in their communities, positively impacting the well-being of their families and the community at large.

The researcher, armed with the insights garnered from this study, becomes a key advocate for the importance of multidisciplinary rehabilitation. By raising awareness about the effectiveness of such rehabilitation strategies for the trauma population, the researcher contributes to a paradigm shift in how rehabilitation is perceived and approached. This advocacy extends beyond the confines of the academic sphere to inform healthcare professionals, policymakers, and the broader community.

The study serves as a catalyst for community awareness about the complications related to trauma. By disseminating research findings, the researcher plays a crucial role in educating the community about the challenges faced by those with posttraumatic disabilities. This awareness can foster empathy, understanding, and community support for individuals on their journey to recovery.

In essence, the significance of this study transcends academic boundaries, offering tangible benefits by shaping policies, improving rehabilitation practices, and fostering a more inclusive and supportive environment for individuals dealing with disabilities resulting from trauma.

1.7 Limitations of the study

The study encountered several limitations that may have influenced the outcomes and interpretations of the findings. One significant limitation was the restricted sample size, which could potentially affect the generalizability of the results to the broader population. To address this challenge, the research team made concerted efforts to include as many eligible participants as possible from the orthopedic ward during the study period, thereby maximizing representation and enhancing the robustness of the data collected. Another limitation was the lack of comprehensive historical data on disability outcomes related to trauma at Intermediate Hospital Oshakati. This absence of data could have hindered a thorough understanding of the long-term effects of trauma. To mitigate this limitation, the researchers conducted interviews and surveys with patients and healthcare providers, effectively gathering qualitative data and insights into the experiences of individuals affected by trauma. Response bias was also a concern, as participants might have given socially desirable answers during interviews, thus impacting the accuracy of the information collected. To mitigate this risk, the study utilized anonymous surveys, assuring participants that their responses would remain confidential. This approach encouraged them to provide honest and accurate reflections on their experiences without fear of judgment.

Additionally, the research faced challenges related to limited resources, which included insufficient funding for extensive data collection methods. The research team addressed this limitation by employing cost-effective research strategies and leveraging existing hospital resources. Collaborating with healthcare staff and utilizing standard medical records for data extraction allowed for a more efficient and practical approach to data collection.

Language barriers posed a challenge in communication with participants who spoke different languages or dialects. To overcome this limitation, bilingual research assistants were engaged to facilitate effective communication, ensuring that participants fully understood the questions and could express their experiences accurately. By addressing these limitations, the study aimed to enhance the validity and reliability of its findings.

1.8 Delimitations of of the study

This study made specific choices to define its scope and focus on the epidemiology of disability resulting from trauma among working-age adults at Intermediate Hospital Oshakati. One of the primary delimitations was the target population, which was intentionally confined to working-age adults, defined as individuals between the ages of 18 and 65. This choice allowed the researchers to delve deeply into the impact of trauma during a critical period of productivity in individuals' lives, rather than broadening the scope to include younger or older populations whose experiences and needs may differ significantly. The setting of the research was another critical delimitation. The study was conducted exclusively within the orthopedic ward of Intermediate Hospital Oshakati. By narrowing the focus to this specific healthcare unit, the

researchers aimed to thoroughly examine trauma-related cases and outcomes unique to this environment, acknowledging that experiences and recovery processes might vary in different wards or other healthcare facilities. Additionally, the study concentrated specifically on traumatic injuries that led to disabilities, intentionally excluding individuals with disabilities arising from non-traumatic causes, such as congenital conditions or chronic illnesses. This focused approach enabled a clearer investigation of the effects of trauma-related injuries on disability, yielding insights directly relevant to the research aim.

The duration of the study was also defined with intention, concentrating on trauma cases admitted between 2021 and 2023. By selecting this timeframe, the researchers aimed to capture recent trends in trauma-related disabilities and the management strategies employed during this period, ensuring that the findings would reflect current healthcare practices and challenges.

1.9 Definition of terms

Disability: Disability refers to a condition that significantly impairs an individual's ability to perform activities considered normal for a human being due to physical, sensory, cognitive, or other impairments (16). In the context of this study, disability specifically pertains to the consequences of trauma among working-age adults, encompassing limitations in mobility, sensory functions, or cognitive abilities resulting from musculoskeletal injuries. The term is utilized to describe a spectrum of impairments that impact individuals'

daily functioning, particularly within the socioeconomic and occupational dimensions.

Epidemiology: Epidemiology involves the study of the distribution and determinants of health-related events or conditions in specified populations, with the aim of informing public health interventions (17) In the context of this research, epidemiology specifically focuses on understanding the incidence, prevalence, and factors contributing to disabilities resulting from trauma among working-age adults in Namibia. The emphasis is on generating knowledge that informs targeted interventions and healthcare policies.

Trauma is defined as a physical injury or wound to the body resulting from an external force, such as a fall, accident, or assault. It encompasses a wide range of injuries, including but not limited to fractures, lacerations, burns, and traumatic brain injuries (18). In the context of this study, **trauma** refers specifically to physical injuries sustained as a result of external force or violent incidents that lead to significant harm, resulting in disability among working-age adults

1.10 Thesis outline

Chapter 1: Introduction

Intermediate Hospital Oshakati (IHO), a vital Namibian referral hospital for northern patients and Angola, is introduced in this chapter. The hospital's importance in healthcare is emphasized. In the orthopedic ward of IHO, disability statistics, especially trauma-induced disabilities, are lacking. This is the study's main issue.

The problem is disability data uncertainty and Namibian research neglecting traumainduced disabilities. The study emphasises the relevance of studying working-age adult disability epidemiology for public health. Objectives include studying the epidemiology of trauma-related disability in working-age people to bridge the information gap and inform policy and rehabilitation. Justification and relevance emphasize the possible impact on policy creation, regulations, and disabled, aged working adults' quality of life. The study promotes community well-being and traumainduced disability awareness.

The study examines trauma-related impairment in working-age people and rehabilitation methods. Limitations define the focus on Namibian working-age adults in IHO's orthopedic ward. The study purposefully uses SADC literature to deepen its perspective. The thesis outlines chapters to guide readers and summarize their contributions.

Chapter 2: Literature Review

The literature review begins with an introduction to disability epidemiology, presenting generic concepts and definitions. It widens the perspective by exploring global and regional viewpoints on disability. Trauma-induced disabilities are examined, delving into prevalence, characteristics, and existing literature on individuals who have experienced trauma. Rehabilitation practices focusing on multidisciplinary approaches and global best practices.

Identified research gaps and challenges in Namibia are discussed, emphasizing the scarcity of literature on working-age adults and disability data within the healthcare system. The chapter concludes with a theoretical framework, providing conceptual underpinnings for disability epidemiology and its applicability to Namibia.

Chapter 3: Methodology

This chapter outlines the research design, emphasizing a quantitative approach through a cross-sectional study design. The study setting, IHO's orthopedic ward, is detailed. The target population is working-age adults with trauma-induced disabilities, and sampling criteria are carefully delineated. Data collection methods include a review of medical records, interviews, and surveys. The analytical approach incorporates descriptive and inferential statistics, coupled with qualitative thematic analysis.

Chapter 4: Results

The results chapter provides an overview of study participants, elucidating demographic characteristics and the nature of trauma and disability. Disability epidemiology findings explore incidence, prevalence, and variability by age, gender, and type of trauma. Rehabilitation practices and challenges are discussed, highlighting issues like delays in management and human resource shortages.

Chapter 5: Discussion

Chapter 5 presents a detailed discussion of the major findings from the study, providing an in-depth analysis of the key results obtained from the data. This chapter connects the empirical evidence gathered with broader theoretical perspectives and previous research to elucidate the underlying trends and patterns identified. By examining the perceptions of injury severity and the implications for patient care and public awareness, Chapter 5 offers critical insights into how these perceptions can influence recovery and management strategies. The chapter aims to interpret the data within the context of existing literature, drawing connections and identifying gaps that warrant attention in

both healthcare practice and policy-making. Through this analysis, the chapter sets the foundation for the subsequent recommendations and conclusions provided in Chapter 6.

Chapter 6: Recommendations and conclusion

The final chapter engages in interpreting findings, drawing comparisons with existing literature, and delineating implications for policy and practice. Addressing research gaps emphasizes the study's contribution to Namibian healthcare knowledge and proposes recommendations. Acknowledgment of limitations, including time constraints and SADC literature influence, is followed by a conclusive summary encapsulating key findings and broader implications for public health in Namibia.

1.11 Chapter summary

Chapter 1 introduces Intermediate Hospital Oshakati (IHO), a critical referral facility in Namibia serving the northern regions and extending into Angola. Despite its crucial role, a significant gap exists in disability statistics within the orthopedic ward, particularly concerning trauma-induced disabilities. This chapter addresses the identified problem and sets the stage for the study. The statement of the problem delves into uncertainties surrounding disability statistics and the neglect of traumainduced disabilities in Namibian research. The study emphasizes the need to investigate the epidemiology of disabilities among working-age adults, recognizing potential implications for public health. Objectives are outlined, focusing on investigating disability epidemiology after trauma in working-age adults, filling the knowledge gap, and contributing insights for policy development and rehabilitation practices. Justification and

significance highlight the potential impact on policy and regulations, and improved quality of life for disabled, aged working adults, positioning the study as a contributor to community well-being and awareness. Research questions guide the study, exploring the epidemiology of disability following trauma among working-age adults and ways to enhance rehabilitation practices. The scope and delimitations clarify the study's focus on working-age adults in Namibia, specifically within the orthopedic ward of IHO. The deliberate use of literature from the Southern African Development Community
(SADC) enriches the study's context. The thesis organization briefly outlines subsequent chapters, providing readers with a roadmap and summarizing each chapter's contributions.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

Chapter 2 delves into the theoretical framework and contextualization of the study, laying the foundation for an in-depth exploration of disability epidemiology among working-age adults in the orthopaedic department of Intermediate Hospital Oshakati (IHO). This chapter critically examines existing literature, addressing the following research questions:

1. What are the patterns of disability among working-age adults discharged at Intermediate Hospital Oshakati orthopaedic department?
2. What are the determinants of disability following trauma among the workingage group discharged in the Intermediate Hospital Oshakati orthopaedic department?
3. What can we learn from the current livelihood status of survivors among the discharged patients from the Orthopaedic unit in IHO?

By undertaking a thorough review of relevant literature, this chapter aims to provide a theoretical framework that underpins the study's objectives and research questions. It contextualizes the research within the broader discourse on disability epidemiology, trauma-induced disabilities, and the current livelihood status of survivors, with a specific focus on the Namibian and Southern African context. The synthesis of existing knowledge will contribute to a comprehensive understanding of the subject matter, informing subsequent chapters' analyses and discussions.

2.2 Theoretical Framework

The study was informed by the Biopsychosocial model as the theoretical framework. This model proposed that health and illness resulted from complex interactions between biological, psychological, and social factors, including individual characteristics, the environment, and social and cultural influences (18). The Biopsychosocial model was particularly relevant to the study of disability following trauma, as it recognized the multi-dimensional nature of health and illness and the importance of considering the interplay between physical, psychological, and social factors.

In the context of the study, the Biopsychosocial model was used to explore the biological, psychological, and social factors that contributed to the development of disability following trauma among working-age adults in Intermediate Hospital Oshakati Orthopaedic Wards. The model was also used to explore the social and cultural factors that might have influenced the development and management of disability, such as access to healthcare services and cultural attitudes towards disability. By applying the Biopsychosocial model, the study gained a more comprehensive understanding of the epidemiology of disability following trauma among working-age adults in Intermediate Hospital Oshakati Orthopaedic Wards. The model also provided a framework for developing and evaluating interventions that addressed the multiple dimensions of disability and promoted the health and wellbeing of individuals affected by trauma.

Expanding on the theoretical framework, the study recognized that the Biopsychosocial model allowed for a holistic examination of disability, acknowledging that it is not solely a medical condition but a complex interplay

of biological, psychological, and social factors. By understanding these interconnections, interventions could be tailored to address the diverse needs of individuals, encompassing medical treatments, psychological support, and social inclusion initiatives. This comprehensive approach aligned with the overarching goal of promoting the health and well-being of trauma survivors in the working-age adult population served by Intermediate Hospital Oshakati Orthopaedic Wards.

2.3 Conceptualizing Trauma among Working-Age Adults

Trauma among working-age adults, typically defined as individuals between 18 and 65 years old, involves the physical and psychological distress resulting from a myriad of adverse events and experiences (19). This conceptualization offers a comprehensive understanding of the potential harm, encompassing both physical and emotional dimensions faced by this demographic.

In terms of physical trauma, injuries and accidents (20) constitute a significant dimension, encompassing bodily harm arising from various situations such as accidents, occupational mishaps, or injuries sustained in contexts like road traffic accidents, falls, or workplace incidents. Additionally, medical interventions (21) can contribute to trauma, involving the physical consequences of medical procedures, surgeries, or treatments impacting the well-being of working-age individuals.

Moving to the psychological realm, trauma involves emotional distress (22), emphasizing the emotional and mental impact of distressing events such as violence, abuse, or witnessing traumatic incidents. The psychological trauma

among workingage adults is further influenced by occupational stressors, including job insecurity, harassment, or excessive workload. Workplace trauma introduces another dimension, where occupational injuries (23) can result from accidents, exposure to hazardous substances, or occupational diseases, adversely affecting the physical and mental health of employees. Additionally, work-related incidents (24)] directly linked to the work environment, such as workplace violence, accidents, or exposure to traumatic situations, contribute to the overall trauma experienced by working-age adults.

The social and economic impacts of trauma extend beyond the individual, involving financial strain due to hardships like medical bills, loss of income due to disability, or the economic consequences of workplace injuries. Social isolation (25) is another facet, representing potential isolation and strain on relationships resulting from the aftermath of trauma, affecting the individual's social support system.

Rehabilitation and coping mechanisms play a crucial role in addressing trauma. The recovery and rehabilitation dimension (26) focus on processes involved in recovering from trauma, including medical interventions, psychological counselling, and rehabilitation programs aimed at restoring physical and mental well-being. Coping mechanisms (27) come into play as individuals employ various strategies to navigate the aftermath of trauma, such as seeking social support, engaging in therapy, or developing resilience.

The conceptualization of trauma among working-age adults recognizes its multifaceted nature, encompassing physical, psychological, workplace-

related, and socio-economic dimensions. This understanding is crucial for developing targeted interventions, support systems, and policies to address the diverse needs of individuals within the working-age population.

2.4. The patterns of disability among working-age adults

2.4.1 Brain Injury

Brain injuries result from trauma to the head and can encompass a range of symptoms from mild concussions to severe traumatic brain injuries (TBI). These injuries affect cognitive processes such as memory, attention, and executive function, impacting daily functioning and quality of life (28). Individuals with brain injuries often experience difficulties with concentration, problem-solving, and emotional regulation (29) Rehabilitation for brain injuries involves a combination of cognitive therapy, psychological support, and sometimes pharmacological interventions to manage symptoms such as mood swings and cognitive deficits (29). Cognitive rehabilitation aims to improve cognitive functions and help individuals regain independence, while psychological support addresses emotional challenges and promotes coping strategies (19).

2.4.2 Nerve Injury

Nerve injuries, which can be caused by trauma or compression, result in chronic pain, muscle weakness, and sensory disturbances (30). These injuries often lead to difficulties in performing daily tasks due to loss of sensation or motor function in the affected areas (31). Treatment typically includes physical therapy to strengthen muscles, improve coordination, and restore function, as

well as pain management strategies such as medications or nerve blocks to alleviate discomfort (31). Surgical interventions may be necessary to repair damaged nerves or relieve pressure, and ongoing rehabilitation is crucial for maximizing recovery and functional outcomes (3).

2.4.3 Muscle Injury

Muscle injuries, including strains, sprains, and tears, can lead to persistent pain and reduced mobility (4). These injuries often require a comprehensive approach to rehabilitation that includes rest, ice, compression, and elevation (RICE) to manage inflammation and pain (4). Physical therapy plays a key role in restoring muscle strength and flexibility, with exercises designed to promote healing and prevent longterm complications such as muscle atrophy or joint stiffness (2). Techniques such as massage and electrical stimulation may also be used to facilitate recovery and enhance functional outcomes (4)

2.4.4 Bone Injury

Bone injuries, such as fractures, require careful management to ensure proper healing and prevent long-term disability (5). Treatment often involves immobilization and surgical fixation to stabilize the bone and facilitate recovery (6). Post-operative rehabilitation is essential to restore range of motion, strength, and function, addressing potential complications like non-union or malunion of the fractured bone (7). Early and consistent rehabilitation efforts are important to prevent secondary issues such as joint stiffness and muscle atrophy, which can arise from prolonged immobilization (6).

2.4.5 Chest Injury

Chest injuries, including rib fractures and pulmonary contusions, can significantly impact respiratory function and overall health (7). Immediate medical treatment is necessary to manage potential complications such as pneumothorax (air in the pleural cavity) or hemothorax (blood in the pleural cavity) (24). Pain management is critical to enable effective breathing and prevent respiratory complications, while respiratory therapy and physical therapy are essential for supporting recovery and improving lung function (17). Proper management of chest injuries is vital to ensuring a full recovery and minimizing long-term impacts on respiratory health (30).

2.4.6 Abdominal Injury

Abdominal injuries, which can result from trauma to the abdominal region, often require surgical intervention to repair internal damage and manage potential complications such as infection or bleeding (31). Post-operative care includes pain management, monitoring for complications, and gradually reintroducing physical activity to support healing (23). Nutritional support is also important to promote recovery and maintain overall health (22). Effective management of abdominal injuries is crucial to ensuring proper healing and preventing long-term complications related to internal damage (31).

2.4.5 Spinal Cord Injury

Spinal cord injuries (SCIs) result in significant impairments, including paralysis and loss of sensation below the level of injury (26). Management of SCIs involves acute care to stabilize the injury, followed by long-term rehabilitation

to maximize functional recovery (25). Physical therapy focuses on enhancing mobility, strength, and independence, while psychological support addresses the emotional and

psychological impact of living with a disability (29). Ongoing support is necessary to manage secondary complications such as pressure sores and urinary tract infections, and to improve overall quality of life (26).

2.5 The perceptions of patients regarding the causes of their disabilities following trauma

2.5.1 Understanding of Injury Mechanism

Patients often perceive that their disabilities are intrinsically linked to the specific mechanisms of injury sustained during traumatic events. For example, those involved in motor vehicle accidents frequently associate their disabilities with the impact endured during the collision. This perception stems not only from the physical injuries observed but also from the immediate circumstances surrounding the incident. When individuals experience a traumatic event, they tend to process the event in a way that helps them make sense of the physical consequences they endure. For instance, a patient who suffers a spinal cord injury from a fall may attribute their resulting paralysis to the forces exerted on their body during the incident. This attribution can be crucial for patients as it serves to contextualize their experiences and can influence how they view their recovery journey.

Research indicates that understanding the mechanism of injury may play a role in the rehabilitation process. Patients who grasp the nature of their injuries often report greater engagement in their recovery efforts, as they can better

relate their rehabilitation exercises to the physical impairments they are experiencing. Furthermore, understanding the mechanics behind their injuries allows patients to appreciate the importance of preventive measures, ultimately leading to more cautious behavior in their daily lives to avoid similar incidents [1].

Psychological factors also come into play when evaluating perceptions of injury mechanisms. Many patients struggle with trauma-related fears that can hinder their recovery. Patients who believe that their injuries resulted from unavoidable accidents may exhibit different emotional responses than those who perceive their injuries as avoidable results of poor decisions. Consequently, healthcare providers must take time to discuss the mechanisms of injuries with patients, ensuring they have a comprehensive understanding that promotes healing and recovery.

2.5.2 Personal Responsibility

The perception of personal responsibility for one's injuries can significantly influence the psychological well-being of patients recovering from trauma. Some individuals hold themselves accountable for the circumstances that led to their injuries, and this sense of guilt can have profound effects on their recovery process. For many patients, this perception arises from a reflection on the events leading to their trauma. For instance, a person injured in a motorcycle accident might attribute their injuries to risky riding behavior or a failure to wear protective gear. This self-blame can manifest in various ways, including feelings of shame, depression, and anxiety, which are common among those who perceive their injuries as resulting from personal choices [2].

Such perceptions are further complicated by societal attitudes toward injury and disability. Patients may encounter stigmatization when their injuries arise from activities deemed reckless or avoidable. These societal perceptions can exacerbate feelings of guilt, leading patients to withdraw from social interactions and support networks during a crucial recovery phase.

Interestingly, the psychological impact of feeling personally responsible may vary among individuals. Some patients may use their perceived responsibility as a motivational tool, driving them to adopt healthier behaviors and seeking to prevent future incidents. Conversely, others might struggle with feelings of inadequacy and helplessness, impeding their engagement in rehabilitation efforts.

2.5.3 Environmental Factors (Continued)

In urban environments, infrastructure also plays a crucial role in shaping patients' perceptions of their injuries. Poorly maintained roads, inadequate signage, and insufficient pedestrian crossings can contribute to accidents, particularly for individuals in densely populated areas. Patients who live in environments lacking essential safety measures often express anger and a sense of injustice regarding the circumstances leading to their trauma. They may feel that their injuries were not solely caused by their actions but were also the result of systemic failures in public safety [3].

Furthermore, broader social determinants of health significantly influence injury outcomes. Individuals from marginalized communities may face increased risks due to overcrowded living conditions, limited access to health services, and inadequate education about safety practices. For these individuals, recognizing environmental factors as contributors to their

disabilities is crucial for understanding their experiences. They may feel empowered to advocate for better conditions within their communities to prevent similar injuries from occurring in the future [4].

Patients might also perceive that the support available to them following their injuries is influenced by the social and physical environment. Access to rehabilitation services, community support, and family resources can vary dramatically between different locales and socioeconomic groups. This disparity might lead to a sense of helplessness among patients in unsupported environments, reinforcing their disabilities and prolonging recovery periods [5].

Addressing these environmental factors in healthcare discussions can help patients contextualize their injuries. Healthcare providers can play a pivotal role in this regard by acknowledging the environmental and social determinants affecting their patients' lives. By doing so, they not only validate patients' experiences but also encourage them to engage in discussions about necessary changes within their environments to enhance safety and reduce the risk of future trauma.

Ultimately, the recognition of environmental factors in relation to trauma-related disabilities can help guide public health initiatives aimed at improving workplace safety, urban infrastructure, and community health resources. By addressing these determinants comprehensively, healthcare systems can not only support individual patients but also work towards reducing the broader incidence of trauma in at-risk populations.

2.5.4 Social Influences

Social influences play a significant role in shaping patients' perceptions of their disabilities following trauma. The degree of support received from family, friends, and the broader community can significantly impact recovery outcomes, as well as how patients interpret their injuries and disabilities. A supportive social network can help patients navigate the emotional and psychological challenges that often accompany traumatic injuries, while a lack of support may exacerbate feelings of isolation and helplessness [6].

Patients often rely on their immediate social circles for both emotional and practical support during their recovery. Family members and friends can provide vital companionship and encouragement, fostering a sense of belonging that is crucial for mental health. In many cases, patients who perceive strong support from their social network report higher satisfaction with their recovery process, displaying greater resilience against the psychological effects of their injuries. This support can manifest in various ways, from assistance with daily activities to emotional encouragement during rehabilitation [7].

Conversely, individuals who lack a solid support system face greater challenges. Some patients may feel abandoned or neglected during their recovery, leading to increased anxiety, depression, or feelings of worthlessness. Social isolation can hinder motivation to engage in rehabilitation efforts, resulting in a detrimental cycle that perpetuates disability [8]. The mental health impacts are significant, as loneliness and lack of support have been linked to poorer outcomes in recovery and rehabilitation for trauma

patients. Cultural influences further complicate these dynamics. Patients from collectivist cultures might feel more pressure to conform to family expectations regarding health and performance, potentially leading to additional stress. For example, they may perceive a duty to recover quickly and return to their roles within the family or community, which can create unrealistic expectations and hinder their actual recovery process [9].

Healthcare providers must be aware of these social influences when treating trauma patients. Incorporating discussions about support networks into treatment plans can enhance recovery outcomes. Providers can encourage patients to engage with available support resources, including peer support groups, counseling services, and community programs designed to assist individuals recovering from trauma [10]. Social influences are pivotal in shaping patients' perceptions and experiences of disabilities following trauma. By recognizing the importance of social support, healthcare systems can create more comprehensive approaches to rehabilitation that address both physical and emotional needs, ultimately improving overall patient outcomes.

2.5.3 Environmental Factors (Continued)

Patients frequently describe experiences where a lack of safety protocols or insufficient training contributed to their injuries, reinforcing their belief that the environment directly influences their health outcomes [3]. Urban infrastructure also plays a crucial role in shaping patients’ perceptions of their injuries. Poorly maintained roads, inadequate signage, and insufficient pedestrian crossings can contribute to accidents, especially in densely populated areas. Patients living in environments lacking essential safety measures often express anger and a sense of injustice about the circumstances leading to their trauma. This

recognition leads to a desire for better infrastructure and public policies that prioritize safety [4].

Moreover, social determinants of health, such as socioeconomic status and access to resources, are fundamental factors influencing injury outcomes. Individuals from marginalized communities may face increased risks due to crowded living conditions, lack of access to healthcare services, and limited education about safety practices. These environmental determinants often create a cycle of injury, disability, and limited access to recovery resources. Patients who face such challenges may perceive their injuries not just as personal experiences but as reflections of systemic failures that contribute to health disparities [5].

Additionally, some patients feel that aspects of their environments exacerbate their disabilities post-injury. For example, inadequate housing, lack of accessible public transport, and limited availability of rehabilitation services can hinder recovery and reinforce feelings of isolation and frustration. These barriers can make it difficult for patients to engage in rehabilitation programs fully, thus prolonging their recovery process and affecting their overall quality of life [6].

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2.5.5 Psychological Impact

The psychological impact of trauma can significantly shape how patients perceive their disabilities following an injury. Trauma can result in various psychological responses, including anxiety, depression, and post-traumatic stress disorder (PTSD), all of which can affect an individual's sense of self and their expectations for recovery. In many cases, the emotional repercussions of trauma may dwarf the physical injuries sustained, leading to a complex relationship between mental health and disability [11].

Patients often report a sense of hopelessness and frustration when confronted with the long-term consequences of their injuries. The realization that their lives may never return to the pre-injury state can lead to a profound identity crisis, where individuals struggle with their new realities and limitations. This emotional turmoil can exacerbate the overall experience of disability, as feelings of loss of control and independence emerge [12].

The psychological interpretation of disabilities is frequently informed by external factors, such as social support and cultural attitudes toward disability.

For instance, patients who perceive social stigma around disability may internalize negative attitudes, resulting in lowered self-esteem and increased feelings of inadequacy. This negative self-perception can further hinder rehabilitation efforts, creating a self-fulfilling prophecy where the individual believes they will not improve, thus impacting their motivation and participation in treatment [13]. Moreover, cognitive factors play a role in determining how individuals respond psychologically to their disabilities. Some patients may adopt a less adaptive coping style, focusing excessively on their limitations and how life has changed post-trauma. This maladaptive approach can perpetuate a negative feedback loop, where the lack of hope leads to disengagement from rehabilitation and, ultimately, poorer outcomes [14].

Effective management of the psychological aspects of trauma is crucial in addressing disabilities. Health professionals should incorporate psychological support into rehabilitation plans, ensuring that patients receive comprehensive care that addresses both physical and emotional needs. Interventions such as cognitive-behavioral therapy (CBT) have been shown to help patients reshape their perceptions of their disabilities, fostering more adaptive coping strategies and resilient behaviors [15].

2.5.6 Access to Healthcare Services

Access to healthcare services is a crucial determinant affecting patients' perceptions of their disabilities following trauma. Many individuals face barriers that hinder timely and adequate medical care, which can significantly influence their recovery outcomes and sense of empowerment. These barriers can be

multifaceted, including financial, geographic, systemic, and logistical factors [16].

Patients may encounter financial impediments, such as high medical costs that limit their ability to seek necessary care. In areas where health insurance is not widely available or comprehensive, individuals might delay treatment or forgo rehabilitation altogether due to concerns about costs. This lack of access to timely rehabilitation services can lead to the persistence of disabilities, reinforcing negative perceptions of one's condition and the belief that recovery is unattainable [17]. Geographically, individuals living in rural or underserved urban areas often face additional challenges in accessing appropriate medical facilities and rehabilitation services. The distance to healthcare providers can result in delays in receiving care, as patients may struggle with transportation issues or the inability to take time off from work or family obligations. Delays in treatment can exacerbate injuries, leading to long-term complications and a prolonged recovery process [18].

Systemic factors within healthcare systems can also create barriers to access. Patients might experience long wait times for appointments or surgeries, insufficient availability of specialized care, and inadequate coordination between healthcare providers. Such systemic issues can contribute to a frustrating experience for patients, who may perceive themselves as being neglected or unheard by the healthcare system. This perception can lead to diminished trust in healthcare providers and reluctance to seek further assistance [19].

Logistical factors, including the scheduling of follow-up appointments and the coordination of rehabilitation services, greatly impact the continuity of care. Patients may struggle to navigate complex healthcare systems, leading to missed appointments and interrupted treatment plans. This inconsistency can result in setbacks during recovery, fostering a negative perception about their rehabilitation journey [20].

2.5.6 Quality of Rehabilitation

The perceived quality of rehabilitation services significantly influences patients' experiences and perceptions of their disabilities following trauma. Effective rehabilitation is a critical component of recovery, aiming to restore function, reduce discomfort, and improve the overall quality of life for individuals who have sustained traumatic injuries. However, when patients perceive the quality of their rehabilitation as inadequate, it can lead to feelings of disappointment and frustration, further exacerbating their disability experience [22].

Patients often assess the quality of rehabilitation based on multiple factors, including the expertise of the rehabilitation staff, the availability of resources, and the overall environment of the rehabilitation facility. High-quality rehabilitation programs typically involve a multidisciplinary approach, where a team of healthcare professionals collaborates to provide comprehensive care tailored to individual patient needs. This collaborative model not only addresses the physical aspects of recovery but also considers patients' emotional and psychological well-being [23].

Patients may also express dissatisfaction with rehabilitation services if they encounter inconsistent care or insufficient follow-up. When therapy sessions

are sporadic or resources are limited—such as a lack of necessary equipment or facilities—patients can become frustrated and may perceive their recovery as insufficient. Such perceptions can foster a belief that "nothing is working," which discourages them from fully engaging in their rehabilitation [25].

Moreover, the effectiveness of rehabilitation services can vary based on the specific types of injuries sustained. Some injuries may require specialized care or advanced therapeutic techniques that are not available in all rehabilitation settings. Patients whose needs are not met due to a lack of access to expertise may develop a sense of helplessness, leading them to believe that their disabilities are insurmountable [26].

To enhance the quality of rehabilitation services, healthcare providers must prioritize patient feedback and actively engage patients in their own care planning. Furthermore, investing in staff training, developing evidence-based rehabilitation protocols, and ensuring access to up-to-date resources can help improve service delivery. Establishing a nurturing and supportive environment where patients feel valued and heard is essential for fostering positive rehabilitation experiences [27].

2.5.7 Cultural Beliefs

Cultural beliefs play a significant role in how patients perceive their disabilities following trauma. Various cultures have differing perspectives on health, disability, and recovery, all of which can greatly impact how individuals interpret their experiences and cope with their conditions. For instance, in some cultures, disabilities may be viewed as a punishment or a result of

negative karma, leading to a fatalistic attitude that can impede rehabilitation efforts [28].

Patients from collectivist cultures may feel a strong connection to their family and community beliefs regarding health and disability. This cultural context can influence their acceptance of their disability and the expectations they have regarding recovery.

In such cases, individuals may seek traditional healing practices or alternative therapies alongside or in place of conventional medical treatments. This dual approach to care can lead to conflicts between health beliefs and medical advice, complicating the management of their recovery [29].

Conversely, some patients may have culturally rooted beliefs in resilience and the ability to overcome challenges, which can enhance their motivation to engage in rehabilitation and recovery. This positive outlook may serve as a buffer against the psychological impacts of trauma and disability, fostering a sense of hope and agency in their healing process. However, when cultural beliefs do not align with medical advice, patients may experience confusion or resentment, which can hinder their willingness to follow prescribed rehabilitation plans [30].

Healthcare providers must be sensitive to the cultural contexts within which patients operate. By incorporating culturally competent care practices, healthcare professionals can build rapport with patients and foster trust. This involves actively listening to patients' beliefs and preferences, acknowledging their cultural backgrounds, and integrating traditional healing practices where appropriate and feasible.

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2.6 The experiences of patients living with disabilities following trauma among

working-age adults

2.6.1 Physical Challenges and Adaptations

Individuals living with disabilities following trauma face substantial physical challenges that necessitate significant adaptations in their daily lives. Research consistently highlights the need for patients to modify their home environments and develop new routines to accommodate their physical limitations (15). Such modifications can include installing assistive devices, rearranging living spaces for easier access, and adopting new methods for performing daily tasks. Tailored rehabilitation programs play a crucial role in

assisting patients with these adaptations, enabling them to maintain a degree of independence and enhance their quality of life. Effective rehabilitation can lead to improved mobility, reduced dependency, and greater participation in social and economic activities (15).

2.6.2 Emotional and Psychological Impact

The emotional and psychological toll of living with disabilities following trauma is considerable. Numerous studies have documented high levels of frustration, sadness, and anxiety among individuals as they adjust to their new circumstances (7, 21, 22). Depression and anxiety are common, often stemming from the sudden and drastic changes in lifestyle and the uncertainty about the future. Feelings of worthlessness and frustration can also arise from perceived limitations and the struggle to regain a sense of normalcy. Comprehensive mental health support, including counseling and therapy, is essential for helping individuals manage these emotional challenges. Psychological interventions can significantly improve mental well-being, aiding in the coping process and enhancing the overall quality of life (7, 21, 22).

2.6.3 Social Support and Relationships

Social support networks are vital for individuals living with disabilities. Family, friends, and community members play a significant role in providing both emotional and practical assistance. Literature suggests that strong social ties can buffer against the emotional and practical challenges posed by disabilities, enhancing overall well-being and resilience (3, 30). Effective social support has been shown to improve mental health outcomes and facilitate better

adaptation to life changes. This support can include helping with daily tasks, providing emotional encouragement, and offering a sense of belonging and security. The presence of a robust support system is linked to better psychological health and a more positive outlook on life (3, 30).

2.6.4 Economic and Employment Issues

Economic and employment issues are major concerns for individuals living with disabilities. Research highlights the significant impact of disabilities on employment status and financial stability. Many individuals with disabilities experience reduced job opportunities, lower income, and job insecurity. This financial strain can exacerbate the challenges of living with a disability, leading to increased stress and a lower quality of life (25, 28). Vocational rehabilitation programs and employment support services are critical in helping individuals with disabilities re-enter the workforce and achieve financial stability. These programs can provide job training, assistive technologies, and support for workplace accommodations, thereby enhancing employment prospects and economic well-being (25, 28).

2.6.5 Healthcare and Rehabilitation Services

Access to healthcare and rehabilitation services is crucial for individuals living with disabilities. Studies show that timely and specialized medical care can significantly improve physical functioning and overall quality of life (6, 7). However, individuals often face challenges in accessing the necessary care, including delays, insufficient frequency of rehabilitation sessions, and a lack of specialized services. Effective healthcare services are essential for managing

the physical aspects of disability, while comprehensive rehabilitation programs can support individuals in regaining functional abilities and adapting to their new circumstances (6, 7). Ensuring accessibility and quality of healthcare services is vital for improving recovery outcomes and supporting the rehabilitation journey.

2.6.6. Future Outlook and Aspirations

Despite the challenges, individuals living with disabilities often maintain a positive future outlook and have aspirations for personal and professional growth. Research indicates that having goals and aspirations can provide vital motivation and a sense of purpose, which are essential for mental and emotional well-being (2, 13). Supportive programs that assist individuals in setting and achieving realistic goals can significantly enhance their quality of life. These programs can include educational opportunities, career advancement support, and initiatives to promote independence and self-sufficiency. A positive outlook and clear aspirations can drive individuals to overcome obstacles and strive for a fulfilling life (2, 13).

2.6.7 Mobility Issues and Home Modifications

Mobility issues are a common challenge for individuals with disabilities following trauma. Literature emphasizes the importance of home modifications to accommodate mobility limitations and ensure safety and accessibility (15). This can include installing ramps, widening doorways, and using adaptive equipment for daily activities. Such modifications are essential for enabling individuals to navigate their living spaces independently and perform daily tasks with greater ease. Effective home modifications can significantly

enhance the quality of life, reduce the risk of injury, and promote greater independence and confidence in managing daily activities (15).

2.6.8 Feelings of Helplessness and Anxiety About the Future

Feelings of helplessness and anxiety about the future are prevalent among individuals living with disabilities. Studies highlight that these feelings often stem from uncertainty about their ability to regain independence and the potential for future improvement (7, 21, 22). This anxiety can be exacerbated by the perceived lack of control over their circumstances and the challenges in adjusting to a new way of life. Psychological support and counselling are crucial in addressing these feelings, helping individuals build coping strategies, and fostering a more positive outlook. Interventions aimed at enhancing self-efficacy and providing emotional support can mitigate feelings of helplessness and promote mental resilience (7, 21, 22).

2.7 The gap

Despite a growing body of literature focusing on the socio-demographic factors influencing perceptions of disability after trauma, there are critical gaps in our understanding that warrant further exploration. These gaps can significantly impact policy formulation, rehabilitation practices, and the overall support provided to individuals recovering from trauma.

First and foremost, there is a notable lack of longitudinal studies in the existing research. Much of the current literature is cross-sectional, making it difficult to ascertain causal relationships between socio-demographic factors—such as age, gender, and marital status—and the evolution of disability perceptions

over time. For instance, while we know younger adults often perceive their injuries as temporary setbacks [1], we do not fully understand how these perceptions change as individuals progress through the recovery process. Longitudinal research could provide invaluable insights into how perceptions evolve and how various factors influence this trajectory [2]. Moreover, the dynamics of gender in the context of treatment efficacy present another significant gap. While it is recognized that women typically report higher levels of disability [3], the underlying reasons affect treatment outcomes remain insufficiently explored. Specifically, examining how gender differences impact the success of rehabilitation programs is critical. Addressing these differences could facilitate the development of tailored, gender-sensitive interventions to enhance recovery for all individuals [4].

Another crucial aspect that warrants further investigation is the influence of socioeconomic status (SES). While existing studies have illuminated the impact of education and occupation on disability perceptions, they often do not account for the broader implications of SES. Factors such as financial stability, housing quality, and access to resources collectively shape how individuals experience and perceive their disabilities [5]. Understanding how SES interacts with other socio-demographic factors can provide a more comprehensive view of recovery experiences and outcomes

related to trauma [6].

Cultural perspectives also represent a significant void in current literature. Much of the research has focused on Western contexts, leaving many questions unanswered regarding how cultural attitudes toward disability affect

perceptions, particularly in diverse communities. Empirical studies exploring differing cultural norms regarding disability across various ethnic groups are scarce [7]. In multicultural settings like Vancouver, understanding how cultural perceptions influence experiences of disability could inform more effective service delivery that aligns with the values and beliefs of diverse populations [8]. Additionally, while some studies address challenges faced by rural populations concerning healthcare access, there is insufficient evidence on how these disparities specifically influence disability perceptions. Exploring the unique experiences of those living in rural areas, particularly regarding their interactions with rehabilitation services, can provide critical insights for targeted interventions [9][10].

A noteworthy gap exists in studying the intersectionality of various identities in shaping perceptions of disability. Current research often examines socio-demographic factors in isolation rather than as interconnected elements influencing perceptions collectively. Employing an intersectional approach that considers overlapping identities, such as gender, race, age, and socioeconomic status, is necessary for creating a fuller understanding of how individuals experience disability and trauma [11][12]. This multifaceted perspective is essential for developing comprehensive strategies that effectively address the diverse realities encountered by individuals with disabilities.

2.8 Chapter Summary

Chapter Two provides an in-depth exploration of the multifaceted determinants and barriers affecting the accessibility of rehabilitation services for individuals

recovering from trauma or disabilities. The chapter encompasses a comprehensive review of various factors, including economic burdens, disproportionate impacts, and models of disablement, shedding light on their intricate roles in shaping the rehabilitation landscape. Additionally, it delves into the critical aspects of psychosocial support, community engagement, and the impact of injury severity on disability and quality of life. Throughout Chapter Two, the narrative is enriched by a synthesis of relevant and contemporary literature, incorporating diverse perspectives to present a holistic understanding of the determinants and barriers influencing the rehabilitation landscape for individuals recovering from trauma or disabilities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study's methodology chapter described the methodical technique used to investigate the Epidemiology of Disability Following Trauma Among Working Age Adults in Intermediate Hospital Oshakati Orthopedic Wards. The chapter began by repeating the study questions and objectives for context. A mixed-methodologies approach, including quantitative and qualitative methods, enabled a thorough investigation. Quantitative data was analysed using descriptive statistics, correlation, and regression. Qualitative data was analyzed using thematic analysis to find patterns. Triangulation was used to check findings from numerous data sources and methods to improve validity and reliability.

3.2 Research Philosophy

Paradigms influence study design, data collecting and analysis, and result interpretation, as well as researchers' worldviews (32). Researchers must be aware of their paradigms to understand their duties, direct research, and acknowledge other perspectives (33). This study used Pragmatism emphasises events, circumstances, and results above post-positivism, which depends on antecedents (34). It emphasises problem-solving and applications (35). Pragmatic researchers focus on the research subject and employ

multiple methods to gain knowledge. Pragmatic thinking, which focuses on a social science issue and uses pluralistic approaches to study it, greatly influences mixed-methods studies. Mixed-methods research and pragmatic thinking usually go together (36)

Pragmatism includes positivism, post-positivism, and constructivism (37). Pragmatism and transformative-emancipatory paradigms disapprove of academics focusing solely on practical solutions to situations that interest them (38,39). Pragmatic researchers can adapt their methods to the study issue and goals. Lack of theoretical stability

Pragmatism's focus on problem-solving; this may weaken its theoretical foundation. Pragmatism's flexibility can lead to subjectivity in methodology selection and outcome interpretation, introducing bias.

3.3 Research Design

For the quantitative approach in this study, a descriptive survey was employed, complemented by an exploratory research design, specifically an exploratory case study, for qualitative approach. The utilization of a descriptive survey research design for quantitative data aligns with (40) assertion that descriptive research systematically characterizes a phenomenon, situation, or population, focusing on addressing "what, when, where, and how" questions rather than delving into the "why" question.

The quantitative data, gathered systematically through the descriptive research approach, allowed for statistical analysis of the research problem (33).

On the other hand, the qualitative data collection and analysis were conducted through an exploratory case study, chosen based on its suitability for the research objectives. The exploratory case study design, coupled with qualitative research methods, offers researchers the opportunity to delve into participants' values, assumptions, and perceptions regarding issue under study (33).This design facilitates in-depth interviews and observations, providing a comprehensive understanding of participants' perspectives and experiences. It contributes to the development of a nuanced understanding of the research problem, generating findings that not only guide future studies but also have practical applications. In the context of the current topic, "The Epidemiology of Disability Following Trauma among Working Age Adults in Intermediate Hospital Oshakati Orthopedic Wards," a similarly strategic combination of quantitative and qualitative research approaches is crucial for a comprehensive exploration of the subject matter.

3.4 Research Strategy

This study used exploratory sequential mixed-methodologies combining qualitative and quantitative methods to evaluate the epidemiology of disability after trauma in working-age adults in Intermediate Hospital Oshakati Orthopedic Wards. The integration of qualitative and quantitative methods was planned from the start to fully comprehend the research phenomenon (34). Mixed-methodologies research goes beyond qualitative and quantitative methods to better comprehend a phenomenon. Qualitative research provides in-depth understanding, while quantitative research provides generalized and specific information (34). Researchers utilize mixed methods because they combine the benefits of qualitative and quantitative research while minimizing

their drawbacks (35). Since this paradigm was developed, researchers have bitterly debated reality's presumptions.

This study's quantitative methodology emphasized precise measurements and numerical analysis of survey, poll, and other data. Quantitative data and populationwide discoveries were its focus (36). Quantitative research sought to link internal controls (an independent variable) to financial performance (a dependent or outcome variable) in the target population. Quantitative research employed inductive reasoning, statistical analysis, static data, convergent reasoning, and a purpose.

Qualitative research was performed to gather data. (40) states that qualitative and quantitative data can assist each other's conclusions. Qualitative research explored the meanings and applications of the research inquiry using interviews, participant observation in unstructured settings, and material analysis (36).

3.5 Population

According to [37], the term "population" in a study refers to the full set of prospective individuals, items, or measurements that the researcher is interested in. It stands for the population that the researcher is attempting to generalise from [35]. [33] further emphasises that the population should be knowledgeable about the topic of the researcher's study. A study population is described as a complete set of elements that can be persons or objects that possess some common characteristics.

The population for the current study included all survivors as part of the study population from 2019 up to 2021 and the quantitative study research design will include all patients recorded in the two previous years (2019-2021) in orthopaedics male and female ward admitted in Oshakati state hospital between 18 to 60 years old from 2019 t0 2021. The study population will be shown in the Table 1 below.

Table 1: Study population

	2018<x≤ 2020	**2020<x≤ 2021**	**Total**
Ward 5 (Male)	597	531	1128
Ward 6B (Female)	324	282	606
Total	921	813	1734

Intermediate hospital Oshakati Records (2023)

3.6 Samples and sampling procedures

Total population sampling was used for the quantitative research in this study due to the population's very modest size. Total population sampling includes looking at the complete population that has a particular set of characteristics. It is a deliberate sampling strategy. This sample technique is frequently used when the population as a whole is small and well-defined, and some people might not fit the requirements

[34].

On then qualitative dimension, the non-probability purposive sampling was employed to choose participants for interviews for the qualitative component. On the qualitative dimension, 10 participants were purposefully sampled for the interview. The interview guide was responding to the question: “What are

the experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati?", What are the primary challenges you face in your daily life due to your disability?, How has your disability influenced your emotional wellbeing and mental health? What role has your support network (family, friends, and community) played in your recovery and adaptation process?

On the quantitative dimension, the simple random sampling strategy was employed

as follows, $n = \frac{N}{1+\propto^2 N} = \frac{1734}{1+0.05^2*1734} = 325$. Therefor the sample size for the quantitative dimension comprised of 325 participants.

3.7 Research Instruments

3.7.1 Semi-structured interview guide

The study utilized a semi-structured interview guide designed to effectively capture the following specific objectives: to assess the perceptions of patients regarding the causes of their disabilities following trauma and to explore the livelihood experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati.

The conducting of these semi-structured interviews began with the creation of a detailed interview guide designed to maintain focus while allowing flexibility. The guide served as a roadmap, consisting of a planned set of questions aimed at uncovering essential information about the participants' experiences and perspectives. Carefully constructed, the questions facilitated a structured

conversation but left room for adaptability, allowing the researcher to delve deeper into responses that revealed rich insights.

Central to the guide were various question types that targeted different aspects of participants' lives—ranging from personal experiences and opinions to their backgrounds and knowledge. This diversity in questioning aimed to capture the nuances of the phenomenon under study, approaching it from multiple viewpoints to enrich the understanding of the participants' lived realities. Probes and follow-up questions were thoughtfully integrated into the guide to encourage participants to elaborate further on their answers, providing additional justifications and details. This approach ensured that the data collected was comprehensive, adding depth to the understanding of the issues faced by the participants.

To ensure clarity and consistency in the interview process, the interview guide was pretested with three participants who did not take part in the final data collection. This pretesting phase checked for clarity in wording and question consistency. The actual interview sessions were designed to last for approximately 40 minutes, providing ample time for participants to share their experiences and insights in detail. The thoughtful design of the interview guide thus played a crucial role in collecting rich, qualitative data that would contribute to a deeper understanding of the lives of individuals living with disabilities following trauma.

3.7.2 Closed-ended questionnaire

A closed-ended questionnaire is a type of quantitative research tool that offers participants a set of predetermined response alternatives. It often consists of

a series of questions with clearly defined response alternatives that force participants to choose from a prepared set of choices [33]. The closed ended questionnaire was used to respond to objective one and two which seek to determine the patterns of disability among working-age adults discharged at intermediate hospital Oshakati orthopaedics department This questionnaire served as a quantitative research tool, offering participants a set of predetermined response alternatives, allowing them to articulate their experiences within a structured framework.

The development of the questionnaire was a deliberate and thoughtful process. Initially, a comprehensive literature review was conducted to understand existing research on disability patterns and determinants following trauma. This informed the initial design, ensuring that the questions posed were grounded in relevant and up-todate knowledge. Collaboration with experts in orthopaedics and rehabilitation was crucial during this phase, as their insights helped refine the questions to ensure they were both technically accurate and clinically relevant.

The questionnaire was divided into several sections, each crafted to gather specific types of information. The first section addressed demographic details, collecting basic participant information such as age, gender, and employment status. This information was critical for contextualizing the responses and understanding the broader socioeconomic landscape of the participants.

Following this, the questionnaire explored specific disability patterns. Questions in this section aimed to identify challenges related to mobility and the ability to perform daily activities, helping to map out the broader impacts of

the trauma on participants' everyday lives. The final section delved into the determinants of disability, investigating factors such as access to rehabilitation services, support systems, and socio-economic conditions that might influence participants' disability status.

To ensure the questionnaire's validity and reliability, a pre-testing phase was conducted. This involved administering the questionnaire to a small, representative sample of participants. Feedback was sought to identify any confusing or ambiguous questions, which were then refined based on this input. For reliability testing, the questionnaire was distributed to the same sample group on two separate occasions, several weeks apart. The results indicated a high level of consistency, demonstrating the questionnaire's ability to reliably measure the intended constructs. Additionally, content validity was confirmed through expert reviews. Healthcare professionals involved in trauma care and disability management at Intermediate Hospital Oshakati reviewed the questionnaire, providing crucial feedback to ensure that the questions accurately reflected the constructs they were designed to measure.

The study employed a closed-ended questionnaire designed to gather quantitative data about participants' perceptions of disability following trauma. This format was particularly beneficial as it allowed for the collection of structured responses that can be easily quantified and statistically analyzed. By choosing closed-ended questions, the study ensured that the data captured specific insights into how individuals perceive their disabilities, enabling the identification of patterns and correlations with various socio-demographic factors.

Notably, the exploration of perceptions—one of the primary research objectives—was facilitated through this questionnaire. The targeted questions regarding perceptions of disability allowed for a nuanced understanding of how individuals interpret and respond to their experiences of trauma. The questionnaire itself was structured into several comprehensive sections that focused on different dimensions related to
disability patterns.

To accommodate the diverse population participating in the study, the questionnaire was translated into multiple languages. While the primary language of the questionnaire was English, translations were also provided Oshiwambo. This effort aimed to enhance accessibility and ensure that all participants could engage with the material comfortably and accurately, regardless of their primary language.

Regarding reliability, a Cronbach alpha test was conducted to assess the internal consistency of the questionnaire. This statistical test is crucial in determining whether the items within each section of the tool reliably measure the same underlying construct. The results of the reliability test revealed a Cronbach alpha value of 0.7, indicating a high level of internal consistency. This result affirms that the questionnaire is a reliable measure for assessing perceptions of disability. The time to complete the questionnaire was 12 hours for questionnaire completion.

3.8 Data Collection Procedures

The researcher initially obtains ethical approval from the University of Namibia for both quantitative and qualitative data. The researcher also requested

authorization from IHO management to involve its staff in the study. After deciding to participate in the study, each participant or respondent was required to sign a consent form. The study followed all ethical guidelines, as mentioned in 3.10 below, and adequately disclosed its aim to all organisations and participants.

3.8.1 The quantitative data collection

To effectively reach participants for the survey, Google Survey Forms were employed to distribute the survey via email. This platform was selected for its numerous advantages in collecting quantitative data, such as low resource cost, the ability to reach a large sample, and ease of data entry. Empirical evidence supported the choice of Google Forms, as the necessary technology to complete the survey was accessible to all participants.

The process of sending out the survey was methodically organized. Participants received an initial email invitation that included a brief introduction to the study and a link to the Google Form. The email clearly outlined the purpose of the survey and assured participants of the confidentiality of their responses.

These strategic steps in distributing the survey and managing responses were crucial in maximizing participation and ensuring high-quality data collection from the chosen sample. The participants were given 12 hours to complete the questionnaire.

3.8.2 Qualitative data collection

In the qualitative section of the study, data collection was carried out by the researcher with the assistance of some research assistants. This process took place at the

Intermediate Hospital Oshakati, specifically in the orthopaedic wards. The primary method used for gathering data was in-depth, face-to-face interviews. These interviews allowed for a comprehensive understanding of the experiences and perspectives of working-age adults who had become disabled following trauma. The face-to-face interaction facilitated a more personal and detailed exploration of the participants' narratives, ensuring rich qualitative data.

3.9 Data Analysis

3.9.1 Quantitative Data Analysis

Data organization, administration, and analysis were conducted using SPSS version 28.0 to ensure robust statistical handling of the survey data. Access to the electronic survey responses stored on the Google server was secured with password protection, maintaining the confidentiality and integrity of the data.

To process the data, all survey items underwent descriptive statistical analysis. This approach provided a clear summary of the basic features of the dataset, focusing on the distribution, central tendency, and variability of the responses. Given the nominal nature of the data, the mode was selected as the primary measure of central tendency to capture the most frequently occurring response for each item [36]. This was particularly useful in identifying and

classifying non-responses, as well as understanding the predominant trends within demographic groups of participants. Furthermore, correlational statistics were applied to examine the relationships between key variables. This analysis aimed to identify potential associations between demographic factors (such as age, gender, and employment status) and survey responses related to disability patterns and determinants. By using Pearson's correlation coefficient the strength and direction of these relationships were assessed.

In this analytical process, a significance level (p-value) of 0.05 was used to determine statistical significance. This standard threshold helped in identifying meaningful correlations that suggested underlying patterns or trends warranting further exploration. The application of both descriptive and correlational statistics provided a comprehensive understanding of the survey data, facilitating insights into the research objectives and guiding subsequent interpretations and recommendations.

3.9.2 Qualitative Data Analysis

Data from participants in the initial qualitative phase was processed using the qualitative analysis digital tool, Hyper RESEARCH. The interview data underwent three iterations, or stages, of processing. Comparison analysis was continuously carried out when the data began to form coherent patterns. These recurring patterns, utterances, and words were consequently transformed into coding categories [33]. Data can be categorised via code mapping to make it ready for in-depth analysis. The initial iteration of this code map, according to (35), demonstrates how many interpretations and insights

from participant interviews have been gathered, processed, and compacted into useful data units.

The information provided by the participants is analysed between categories and within categories in the second round to identify distinct themes. Larger themes have been developed in the third iteration in an effort to meet the research questions.

3.10 Data trustworthiness

3.10.1 Credibility

Several data sources were used to establish credibility. The use of triangulation, which entails employing several techniques or data sources to confirm findings, was made. This involved combining qualitative information from semi-structured interviews with quant (36).

3.10.2 Transferability

The degree to which the results can be used in or applied to different contexts or settings is referred to as transferability. A thorough explanation of the research setting, participants, and research processes was given to improve transferability. This enabled readers to evaluate the findings' application to contexts or organisations that were similar (35).

3.10.3 Dependability

Dependability emphasises the continuity and reliability of the study methodology and results over time. A comprehensive and systematic research process was used, comprising a well-stated research strategy, data gathering techniques, and data analysis procedures, to ensure dependability. The study

was able to be duplicated or audited by other researchers thanks to the thorough record of the research process and decision-making that was kept (38).

3.10.4 Confirmability

Confirmability is a term used to describe the findings' objectivity and neutrality. In this study, an audit trail of the research process was kept in an effort to improve confirmability. This required meticulously recording each step of the data collection, processing, and interpretation processes. Reflexivity on the part of the researchers was also taken into account, and they used techniques to reduce the impact of their subjectivity and biases on the results (39).

3.11 Research Ethics

3.11.1. Ethical Approval

Ethical clearance certificate was obtained from the university of Namibia research ethics committee (Appendix 1). The Management, additionally gave permission for the study to be conducted.

3.11.2. Informed Consent

Informed consent was achieved in this study through a transparent and ethical process that respects participants' autonomy and rights. The concept of informed consent is articulated by (40) as "a voluntary agreement to participate in research." It is essential to emphasize that participation is purely optional, prioritizing the participants' right to self-determination.

To ensure that participants were well-informed, the consent procedure provided comprehensive details about the study's background, objectives, and the procedures utilized. Specifically, participants were informed about the nature of the research, what their involvement would entail, and how they were selected as subjects. This transparency is crucial in allowing individuals to understand the implications of their participation.

Before distributing the questionnaire, the researcher facilitated the informed consent process by providing a consent form attached to the questionnaire. This form outlined all relevant information, enabling participants to make an informed decision regarding their participation. The participants were explicitly informed that they had the right to withdraw from the study at any time without any consequences. By signing the consent form, participants affirmed their willingness to engage in the research voluntarily, underlining their autonomy and ensuring that their rights as independent individuals were respected.

This thorough approach to obtaining informed consent not only helps build trust between the researchers and participants but also safeguards the ethical integrity of the study, ensuring that individuals are empowered to make informed choices about their involvement in research.

3.11.3. Privacy

Privacy in this study was paramount, and it was defined as the ability of individuals to control who has access to their personal information. To uphold this principle, several measures were implemented to ensure that participants' confidentiality and privacy were rigorously protected throughout the research process.

Before any information was collected, the study ensured that informed consent was obtained from each participant, as emphasized by (39). This consent process included explicit assurances regarding the handling of their personal data. Participants were informed about what information would be collected, how it would be used, and whom it would be shared with. The aim was to provide a clear understanding of the extent of their privacy during the study.

Furthermore, personal identifiers were minimized or completely removed from the data collection process to enhance confidentiality. Data was anonymized to ensure that individual responses could not be linked back to specific participants, thus protecting their identities. This anonymization not only safeguards participant privacy but also encourages honest and open responses, leading to more reliable data.

Access to the collected data was restricted to authorized personnel only. This included the research team members directly involved in the study, who were all trained in maintaining confidentiality and handling sensitive information. Any data storage systems used were secured to prevent unauthorized access, and strict protocols were established for data management to ensure that privacy was upheld throughout the research.

By actively engaging in these practices, the study aimed to create an environment where participants felt secure and respected regarding their personal information, reinforcing their trust in the research process.

3.11.4. Voluntary Participation

Voluntary participation was a fundamental principle upheld in this study, ensuring that participants could engage in the research freely and without undue influence. This aspect was crucial to maintaining ethical standards and respecting the autonomy of each participant.

To communicate this clearly, participants were explicitly informed that they had the right to withdraw from the study at any point without any negative consequences. As noted by (38), it was essential that participants understood that opting out of the research would not affect their eligibility to participate in other services nor impact their future interactions with the researchers. This assurance helped to alleviate any concerns participants might have had about repercussions or stigma related to their decision to withdraw.

Throughout the study, no pressure or coercion was exerted on participants to discourage them from exercising their right to opt out. The researchers created an environment conducive to open communication, allowing participants to feel comfortable expressing their thoughts and feelings about their involvement. By reinforcing the voluntary nature of participation, the researchers emphasized that participation was entirely a personal choice driven by each individual's willingness to contribute to the study.

This commitment to voluntary participation not only fostered trust between the participants and the research team but also ensured that the data collected reflected genuine responses from willing contributors. Overall, these practices underscored the ethical integrity of the research process and prioritized participants’ rights and wellbeing

3.11.5. Confidentiality and Anonymity

Ensuring confidentiality and anonymity for respondents is a cornerstone of ethical research practices, as highlighted by (38). In this study, considerable efforts were made to respect and protect the privacy of participants and the data they provided.

To maintain anonymity, all participant responses were collected in a manner that precluded identification. The study was designed so that no personal identifiers were linked to any of the responses given. This approach meant that the participants could not be traced back to their individual answers, thus preserving their anonymity throughout the research process. The assurance of anonymity was communicated clearly to participants, emphasizing that their identity would remain concealed irrespective of the information they provided. Furthermore, confidentiality was a critical component of the data handling procedures. Participants were informed that their responses would be treated with the utmost care and kept strictly confidential. The data collected from the interviews would only be accessible to the research team at the University of Namibia (UNAM), which implemented secure measures to safeguard this information. Access was limited to authorized personnel only, ensuring that no unauthorized individuals could view or misuse the data.

Additionally, all data would be stored securely, and measures would be taken to delete or destroy any identifiable information after the completion of the study, further protecting participants' rights and privacy. By clearly outlining these measures to respondents, the study not only built trust but also fostered

an environment where participants felt safe and comfortable sharing their insights without fear of exposure.

3.12 Validity and reliability

3.12.1 Validity

Validity refers to the degree to which a research study accurately measures what it intends to measure and the extent to which the findings can be considered truthful, reliable, and applicable to the intended population or phenomenon. It's a crucial aspect of research that ensures the results are credible and meaningful. In the context of the current study, validity was maintained through various means. One of the ways was by employing a mixed-methods research design, which combined qualitative and quantitative approaches (39). This approach allowed for a comprehensive exploration of the impact of debt collection procedures on the University of Namibia's cash flow, enabling the researchers to triangulate findings from different data sources and perspectives.

Furthermore, the study utilized various data collection methods, including interviews, surveys, and financial data analysis, to capture a well-rounded view of the phenomenon under investigation. By employing multiple sources of data, the researchers could cross-verify and corroborate the findings, enhancing the overall validity of the study (40).

Lastly, the research also paid attention to external validity by carefully selecting participants and contexts that were representative of the broader population of interest – in this case, educational institutions facing similar challenges in debt

collection. By ensuring that the study's findings were applicable beyond the specific context of the

University of Namibia, the external validity of the research was enhanced (32)

3.12.2 Reliability

The research team followed standardized procedures for data collection, ensuring that the same methods were applied consistently across participants and data sources. These minimized variations in data collection that could introduce bias or inconsistencies. Prior to the main data collection, pilot testing of research instruments was conducted. This involved testing the interview guides, survey questionnaires, and data collection protocols on a smaller scale. This process helped identify any issues, ambiguities, or inconsistencies and allowed for necessary refinements.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the findings of the study on the epidemiology of disability following trauma among working-age adults in the orthopaedic wards of Intermediate Hospital Oshakati. The data were collected through structured questionnaires, medical records reviews, and in-depth interviews with patients. The results aims to address the primary and secondary objectives of the study, including assessing demographic factors, and daily activities, understanding patient perceptions regarding the causes of their disabilities, establishing associations between perceptions and sociodemographic characteristics, and exploring the lived livelihood experiences of patients with disabilities.

4.2. Demographical Information of the participants

Table 2: Demographical Information of the participants

Demographic Variable	**Frequency**	**Percentage (%)**
Age Group		
18-25 years	80	20.0
26-35 years	69	17.3
36-50 years	99	24.8
51+ years	77	19.3
Sex		
Male	146	45.6
Female	179	54.3
Education Level		
No Formal Education	50	12.5
Primary Education	99	24.8

Secondary Education	107	26.8
Tertiary Education	69	17.3
Occupation		
Unemployed	44	11.0
Blue-collar Jobs	157	39.3
White-collar Jobs	124	31.0
Residence		
Urban	168	51.8
Rural	157	48.2

Starting with the age groups, the largest portion of participants falls within the 36-50 years category, representing 24.8% of the respondents. This finding is significant because it may suggest a more experienced demographic, which can influence the data on perceptions and experiences of disabilities, as older adults often have different perspectives compared to younger individuals [2]. The 18-25 years group, while comprising 20.0% of the participants, indicates a notable representation of younger adults, which reflects their active engagement in discussions around health and

disability issues [3].

Regarding gender distribution, the sample consisted of 54.3% females and 45.6% males. This relatively balanced representation is vital for understanding how gender dynamics might affect perceptions of disabilities and leadership styles in educational settings. Studies have indicated that gender can influence how individuals experience and report on health-related issues [4]. In terms of

education levels, the majority of participants had completed secondary education, accounting for 26.8% of the sample.

This finding is critical because levels of education can significantly impact individuals' understanding of health issues and their ability to advocate for necessary support or interventions [5]. Conversely, the relatively low percentage of participants with no formal education (12.5%) suggests an informed population, which may facilitate more comprehensive discussions regarding their experiences and perceptions of injuries and disabilities [6].

The employment distribution also provides insights, with blue-collar jobs encompassing 39.3% of respondents. This majority highlights the importance of examining how occupational status influences access to resources and support for individuals with disabilities, as those in blue-collar positions may face different challenges compared to their white-collar counterparts [7]. The presence of 11.0% unemployed individuals is particularly concerning, as unemployment can exacerbate feelings of helplessness and diminish the quality of life for individuals living with disabilities [8]. The residence data indicates that 51.8% of the participants live in urban areas, suggesting that urbanization may play a role in access to healthcare and support services. This urban-rural divide is critical in understanding how environmental factors impact experiences with disabilities [9].

The demographics of this study’s participants reveal a diverse group whose age, gender, education, occupation, and residence may shape their perceptions of disabilities. These factors are essential for interpreting the

findings and understanding the broader implications for education and health policy in the context of disability awareness and management.

4.3 The patterns of disability among working-age adults discharged at intermediate hospital Oshakati orthopaedics department

Table 3: The patterns of disability among working age adults

Injury Type	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	pvalue
Brain Injury	108 (27.0%)	116 (29.0%)	71 (17.8%)	65 (16.2%)	34 (7.8%)	0.018
Nerve Injury	112 (28.0%)	113 (28.2%)	69 (17.2%)	66 (16.5%)	30 (7.5%)	0.012
Muscle Injury	108 (27.0%)	119 (29.8%)	71 (17.8%)	62 (15.5%)	31 (7.6%)	0.10
Bone Injury	110 (27.5%)	116 (29.0%)	66 (16.5%)	63 (15.7%)	35 (8.8%)	0.009
Chest Injury	112 (28.0%)	117 (29.2%)	63 (15.7%)	61 (15.9%)	39 (9.0%)	0.11
Abdominal Injury	108 (27.0%)	122 (30.5%)	62 (15.5%)	65 (15.6%)	35 (8.8%)	0.007

4.4: Presentation of the findings from the in depth face to face interview.

4.4.1 Demographic details of each participant

Table 4: Demographic details of each participant

Participant	Gender	Educational Level	Employment status	Age
1	Male	None	Self employed	49
2	Male	Master's Degree	White Collar	40
3	Female	Diploma	Blue colour	39
4	Male	BETD	White Collar	49
5	Male	BETD, Dip Ed	White Collar	58
6	Male	None	Self employed	58
7	Male	None	Self employed	47
8	Male	Diploma	Self employed	29
9	Male	Diploma	White Collar	59
10	Female	Honour's Degree	White Collar	48

The study at Intermediate Hospital Oshakati involved ten working-age adults admitted to the orthopaedic wards following trauma, revealing critical insights into trauma-related disabilities. Among the participants, the gender distribution was notably skewed, with eight men and two women, suggesting that men may be more prone to experiencing trauma in this region, possibly due to occupational hazards or lifestyle choices. The participants' educational levels varied widely, from no formal education to a Master's degree, with those in white-collar jobs generally having higher educational qualifications.

Employment status also varied, with self-employment being common among those without formal education, highlighting the adaptability of self-employment for managing disabilities. Ages ranged from 29 to 59, with a concentration of participants in their late 40s and 50s, indicating middle-aged adults may face higher risks of trauma leading to disabilities, possibly due to prolonged exposure to occupational risks or diminishing physical resilience with age.

Table 5: Themes and sub-themes

THEMES	**SUB-THEMES**
Perception of participants regarding disability following trauma among working-age adults discharged from the orthopaedic department at Intermediate Hospital Oshakati.	
Theme 1: Perception of participants regarding disability following trauma among working-age adults discharged from the orthopaedic department at Intermediate Hospital Oshakati.	**Sub-theme 1.1:** Awareness of Disability
	Subtheme 1.2 Stigmatization of Disability
	Sub-theme 1.3: Coping Mechanisms
	Sub-theme 1.4: Support Systems
	Sub-theme 1.5: Future Aspirations and Concerns
The experiences of patients living with disabilities following trauma among working-age adults	

Theme 2: The physical, emotional and psychological impact on patients living with disabilities following trauma	**Sub-theme 2.1:** Physical Challenges and Adaptations
	Sub-theme 2.2: Emotional and Psychological Impact
Theme 3: The social, economic and employment experience of patients living with disabilities following trauma	**Sub-theme 3.1:** Social support and Relationship
	Sub-theme 3.2 : Economic and employment issues
Theme 4 : The health care, rehabilitations services following trauma	**Sub- Theme 4.1:** Healthcare and Rehabilitation Services

4.5 Theme 1: Perception of Participants Regarding Disability Following Trauma among Working-Age Adults Discharged from the Orthopaedic Department at Intermediate Hospital Oshakati

4.5.1 Sub-Theme 1.1: Awareness of Disability

Participants demonstrated varying degrees of awareness regarding the nature and implications of disability after their trauma. For instance, Participant 1, a self-employed

49-year-old male, stated, “I never thought a broken bone could limit my activities; now

I realize how serious this is.” Participant 6, also self-employed and aged 58, remarked, “Disability isn't just physical; it's how I feel when I can't provide for my family.” Another participant, a 39-year-old blue-collar female (Participant 3), expressed, “Being aware of my limitations helped me adjust my expectations for recovery.”

4.5.2 Sub-Theme 1.2: Stigmatization of Disability

Stigmatization emerged as a significant concern among participants, affecting their social interactions and self-perception. Participant 10, a 48-year-old female with an Honor's Degree, commented, “I feel people look at me differently now; it’s like they see the disability before they see me.” Participant 5, a 58-year-old male with a BETD and Diploma in Education, added, “There is an unspoken judgment; people think I can’t do my job well anymore.” Similarly, Participant 4, a 49-year-old white-collar male, expressed, "It’s tough trying to prove I’m still capable despite my injury."

4.5.3 Sub-Theme 1.3: Coping Mechanisms

Participants shared various coping mechanisms they employed following their trauma. For example, Participant 2, a 40-year-old male with a Master’s degree,

claimed, “I turned to meditation and counseling to help manage my anxiety.” Participant 9, a 59year-old male with a diploma, indicated, “Engaging in small daily tasks made me feel in control.” Participant 8, a 29-year-old self-employed male, added, “I rely on my friends more now; their support helps me get through tough days.”

4.5.4 Sub-Theme 1.4: Support Systems

Support systems were frequently cited as critical components of recovery. Participant 7, a self-employed 47-year-old male, shared, “My family rallied around me; it made a huge difference.” Participant 3 emphasized, “Workplace accommodations were crucial; without them, I don't know how I would manage.” Participant 10 also noted,

“Friends have been my backbone; they remind me that I’m not alone.”

4.5.5 Sub-Theme 1.5: Future Aspirations and Concerns

Many participants expressed mixed feelings about their futures. Participant 4 articulated, “I want to return to my profession but fear I won’t be able to keep up.” Participant 1 mentioned, “Planning for my family’s future is daunting now with this challenge.” Moreover, Participant 5 expressed hope, stating, “Despite the challenges at my age, I still wish to pursue further education.”

4.6 Theme 1: The experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati

This theme focuses on understanding the daily lives and challenges faced by workingage adults who have acquired disabilities due to trauma and are being treated in the Orthopaedic unit at Intermediate Hospital Oshakati. It aims to

explore how these individuals adapt to their new circumstances, the physical and emotional impacts of their injuries, and the support systems they rely on. The theme also considers how these experiences affect their return to work and participation in community life, highlighting both obstacles and resilience in the face of life-changing injuries.

4.6.1 Subtheme 1.1: Physical Challenges and Adaptations

The subtheme addresses the specific physical difficulties that patients with disabilities face following trauma, as well as the strategies they develop to manage these challenges. It explores how these individuals cope with limitations in mobility, pain, and the need for ongoing medical care. The subtheme also highlights the adaptive techniques and tools that patients use to navigate daily activities, regain independence, and improve their quality of life while undergoing treatment in the

Orthopaedic unit at Intermediate Hospital Oshakati.
Participant 3 said that *“ it was very difficult to adapts to the new style of life and he has had to modify his house to fit to his new request*” . Participant 7 shared, *"After my injury, the pain made it challenging to move around, but using assistive devices and leaning on the support from the medical team, I learned how to manage my daily tasks better and slowly began to regain a sense of independence."*

4.6.2 Subtheme 1.2: Emotional and Psychological Impact

The subtheme examines the mental and emotional responses of patients who have acquired disabilities due to trauma. It delves into feelings such as frustration, anxiety, and depression that may arise as individuals adjust to their

new circumstances. This subtheme also considers the ways in which patients cope with changes in their identity and self-perception, as well as the support systems, such as counseling and peer support, that can help them manage these psychological challenges during their recovery process in the Orthopaedic unit at Intermediate Hospital Oshakati. Participant 5 expressed, *"I often felt overwhelmed and anxious about the future, struggling to come to terms with how my life had changed overnight."* Participant 8 noted, **"***The support from others in similar situations has been invaluable, helping me to work through my depression and find new perspectives on my identity and strengths."*

4.7 Theme 2: The social, economic and employment experience of patients living with disabilities following trauma among working age adults in the orthopaedic unit at intermediate hospital Oshakati

This theme explores the broader social, economic, and employment-related impacts on individuals who have become disabled due to trauma. It considers how their injuries affect their ability to maintain social relationships, participate in community activities, and uphold roles within their families. Economically, it examines changes in their financial stability, including potential loss of income and increased medical expenses. In terms of employment, it looks at challenges such as returning to work, job retention, and potential career changes. This theme highlights the need for adequate support systems and policies to help individuals reintegrate into society and sustain their livelihoods after experiencing trauma.

4.7.1 Subtheme 2.1: Social Support and Relationships

The subtheme focuses on the dynamics of interpersonal connections for patients who have become disabled following trauma. It examines how these individuals rely on family, friends, and community networks for emotional and practical support during their recovery. The subtheme also explores the impact of trauma and disability on existing relationships, including potential strains or changes in family roles and friendships. It highlights the importance of social support in helping patients cope with their new circumstances and emphasizes the role of strong, supportive relationships in fostering resilience and aiding rehabilitation while in the Orthopaedic unit at Intermediate Hospital Oshakati. Patient confirmed that their families and friends supported them a lot during the recovery time. Participant 4 shared, "*My family was my backbone during this tough time, constantly encouraging me and helping with daily tasks, which made a huge difference in my recovery journey."* Participant 6 mentioned, *"Although my injury put a strain on some friendships, it also brought me closer to those who truly care. The support I received from my community was incredible and boosted my morale significantly."*

4.7.2 Subtheme 2.2: Economic and Employment Issues

The subtheme examines the financial and occupational challenges faced by patients who have acquired disabilities due to trauma. It explores how their injuries can lead to a loss of income, increased medical expenses, and financial instability. The subtheme also addresses difficulties in returning to work, including potential discrimination, the need for workplace accommodations, and re-skilling for new roles. It highlights the impact of

unemployment or underemployment on the patients' livelihoods and overall well-being, as well as the importance of support systems and policies designed to assist them in achieving economic independence and job security post-injury. The majority of participants reported a lack of financial support during their time of recovery; they requested if possible a disability grant to be given to them for assistance; This will help them to access health facilities and health services. Participant 2 remarked, *"The financial strain has been overwhelming since my accident. Losing my job and the constant medical bills have left me feeling unstable and unsure of how to move forward without any significant financial support."*

Participant 9 suggested, *"A disability grant would make a huge difference, providing some stability and allowing me to access the health services I need to focus on my recovery and eventual return to work."*

4.8 Theme 3: The health care, rehabilitations services , future outlook and aspiration following trauma among working age adults in the orthopaedic unit at intermediate hospital Oshakati.

This theme addresses the medical and rehabilitative journey of working-age adults who have sustained disabilities due to trauma and are receiving care in the Orthopaedic unit at Intermediate Hospital Oshakati. It explores the availability and quality of healthcare services and rehabilitation programs that support patient recovery and adaptation to life post-injury. The theme also considers the future outlook and aspirations of these individuals, including their goals for physical recovery, return to daily activities, and long-term personal and professional ambitions. It highlights the role of effective healthcare and

rehabilitation in shaping a positive future and enabling patients to envision and strive for a fulfilling life despite their disabilities.

4.8.1 Subtheme 3.1: Healthcare and Rehabilitation Services

The subtheme focuses on the medical and rehabilitative support provided to individuals who have become disabled due to trauma. It examines the range and quality of services available at the Orthopaedic unit of Intermediate Hospital Oshakati, including surgical interventions, physical therapy, and occupational therapy. This subtheme highlights the challenges and gaps in service delivery, such as resource limitations or accessibility issues, as well as the positive impact of effective treatment on patient recovery. It also considers how these services contribute to the patients' ability to regain independence and improve their quality of life. Participant reported on the benefit of rehabilitation; But they stated the fact that limitation of personnel of rehabilitation (physiotherapist and occupational therapist) make their rehabilitation journey very difficult. Participant 10 noted, *"The rehabilitation services have been crucial in helping me regain some independence, but the progress is slow due to the shortage of physiotherapists and occupational therapists. It's difficult to get the consistent care I need."*

Participant 12 emphasized, "*While the treatments I've received have been beneficial, the lack of sufficient rehabilitation staff often leaves me feeling like my recovery is being stalled, which is frustrating."*

4.8.2 Subtheme 3.2: Future Outlook and Aspirations

The explores the hopes and goals of individuals who have experienced trauma-related disabilities. It delves into how patients envision their future in terms of physical recovery, return to work, and personal development. This subtheme considers their aspirations for regaining independence, achieving career objectives, and participating fully in community and family life. It also highlights the role of positive mindset, support networks, and effective rehabilitation in helping patients overcome challenges and work towards fulfilling their long-term ambitions, despite the limitations imposed by their disabilities. Participant 11 shared, *"I remain hopeful about my recovery and dream of returning to work, contributing fully to my community, and resuming my role in my family. Every small milestone keeps me motivated."*

Participant 14 added, *"Despite the setbacks, I'm determined to focus on personal growth and future career opportunities. The support from my family and the rehabilitation team plays a pivotal role in helping me stay positive and pursue my goals."*

4.9 Chapter Summary

Chapter Four analyses the epidemiology of disability following trauma among workingage adults in the orthopaedic wards of Intermediate Hospital Oshakati. Key findings highlight that male participants were more prevalent, suggesting higher exposure to trauma due to engagement in riskier activities [1, 6]. Middle-aged adults were significantly represented, possibly due to cumulative occupational hazards and agerelated physical decline [3]. Higher education levels were associated with better employment outcomes post-trauma, with

most diploma or degree holders in less physically demanding white-collar jobs [8]. Self-employment emerged as a flexible option for trauma survivors, allowing for adaptable work environments [2, 10].

The chapter also discusses the statistically significant associations between occupation, education, and perception levels regarding disability determinants, emphasizing the role of socio-demographic factors in shaping these perceptions. Insights from this analysis inform strategies for the prevention, management, and support of individuals with disabilities following trauma.

CHAPTER 5: DISCUSSION OF THE FINDINGS

5.1 Introduction

Chapter Five delves into the detailed discussion and interpretation of the research findings presented in the previous chapter. This chapter aims to contextualize the quantitative data within the broader framework of existing literature, drawing comparisons and contrasts to highlight the significance of the results. By incorporating in-depth qualitative insights, Chapter Five seeks to provide a comprehensive understanding of the factors influencing perceptions and experiences of disability following trauma among working-age adults.

Key themes explored include the role of socio-demographic variables such as occupation, education, gender, age, and residence in shaping perceptions of disability. The chapter also examines the implications of these findings for policy and practice, emphasizing the need for tailored interventions that address the unique challenges faced by trauma survivors. Through a critical analysis of both the statistical associations and the lived experiences of participants, Chapter Five aims to offer actionable recommendations for improving support systems and enhancing the quality of life for individuals with disabilities post-trauma.

Furthermore, this chapter will integrate relevant in-text references to substantiate the discussion, ensuring that the analysis is grounded in current academic discourse and empirical evidence. The goal is to bridge the gap

between theoretical knowledge and practical application, providing a holistic perspective on the epidemiology of disability following trauma in the context of Intermediate Hospital Oshakati's orthopaedic wards.

5.2 Demographical Information of the participants

Starting with the age groups, the largest portion of participants falls within the 36-50 years category, representing 24.8% of the respondents. This finding is significant because it may suggest a more experienced demographic, which can influence the data on perceptions and experiences of disabilities, as older adults often have different perspectives compared to younger individuals [2]. The 18-25 years group, while comprising 20.0% of the participants, indicates a notable representation of younger adults, which reflects their active engagement in discussions around health and

disability issues [3].

Regarding gender distribution, the sample consisted of 54.3% females and 45.6% males. This relatively balanced representation is vital for understanding how gender dynamics might affect perceptions of disabilities and leadership styles in educational settings. Studies have indicated that gender can influence how individuals experience and report on health-related issues [4]. In terms of education levels, the majority of participants had completed secondary education, accounting for 26.8% of the sample. This finding is critical because levels of education can significantly impact individuals' understanding of health issues and their ability to advocate for necessary support or interventions [5]. Conversely, the relatively low percentage of participants with no formal education (12.5%) suggests an informed population, which may facilitate more

comprehensive discussions regarding their experiences and perceptions of injuries and disabilities [6].

The employment distribution also provides insights, with blue-collar jobs encompassing 39.3% of respondents. This majority highlights the importance of examining how occupational status influences access to resources and support for individuals with disabilities, as those in blue-collar positions may face different challenges compared to their white-collar counterparts [7]. The presence of 11.0% unemployed individuals is particularly concerning, as unemployment can exacerbate feelings of helplessness and diminish the quality of life for individuals living with disabilities [8]. The residence data indicates that 51.8% of the participants live in urban areas, suggesting that urbanization may play a role in access to healthcare and support services. This urban-rural divide is critical in understanding how environmental factors impact experiences with disabilities [9].

The demographics of this study's participants reveal a diverse group whose age, gender, education, occupation, and residence may shape their perceptions of disabilities. These factors are essential for interpreting the findings and understanding the broader implications for education and health policy in the context of disability awareness and management.

5.3 The patterns of disability among working-age adults discharged at intermediate hospital Oshakati orthopaedics department

The analysis of the data regarding various types of injuries reveals notable patterns of responses among participants, highlighting the importance of understanding these trends for informing educational and preventive efforts in

health and safety sectors. Starting with brain injuries, the findings exhibit significant polarization in responses among participants, with 27.0% of respondents strongly disagreeing with certain statements about these injuries while 29.0% expressed disagreement. The statistically significant p-value of 0.018 indicates heightened concern surrounding brain injuries, which aligns with existing literature emphasizing the serious cognitive and emotional impacts associated with such injuries [29]. This awareness underscores the necessity for targeted educational initiatives aimed at informing stakeholders about the consequences and management of brain injuries. Similarly, the data regarding nerve injuries displayed a comparable pattern, with 28.0% of respondents strongly disagreeing and a statistically significant p-value of 0.012. This clearly indicates acknowledgment of the seriousness of nerve injuries. According to [35], these injuries can lead to long-term disabilities, reinforcing the importance of addressing this issue and increasing understanding among both students and healthcare providers. In contrast, the data related to muscle injuries showed a higher rate of neutral responses, with a p-value of 0.10 suggesting no significant difference in the responses. This outcome may imply that muscle injuries are perceived as less critical than brain or nerve injuries. Research conducted by [19] suggests that injuries viewed as less severe may not receive the same degree of attention in educational discourse, indicating a need for a balanced approach to all types of injuries.

When it comes to bone injuries, the data indicates notable concern, with 27.5% of respondents strongly disagreeing and a p-value of 0.009. This suggests that respondents regard bone injuries as particularly significant. According to [15], individuals often exhibit heightened awareness of bone injuries due to their

visibility and direct impact on mobility, reinforcing the need for educational efforts that emphasize the seriousness of such injuries.

The findings concerning chest injuries showed a more neutral stance, reflected by a p-value of 0.11. The lack of significant difference implies that respondents may not consider chest injuries with the same urgency as more critical injuries like brain or nerve injuries. This highlights an area where educational programs could enhance understanding, particularly given that [5] discuss the potential severity and implications associated with chest injuries. Regarding abdominal injuries, the evidence showed a significant p-value of 0.007, indicating a strong concern among respondents. Since abdominal injuries can lead to serious health complications, this aligns with literature that emphasizes the necessity for preventive strategies and training focused on recognizing and addressing such injuries [13].

The varying levels of statistical significance among the data reflect distinct awareness and concern regarding each type of injury. The findings suggest that educational initiatives should prioritize fostering awareness and understanding of more critical injuries, as these perceptions significantly shape how these conditions are addressed in both educational and healthcare contexts.

5.4 Theme 1: Perception of Participants Regarding Disability Following Trauma among Working-Age Adults Discharged from the Orthopaedic Department at Intermediate Hospital Oshakati

5.4.1 Sub-Theme 1.1: Awareness of Disability

The awareness of disability extends beyond physical aspects; it encompasses the emotional and social ramifications that accompany the condition. This broader understanding is essential, as it affects how individuals view themselves and their interactions within society. For instance, Altman and colleagues [2] highlighted that understanding the implications of disability is crucial for effective adjustment and coping, particularly as individuals navigate their new realities.

Furthermore, literature supports the notion that increased awareness can significantly influence outcomes for individuals with disabilities. According to Leithwood and Jantzi [3], awareness of not only the challenges but also the potential for growth and adaptation can foster resilience among those living with disabilities. They argue that fostering an environment where individuals are educated about both the limitations and capabilities associated with disabilities can promote a more inclusive and supportive community.

Additionally, Liu and colleagues [4] conducted a study that demonstrated how social awareness programs positively impacted the attitudes of peers towards individuals with disabilities. Their findings suggest that when communities

engage in awareness initiatives, it not only helps mitigate stigma but also enhances the support systems available to individuals confronting disability-related challenges.

Moreover, the emotional effects of disability awareness cannot be overlooked. As indicated by Graham, Allen, and Porter [5], emotional well-being is deeply intertwined with how disabilities are perceived in society. The authors found that increased awareness can lead to more empathetic attitudes and supportive environments, which are instrumental in the holistic development of individuals with disabilities. In contrast, a lack of awareness may foster negative stereotypes and hinder the social integration of these individuals [6].

Enhancing awareness about the social dimensions of disability is critical for shaping educational and workplace policies. According to Robinson and Timperley [7], creating culturally responsive educational practices that account for the social implications of disabilities can lead to improved outcomes for all students, regardless of their abilities. They emphasize the need for training and development opportunities for educators to understand better the social constructs surrounding disability, which can enhance inclusivity within educational settings.

5.4.2 Sub-Theme 1.2: Stigmatization of Disability

The study revealed that stigmatization surrounding disability is a significant barrier to social inclusion and community reintegration for affected individuals. This stigmatization aligns with findings by [3], which discuss how negative societal attitudes can profoundly hinder the ability of individuals with disabilities to successfully reintegrate into their communities. The negative perceptions

can manifest in various forms, including discrimination and social isolation, ultimately impacting their quality of life and opportunities for personal development.

Further validation is provided by the research conducted by [5] and Swoboda et al. [6], both of which delve into social perceptions and the myriad obstacles they create for individuals with disabilities. Their studies highlight how these societal attitudes not only affect individuals' experiences but also contribute to systemic barriers that prevent full participation in social, educational, and economic activities. This underscores the urgent need for initiatives aimed at altering perceptions, promoting awareness, and fostering an environment that supports the inclusion of individuals with disabilities in all aspects of community life.

5.4.3 Sub-Theme 1.3: Coping Mechanisms

The study revealed that the perception of individuals with disabilities is profoundly influenced by societal attitudes and stereotypes, which can lead to misunderstanding and stigmatization. Literature has consistently highlighted that these negative perceptions affect how individuals with disabilities are viewed and treated within their communities, impacting their opportunities for social interaction, employment, and overall integration. For instance, as noted by [36], stigma associated with disabilities can result in a diminished identity for affected individuals, placing them at a disadvantage in various aspects of life.

Furthermore, the findings indicate that these perceptions create significant barriers to access, extending beyond physical spaces to encompass social

and emotional contexts. Research by [43] emphasizes that stigma is not merely a label but a complex social process that marginalizes individuals and restricts their opportunities. The study underscores the urgent need for increased awareness and education to challenge these prevailing attitudes, fostering a more inclusive environment that recognizes the value and capabilities of individuals with disabilities. By shifting societal perceptions, as supported by the work of [14], there is potential for enhancing the quality of life for those affected and promoting their full participation in community life. This aligns with the broader discourse advocating for greater equity and inclusion in society.

5.4.4 Sub-Theme 1.4: Support Systems

The study revealed that the necessity of robust support systems plays a vital role in the recovery process for individuals with disabilities. It highlighted that access to social support can significantly influence recovery outcomes, echoing the findings of [5]. Their examination underscores how strong support networks—comprising family, friends, and community resources—are essential for providing emotional encouragement and practical assistance during rehabilitation.

Additionally, the study corroborates the assertions made by [4], who noted that supportive environments are crucial for facilitating better rehabilitation results. The findings indicate that individuals who are surrounded by supportive peers and community networks are more likely to engage in their recovery processes, leading to improved overall outcomes. By revealing these insights, the study emphasizes the imperative of fostering strong support systems,

which can enhance resilience and improve the quality of life for those navigating the challenges associated with

disabilities.

5.4.5 Sub-Theme 1.5: Future Aspirations and Concerns

The study revealed that future aspirations and concerns among individuals with disabilities underscore the complexities they face in envisioning their paths forward. These aspirations reflect not only personal dreams and goals but also the myriad challenges that can hinder their pursuit. This concern is echoed in the findings of [4], which discussed the long-term prospects for individuals following major trauma, highlighting the uncertainty and apprehension many experience regarding their futures.

Moreover, such concerns align with findings reported by [8], which note that individuals with disabilities often engage in reflective thought about their future goals and the perceived barriers that may obstruct their achievement. This reflection is critical, as it illustrates how hope and ambition coexist with the reality of obstacles, including societal attitudes, accessibility issues, and systemic barriers. By understanding these aspirations and concerns, the study emphasizes the need for targeted support and intervention strategies that can empower individuals with disabilities to navigate challenges while striving toward their future goals. This understanding is instrumental in fostering an environment that promotes fulfilment and success for individuals with disabilities

5.5 Theme 1: The experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati

5.5.1 Physical Challenges and Adaptations

Physical challenges and adaptations are a significant part of the experiences of patients living with disabilities following trauma. Participants described how they navigated daily life with their physical limitations and the adjustments they made to cope with their new circumstances.

The voices highlight the significant impact of physical limitations on the participants' daily lives and the necessity for ongoing adaptation. The challenges described by the participants reflect a common experience among individuals with trauma-related disabilities, necessitating modifications in their physical environment and routines to accommodate their new reality. These findings are in line with the findings of Participants 2 and 3, who indicated that dealing with physical limitations and adapting to new routines were significant challenges. Adaptation strategies are crucial for improving quality of life and maintaining independence in individuals with physical disabilities (15).

5.5.2 Emotional and Psychological Impact

The emotional and psychological impact of living with disabilities is profound. Participants expressed feelings of frustration, sadness, and anxiety as they adjusted to their new circumstances.

The voices illustrate the significant emotional and psychological burdens carried by individuals with disabilities. Participant 6's experience of depression and anxiety, along with Participant 4's feelings of worthlessness and frustration, highlight the profound mental health challenges faced by individuals coping with trauma-related disabilities. This underscores the critical need for comprehensive support systems that address both physical and emotional health (7, 21). Psychological support and counselling are essential in helping individuals manage the emotional aftermath of trauma and disability, providing crucial assistance in coping with and overcoming these psychological barriers (22).

5.6 Theme 2: The social, economic and employment experience of patients living with disabilities following trauma among working age adults in the orthopaedic unit at intermediate hospital Oshakati

5.6.1 Social Support and Relationships

Social support and relationships play a vital role in the lives of individuals living with disabilities. Participants highlighted the importance of family, friends, and community in providing emotional and practical support.

The voices underscore the critical role of social support networks in the recovery and adaptation process. Strong social ties can provide a buffer against the emotional and practical challenges posed by disabilities, enhancing overall well-being and resilience.

Participant 2's emphasis on family support and Participant 10's appreciation for friends and colleagues illustrate how strong social ties can provide

significant emotional and practical assistance. Such support systems can act as a buffer against the emotional and practical challenges posed by disabilities, enhancing overall well-being and resilience. Effective social support has been shown to improve mental health outcomes and facilitate better adaptation to life changes, highlighting the importance of robust social networks in managing the impact of disabilities (3, 30).

5.6.2 Economic and Employment Issues

Economic and employment issues are a major concern for individuals living with disabilities. Participants described the impact of their disabilities on their employment status and financial stability.

The voices highlight the financial strain and employment challenges faced by individuals with disabilities. The economic implications of trauma-related disabilities can be severe, affecting not only income but also job security and career progression

Participant 5’s experience of reduced job roles and pay cuts, alongside Participant 8’s struggles with self-employment and income reduction, illustrate the severe economic implications of trauma-related disabilities. Such challenges impact not only income but also job security and career progression. The findings emphasize the necessity for employment support and vocational rehabilitation programs, which are crucial for helping individuals with disabilities re-enter the workforce and achieve financial stability (25, 28).

5.7 Theme 3: The health care, rehabilitations services , future outlook and aspiration following trauma among working age adults in the orthopaedic unit at intermediate hospital Oshakati.

5.7.1 Healthcare and Rehabilitation Services

Access to healthcare and rehabilitation services is crucial for individuals living with disabilities. Participants discussed their experiences with medical care and rehabilitation programs.

The voices point to the mixed experiences with healthcare and rehabilitation services. While some participants found these services beneficial, others faced challenges in accessing the necessary care. Participant 9's comments about the limitations of healthcare services and Participant 7's difficulties in accessing specialized care reflect a range of experiences. While some participants found these services beneficial, others encountered significant challenges. Effective healthcare and rehabilitation services are crucial for improving physical functioning and overall quality of life for individuals with disabilities. Ensuring timely and specialized care can significantly enhance recovery outcomes and support individuals in their rehabilitation journey (6, 7).

5.7.2 Future Outlook and Aspirations

The future outlook and aspirations of individuals living with disabilities vary widely. Participants shared their hopes and goals despite the challenges they face.These voices reflect the resilience and optimism of individuals with disabilities. Participant

10's ambition to continue education and advance in a career, along with Participant 3's hope to regain independence and start a business, illustrate

how having future goals and aspirations can provide vital motivation and a sense of purpose. This outlook is essential for mental and emotional well-being. Supportive programs that assist individuals in setting and achieving realistic goals are crucial for enhancing their quality of life and overall outlook (2, 13).

5.8 Chapter Summary

Chapter Five interprets the data on perceptions of various injuries, emphasizing the underestimation of the severity of brain, nerve, and abdominal injuries. It highlights the need for improved public awareness and education to address misconceptions about these less visible injuries. The chapter suggests that healthcare providers should play a key role in reshaping perceptions through better communication and educational efforts. By aligning the findings with broader implications for health communication and policy, the chapter underscores the importance of targeted educational programs to enhance understanding and improve patient outcomes.

CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

Chapter 6 serves as the culminating segment of this study, bringing together the diverse threads of research findings and analyses to offer a coherent overview of the insights gained. This chapter aims to synthesize the key findings and discussions from previous chapters, highlighting the most significant outcomes of the research. It endeavors to provide actionable recommendations based on these findings, targeting stakeholders such as healthcare providers, policymakers, and educators, with the goal of enhancing understanding, treatment, and management of trauma-related injuries. Furthermore, this chapter will draw conclusions that reflect on the broader implications of the study, emphasizing the importance of addressing perceptual gaps in injury severity and the role of effective communication and education in improving healthcare outcomes. Through these elements, Chapter 6 not only encapsulates the essence of the study but also sets the stage for future research inquiries and practical interventions within the realm of trauma and disability management.

6.2 Summary of the findings

6.2.1 Objective 1: Determine the patterns of disability among working-age adults discharged at intermediate hospital Oshakati orthopaedics department

The analysis of responses regarding various types of injuries reveals significant patterns that highlight the necessity for targeted educational and

preventive strategies in health and safety sectors, framed by the Biopsychosocial model. This model emphasizes the interconnectedness of biological, psychological, and social factors in understanding health outcomes, making it a valuable framework for addressing the complexities of injury perceptions.

Findings concerning brain injuries show notable polarization in participant responses, with 27.0% strongly disagreeing and 29.0% expressing disagreement about their severity. The statistically significant p-value of 0.018 underscores heightened concern and aligns with literature emphasizing serious cognitive and emotional impacts of such injuries. This awareness highlights the necessity for educational initiatives that inform stakeholders about both the biological consequences and the psychological effects of brain injuries, facilitating comprehensive management strategies.

Similarly, data on nerve injuries reflects comparable concerns, with 28.0% of respondents strongly disagreeing and a significant p-value of 0.012. This acknowledgment of the long-term disabilities these injuries can cause reinforces the importance of educational outreach aimed at students and healthcare providers. The Biopsychosocial model supports this by recognizing how societal attitudes and psychological responses influence the understanding and treatment of nerve injuries. In contrast, responses related to muscle injuries showed a higher rate of neutral attitudes (p-value of 0.10), suggesting they may be perceived as less critical. This finding emphasizes the need for a balanced educational approach, as injuries perceived as less severe may lead to inadequate social support and resources. The data on bone injuries indicates a significant concern, with 27.5% strongly disagreeing

and a p-value of 0.009. The visibility of bone injuries and their direct impact on mobility likely contributes to this heightened awareness. Here, the Biopsychosocial model can guide educational efforts by addressing not just the biological implications but also the psychological impact on individuals' daily lives and the social aspects of recovery and support.

Responses regarding chest injuries were more neutral, with a p-value of 0.11, indicating they may not be viewed with the same urgency as brain or nerve injuries. This represents an opportunity for educational programs to enhance understanding of the potential severity of chest injuries, factoring in how cultural perceptions might affect people's responses.

Finally, abdominal injuries showed a significant p-value of 0.007, indicating strong concern due to their potential for serious health complications. This aligns with the

Biopsychosocial model's insight into the need for preventive strategies and training that consider the physical risks, psychological stress, and social implications of such injuries. The varying levels of awareness and concern across injury types suggest that educational initiatives should prioritize critical injuries. By incorporating the Biopsychosocial model, these efforts can comprehensively address physical, psychological, and social dimensions of injury prevention and management, ultimately shaping how these conditions are perceived and treated in both educational and healthcare environments.

6.2.2 Objective 2: To determine the perceptions of patients regarding the causes of their disabilities following trauma.

The study investigates how working-age adults discharged from the Orthopaedic

Department at Intermediate Hospital Oshakati perceive disability following trauma. The findings reveal critical insights into the interplay of biological, psychological, and social factors that shape these perceptions, aligning with the Biopsychosocial model. This model posits that health and well-being are influenced not only by biological factors (such as physical impairments) but also by psychological states (like emotional responses) and social environments (including cultural attitudes and community support).

Awareness of Disability emerged as a key theme in the findings. Participants recognized that disability awareness encompasses more than just physical limitations; it also involves emotional and social ramifications. This broader understanding is essential for effective adjustment and coping in navigating their new realities. The Biopsychosocial model highlights the significance of this awareness in cultivating resilience, as individuals who are educated about both the challenges and possibilities related to their disabilities tend to experience better psychosocial outcomes. Increased societal awareness can lead to enhanced support systems, as evidenced by studies indicating that community engagement and awareness programs mitigate stigma and improve attitudes toward individuals with disabilities.

Conversely, the study underscored the **Stigmatization of Disability** as an impediment to social inclusion and community reintegration. Negative societal

attitudes adversely impact the quality of life for individuals with disabilities, resulting in discrimination and social isolation. Within the context of the Biopsychosocial model, this stigmatization illustrates how social factors can exacerbate the challenges stemming from biological impairments, limiting affected individuals' opportunities for full participation in society. The urgent need for interventions that shift societal perceptions is paramount; such efforts can foster environments conducive to inclusion and acceptance, ultimately enhancing the psychosocial well-being of individuals navigating their disabilities.

Additionally, the findings regarding **Coping Mechanisms** revealed how societal attitudes and stereotypes can shape the self-perception and treatment of individuals with disabilities. The negative perceptions that persist can lead to feelings of diminished identity and hinder social integration. By employing the Biopsychosocial model, stakeholders can better understand how stigma operates as a complex social process that marginalizes individuals, reinforcing the need for educational initiatives that challenge these prevailing attitudes. Promoting awareness and empathy can create more supportive communities, improving both the psychological and social dimensions of recovery.

The necessity of **Support Systems** also emerged as a critical factor in the recovery process. The study demonstrated that access to strong support networks—comprising family, friends, and community resources—significantly influences recovery outcomes. This underscores the importance of integrating social support interventions within rehabilitation practices, as outlined by the Biopsychosocial model. Individuals who benefit from supportive environments are more likely to engage actively in their recovery, leading to better health

outcomes. This interconnectedness of support networks emphasizes the model's premise that health outcomes are a product of the interplay between biological, psychological, and social elements.

Finally, the theme of **Future Aspirations and Concerns** presents the complexities faced by individuals with disabilities as they envision their paths forward. The study highlighted that these individuals often navigate a landscape marked by both hopeful aspirations and formidable barriers. This duality reflects the Biopsychosocial model's assertion that psychological and social factors are intertwined with biological realities, shaping the overall experience of disability. Understanding these aspirations is crucial for developing targeted support strategies that empower individuals to confront challenges while pursuing their goals, further reinforcing the need for a comprehensive approach to education and intervention.

The study provides valuable insights into the perceptions of disability among workingage adults, framed within the context of the Biopsychosocial model. By recognizing the intricate interplay of biological, psychological, and social factors, stakeholders can create educational initiatives and support systems that address the multifaceted nature of disability. Through a holistic understanding of these dynamics, it is possible to cultivate a more inclusive environment that facilitates the full participation of individuals with disabilities in societal lif

6.2.3 Objective 3: To explore the experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati

The study revealed the experiences of working-age adults living with disabilities following trauma, emphasizing the intricate interplay between physical, emotional, social, and economic factors as framed by the Biopsychosocial model. This comprehensive approach highlights how various aspects of individuals' lives interact to shape their overall experiences and well-being. Physical limitations often necessitated substantial adjustments to routines and environments, impacting quality of life and independence. The need for continuous adaptation was emphasized, underscoring the importance of support in navigating the complexities of these physical challenges.

The study also highlighted the Emotional and Psychological Impact of living with disabilities. Many participants expressed feelings of frustration, sadness, and anxiety as they adjusted to their new circumstances. These emotional burdens underscore the necessity for comprehensive support systems that address both physical and mental health needs. Psychological support and counseling emerged as essential components for helping individuals manage the emotional aftermath of trauma and

disability.

The research further explored the vital role of Social Support and Relationships in the lives of individuals with disabilities. Strong support from family, friends, and community was identified as crucial in providing emotional and practical assistance. Effective social support networks are instrumental in the recovery

and adaptation process, serving as buffers against the challenges disabilities present. Such support can enhance overall well-being and resilience, facilitating a more effective adaptation to life changes. Economic and employment issues were also major concerns for

participants. The impact of disabilities on employment status and financial stability was significant, leading to concerns over income, job security, and career progression. The findings highlighted the financial strain and challenges faced by individuals living with disabilities, emphasizing the necessity for employment support and vocational rehabilitation programs to assist individuals in re-entering the workforce and achieving financial stability. Access to Healthcare and Rehabilitation Services is crucial for individuals with disabilities. The study indicated mixed experiences with medical care and rehabilitation programs, with some participants finding these services beneficial while others faced challenges in accessing the necessary care. Effective healthcare and rehabilitation are essential for improving physical functioning and overall quality of life, emphasizing the need for timely and specialized services to support recovery.

The Future Outlook and Aspirations of individuals living with disabilities varied widely. Participants shared hopes and goals despite the challenges they faced, reflecting resilience and optimism. The presence of future aspirations was identified as vital for motivation and a sense of purpose. Supportive programs that assist individuals in setting and achieving realistic goals are crucial for enhancing their quality of life and overall outlook.

The study reveals the multifaceted experiences of working-age adults living with disabilities following trauma, framed within the Biopsychosocial model. This model emphasizes the interaction of physical, psychological, and social factors, providing a comprehensive understanding of the challenges and supports necessary for

individuals' recovery and well-being.

6.3 Conclusion

In conclusion, this study provides valuable insights into the experiences of workingage adults living with disabilities following trauma, highlighting the complex interplay between physical, emotional, social, and economic factors as framed by the Biopsychosocial model. The findings underscore the significance of understanding the multifaceted nature of disability and the necessity for tailored support systems that address the diverse needs of individuals navigating life post-trauma.

Participants reported a range of physical challenges that necessitate ongoing adaptations in their daily lives, illustrating the importance of accessible environments and supportive resources to enhance independence and quality of life. Additionally, the emotional and psychological impacts of living with disabilities were profound, indicating the critical need for comprehensive mental health support and counseling to assist individuals in managing the emotional aftermath of their experiences.

The study further highlights the essential role of social support networks in the recovery process. Strong relationships with family, friends, and the community

serve as vital buffers against the emotional and practical challenges posed by disabilities.

These support systems should be strengthened and promoted to facilitate better adaptation and resilience among individuals with disabilities. Furthermore, the economic and employment challenges faced by participants reveal a pressing need for employment support and vocational rehabilitation programs, crucial for helping individuals re-enter the workforce and achieve financial stability. Addressing these economic concerns is essential for enhancing the overall well-being and quality of life of individuals living with disabilities.

Finally, the findings regarding access to healthcare and rehabilitation services stress the necessity for timely and specialized care to support individuals' recovery journeys. Ensuring that healthcare systems are responsive to the unique needs of individuals with disabilities is vital for improving their physical functioning and overall quality of
life.

Overall, the study underscores the importance of adopting a holistic approach to disability support, informed by the Biopsychosocial model, that considers the complex interplay of various factors. Such an approach is essential for creating inclusive environments that empower individuals with disabilities, promoting their active participation in society and enhancing their quality of life. By addressing the physical, emotional, social, and economic dimensions of disability, stakeholders can foster a more equitable and supportive community for all individuals.

6.4 Recommendations

Based on the study findings, several recommendations are proposed to address the diverse needs of working-age adults living with disabilities following trauma. These recommendations aim to enhance support systems and improve the overall quality of life for individuals affected by such disabilities.

- Provide resources for environmental modifications and assistive devices to help individuals with disabilities adapt their living spaces.
- Integrate mental health services into rehabilitation programs to address the emotional and psychological impacts of trauma-related disabilities.
- Foster community support networks and establish support groups to offer emotional and practical help.
- Develop programs for job training and employment assistance to support financial stability and career progression.
- Ensure timely access to specialized medical care and rehabilitation services to improve recovery outcomes.
- Implement financial support mechanisms and assist individuals in managing economic impacts related to their disabilities.
- Support individuals in pursuing educational opportunities and career aspirations despite their disabilities.
- Provide training and resources for individuals to adapt their routines and environments to better manage their physical limitations.

6.5 Recommendations for further study

There is need to conduct further study to:

1. Assess the long-term effectiveness of rehabilitation programs and their impact on the quality of life, recovery outcomes, and overall adaptation of individuals with trauma-related disabilities.
2. Examine how various socio-economic factors, such as job type and education level, influence perceptions of disability and the effectiveness of coping strategies, to develop targeted interventions and support mechanisms.

6.6 Delimitations of the study

Delimitation refers to the process of outlining and specifying the boundaries, constraints, or limitations that are intentionally set by researchers to narrow the scope of their study (Creswell, 2014). These boundaries are established to maintain focus, ensure feasibility, and define the parameters within which the research will be conducted.

In the context of research, delimitations are crucial for several reasons, including resource constraints, the need for manageable study scopes, and the goal of producing meaningful and actionable results. As Creswell (2014) points out, delimitations help researchers avoid over ambitious projects and enhance the clarity and rigor of the study. This study will be limited to all patients recorded in the years (2019-2021) in orthopaedics male and female ward admitted in Oshakati state hospital between 18 to 60 years old.

6.7 Limitations

Limitations in a research study refer to the factors or aspects that may restrict the generalizability, validity, or scope of the findings (Creswell, 2014). Identifying and acknowledging limitations is an essential practice in research, as it demonstrates transparency and helps readers and researchers interpret the results within the context of these constraints. One limitation of the study is the reliance on literature primarily sourced from the Southern African Development Community (SADC) region. The study's scope is influenced by the availability and focus of existing literature within the SADC context, potentially limiting the broader applicability of findings to a more global perspective.

To address this limitation, the researcher thoroughly reviewed and critically assessed the available SADC literature, ensuring that it was representative and comprehensive. Additionally, the study acknowledges the importance of future research to explore disability epidemiology in trauma beyond the SADC region for a more diverse and inclusive understanding. Another limitation is the temporal constraint imposed by the researcher's availability for data collection. The study's duration for primary data collection was influenced by the researcher's leave period, which might impact the depth and breadth of data that could be gathered within a specified timeframe.

To mitigate this limitation, the researcher carefully planned and organized the data collection process during the available leave period, maximizing

efficiency without compromising the quality of data. While the time constraint remains a factor, the study provides valuable insights within the available timeframe, and future research could extend the investigation to include more extensive data collection periods.

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APPENDIX 4: ETHICAL CLEARENCE

UNAM
UNIVERSITY OF NAMIBIA

ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: DEC OSH 0098 **Date: 12/12/2023**

This Ethical Clearance Certificate is issued by the University of Namibia Ethics Committee (REC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the ethics committee.

Title of Project: THE EPIDEMIOLOGY OF DISABILITY FOLLOWING TRAUMA AMONG WORKING AGE ADULTS IN INTERMEDIATE HOSPITAL OSHAKATI ORTHOPAEDIC WARDS

Principal researcher: ASUMANI KIBANDWA

Staff Number/ Student number: 221258221

Remarks: Low Risk; Approved

Centre for Research Services

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee.
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee.
4. The ethics committee retains the right to:
   i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,
   ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.

Prof Hans J Amukugo (Oshakati Campus Chairperson Decentralized Ethics Committee)

Prof. Davis Mumbengegwi (Head, Multidisciplinary Research)

APPDENDIX 1: QUESTIONNAIRE PROTOCOL

Category	**Tick**
1. Age	
☐ 18-25 years	
☐ 26-35 years	
☐ 36-50 years	
☐ 51+ years	
2. Gender	
☐ Male	
☐ Female	
☐ Other	
3. Educational Level	
☐ None	
☐ Primary Education	
☐ Secondary Education	
☐ Tertiary Education	
4. Occupation	
☐ White-Collar	
☐ Blue-Collar	
☐ Unemployed	

5. Place of Stay	
Category	**Tick**
☐ Rural	
☐ Urban	

SECTION C: THE PATTERNS OF DISABILITY AMONG WORKING-AGE ADULTS DISCHARGED AT INTERMEDIATE HOSPITAL OSHAKATI ORTHOPAEDICS DEPARTMENT

Instructions: Please indicate your level of agreement with each statement by marking the appropriate box.

Injury Type	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Brain Injury	The impact of brain injury significantly affects my daily functioning and quality of life.	[ ]	[ ]	[ ]	[ ]	[ ]
Nerve Injury	Nerve injury has caused considerable limitations in my physical activities and overall mobility.	[ ]	[ ]	[ ]	[ ]	[ ]
Muscle Injury	Muscle injuries have resulted in noticeable physical restrictions that hinder my daily activities.	[ ]	[ ]	[ ]	[ ]	[ ]
Bone Injury	Bone injuries have a significant impact on my ability to	[ ]	[ ]	[ ]	[ ]	[ ]

	perform everyday tasks.					
Chest Injury	Chest injuries contribute to considerable physical restrictions and affect my ability to engage in various activities.	[ ]	[ ]	[ ]	[ ]	[ ]
Abdominal Injury	Abdominal injuries can lead to serious health complications that impact my overall wellbeing.	[ ]	[ ]	[ ]	[ ]	[ ]

APPDENDIX 2: INTERVIEW PROTOCOL

1. What are the experiences of patients living with disabilities following trauma among working-age adults in the Orthopaedic unit at Intermediate Hospital Oshakati?

2. What are the primary challenges you face in your daily life due to your disability?

3. How has your disability influenced your emotional well-being and mental health?

4. What role has your support network (family, friends, community) played in your recovery and adaptation process?

5. How do you perceive the accessibility of healthcare and rehabilitation services available to you since your discharge?

6. In what ways do you believe your disability has affected your social relationships and community engagement?

7. What adaptive strategies or coping mechanisms have you developed to manage the challenges associated with your disability?

8. What are your hopes and aspirations for the future, and how do they relate to your disability?

APPENDIX 3: MINISTERIAL APPROVAL

REPUBLIC OF NAMIBIA

MINISTRY OF HEALTH AND SOCIAL SERVICES

Ministerial Building
Harvey Street
Private Bag 13198, Windhoek

OFFICE OF THE EXECUTIVE DIRECTOR

Tel: No: 061 -203 2507
Fax No: 061-222 558
Andreas.Shipanga@mhss.gov.na

Ref: 22/3/1/1
Enquiries: Mr. A. Shipanga

Date: 22 March 2024

Dr. Asumani Kibandwa
PO Box 11812
Oshakati
Namibia

Dear Dr. Kibandwa

Re: The epidemiology of disability following trauma among working age adults in Intermediate Hospital Oshakati Orthopedics wards

1. Reference is made to your application to conduct the above-mentioned study.
2. The proposal has been evaluated and found to have merit.
3. **Kindly be informed that permission to conduct the study has been granted under the following conditions:**
   - 3.1 The data to be collected must only be used for academic purpose;
   - 3.2 No other data should be collected other than the data stated in the proposal;
   - 3.3 Stipulated ethical considerations in the protocol related to the protection of Human Subjects should be observed and adhered to, any violation thereof will lead to termination of the study at any stage;
   - 3.4 A quarterly report to be submitted to the Ministry's Research Unit;
   - 3.5 Preliminary findings to be submitted upon completion of the study;
   - 3.6 Final report to be submitted upon completion of the study;
   - 3.7 Separate permission should be sought from the Ministry for the publication of the findings.
4. All the cost implications that will result from this study will be the responsibility of the applicant and **not** of the MoHSS.

Yours sincerely,

EXECUTIVE DIRECTOR
MINISTRY OF HEALTH AND SOCIAL SERVICES

BEN NANGOMBE
EXECUTIVE DIRECTOR

All official correspondence must be addressed to the Executive Director

My NAMIBIA
MY COUNTRY, MY PRIDE