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PERCEPTION AND KNOWLEDGE OF HEALTHCARE WORKERS TOWARDS "EMERGENCY DEPARTMENT PHYSIOTHERAPY"

BY

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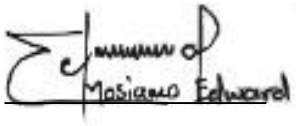
SUPERVISORS: PROF. VERONICA NTSIEA & DR CHUKA UMEONWUKA

A Dissertation submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Master of Science in Physiotherapy

July 2025

DECLARATION

I, Mosiamo Munzhedzi Edward, student number 2515277, declare that the dissertation titled "Perception and knowledge of healthcare workers towards "emergency department physiotherapy" "is my own work and that all sources that have been used have been acknowledged by means of complete references, and that this work or part of this work has not been submitted for any other degree, part of a degree or examination at this or any other university.



Signature

Date: 22 July 2025

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LIST OF ABBREVIATIONS

ABBREVIATIONS	DEFINITION
AD/T	Assistive Devices / Technology
Drs	Doctors
ED	Emergency Department
EDP	Emergency Department Physiotherapy
GDoH	Gauteng Department of Health
GED	Gauteng Emergency Department
HCW	Healthcare workers
ICD	Intercostal drainage
ICU	Intensive Care Unit
LOS	Length of stay
MDT	Multidisciplinary team
OPD	Outpatient Department
PEC	Patient Experience of Care
REDCap	Research Electronic Data Capture
SA	South Africa
WA	Walking Aids

ABSTRACT

Introduction: Addition of physiotherapists in Emergency Departments (ED) as first-contact treating practitioners can be taken as a useful asset. However, some hospitals lack dedicated Physiotherapists in ED.

Aim and Objectives: This study aimed to explore the knowledge and perceptions of healthcare workers (HCWs) towards Emergency Department Physiotherapy (EDP), assess the current staffing composition in ED, and determine the perceived need for the placement of physiotherapists in these settings. Objectives included: determine current staffing composition in Gauteng ED, identifying the need of physiotherapist placement, and determine HCW & physiotherapists' knowledge and perceptions towards EDP.

Methodology: A quantitative cross-sectional study was conducted using an electronic questionnaire (RedCap) & a retrospective review of patient records from 01/01/2023 to 31/12/2023.

Results: ED staff in Gauteng hospitals are composed of doctors, nurses, physiotherapists, clinical & therapeutic, and support staff (20 ED managers responses). Higher-level hospitals had greater staffing numbers (e.g., central hospital n=557,72%). A total of 2,242 clinical files were reviewed from 4 EDs (1 ED per category of hospital). Common ED diagnoses included pain (30%), soft tissue injuries (26%), respiratory issues (14%), neurological conditions (9%), and fractures (6%). Notably, 73% (n=1,641) of records with conditions suitable for physiotherapy were not referred. Only 4% of ED cases were screened by physiotherapists, while 23% were referred. Among ED managers, 20% recommended adding physiotherapists to ED, and 95% supported awareness campaigns on physiotherapy roles. Among HCWs, 73% (doctors and nurses) had never heard of EDP, 81% reported its absence in their facilities, and 62% expressed the need for dedicated EDP posts. HCWs identified key physiotherapy roles such as chest physiotherapy, walking aid provision, early mobilization, acute respiratory care, and orthopaedic/trauma management. Over 50% believed EDP could reduce waiting times, improve care quality, enhance early intervention, reduce inappropriate referrals, and optimize resource use. Among physiotherapists, 76% had some interaction with ED, 83% were not trained in EDP, and 88% indicated a need for such training. About 47% of referred patients were treated in ED. Physiotherapists reported attending to patients needing urgent stabilization to prevent hospitalization and promote recovery.

Conclusion: EDP plays a vital role in ED. There is a clear need for increased awareness, education, training, and the strategic placement of physiotherapists in ED. Both HCWs and physiotherapists recognize the value & importance of EDP in improving emergency care outcomes. The study also lays the groundwork for future research and benchmarking, both locally and internationally, in the development and implementation of EDP.

Keywords: Emergency Department Physiotherapy (EDP); Physiotherapist Placement; Healthcare Workers (HCW); Knowledge & Perception; Staffing Composition; Gauteng Hospitals.

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CHAPTER 1.

1. INTRODUCTION AND BACKGROUND.

1.1 INTRODUCTION.

This chapter includes the discussions of the overall thoughts that provoked the investigation which resulted in this study. The background to the study, study problems, research questions, aim, objectives and significance of the study are discussed. The chapter also includes the definition of key terms that were used often in the study. The chapter concluded with the overall inference the researcher made regarding the study.

1.2 BACKGROUNG TO THE STUDY.

Emergency departments are receiving continuous growing need in both advanced and advancing nations (Di Somma, Paladino, Vaughan, Lalle, Marini, Magnanti, 2015). This is evidenced by the study done in Australia where the number of emergency patients attended is increasing yearly by 3.6% because of population growth (Lowthian; Curtis; Cameron; Stoelwinder; Cooke; McNeil, 2011). Elder, Johnston and Crilly (2015) came up with a plan to better patient movement at emergency departments by extending the scope of practice to other healthcare practitioners such as physiotherapists.

Before 1970s, physiotherapists used to work under direct control of medical doctors, whereby the doctor had to first refer the patient to them to treat and after 1976, physiotherapists started to work independently as first contact healthcare practitioner (Scott, 2014). Addition of physiotherapists in emergency department as first contact treating practitioners can be beneficial to the emergency department clinical team (Scott, 2014). The multi-professional team makes working relationships more horizontal, allowing a holistic view of the patient whereby it includes most relevant physiotherapist's role in the cardiorespiratory sphere and functional movements (Braz, Curitiba, 2019).

Emergency department physiotherapist (EDP) is explained as a 'clinician committed to work as a part of the emergency department (ED) team in managing patients freely or together with medical doctors and nurses (Anaf, Sheppard, 2007). Emergency Department Physiotherapy possess some distinctive competency skills that is used in management of patient, and it has shown great benefits for those patients who access health services and if taken in to account it can better service delivery at the ED (Scott, 2014). Physiotherapists bring some distinctive competency skills and knowledge in clinical assessment and diagnosis of musculoskeletal conditions, in addition to

diverse techniques such as strapping and taping, prescription of mobility aids, manual therapy and exercise prescription (Scott, 2014).

Recommendation made for later activity was to uplift many organizations beyond the nation to integrate physiotherapy at ED to intensify action and consequence of non- emergency care (Fleming-McDonnell, Czuppon, Deusinger, Deusinger, 2010). This recommendation is essential because the existence of EDP is perceived differently by hospitals since there are hospitals that do not have allocated/dedicated physiotherapists in the ED (Sophie, 2008).Similar recommendation was also made by the Australian government commission to consider EDP role as an innovative workforce strategy (Australian government productivity commission, 2005).

The role of physiotherapists in ED is perceived differently by healthcare workers and the patients. Healthcare professionals and patients regard physiotherapy services to better patients ability to care by contributing to well-timed treatment, organizing ongoing referral or releasing other emergency department multidisciplinary team to attend patients, and having good interpersonal communication, giving grater education to patients and having more time for exercises (Rosalie, Louise, 2018, Ferreira, Traeger, O'Keeffe, Maher, 2018; Greensitt, Bowen, Singh, Vaziri, Bambarvajane, Price, Rajwani, 2019; Sophie, 2008). In recent years, the physiotherapy performance in the emergency room has been expanded, aiming at reducing complications, length of hospital stays and providing identification and early action in cardiopulmonary and body movement problems (Braz, Curitiba, 2019). Early intervention by physiotherapists at the ED may lead to speedy recovery of patients (Lebec; Cernohous; Tenbarge; Gest; Seveson; Howard, 2010).

According to Rosalie et al. (2018) physiotherapists in Australia and United Kingdom perceive their role as not well accepted by ED team and other patients perceive EDP intervention to be hurting, unfruitful and should be considered on a later phase of care (Ferreira; Traeger; Maher, 2019) They feel that they need to prove their ability to other healthcare providers to receive and recognize them. In addition, they miss peer assistants from other healthcare workers and must seek this elsewhere. However, they have noticed that if physiotherapy service is set up and medical doctors become cognizant of their contribution and capability, they are regarded as part of the great ED multidisciplinary team. This suggests that maybe physiotherapists are precise in their insight, so they require to show themselves inside ED (Rosalie et al., 2018). The information on South African context would be of benefit for the study however there is no research done yet.

1.3 PROBLEM STATEMENT.

The researcher has observed other hospitals in Gauteng Province in South Africa, including the hospital he is working at, there are no physiotherapists allocated/dedicated at ED. Lack of EDP is like the situation in Australia whereby the researcher Sophie (2008) found that there are some hospitals with no physiotherapists allocated at the ED or with no permanent or dedicated physiotherapists in ED, whereas in other hospitals there were permanent/dedicated physiotherapists in ED working from 6am to 5pm.

Emergency Department physiotherapists are valued by patients and ED healthcare workers and their jobs are regarded to better ED services (Ferreira et al., 2018). This indicates that facilities that do not have EDP may deprive patients of their rights in accessing EDP services. Hence there are patients who are being discharged from the ED without necessary Physiotherapy intervention and with no physiotherapy home programme.

Lack of knowledge on the physiotherapy role in ED by healthcare workers may have an impact on whether physiotherapists are placed or not placed in ED. Emergency Department healthcare workers refer patients to Physiotherapy OPD services which sometimes lead to notable delays (Rosalie & Louis, 2018). Addition of physiotherapists in ED as first contact treating practitioners can be taken in as a useful asset at ED clinical group (Scott, 2014). There is no research about EDP services in South Africa including the knowledge and perception of the healthcare workers on the role of EDP.

1.4 SIGNIFICANCE OF THE STUDY.

The results of record review will assist in informing decisions for placement of physiotherapists in emergency department based on medical conditions that are commonly managed at the ED. The presence of EDP can reduce the waiting times for patients (Nall, 2009) and can permit other emergency healthcare practitioners to concentrate on extra cases of patients that are critical (Derlet, Kinser, Ray, 1995). This will minimize the need to refer patients to Physiotherapy outpatient services which sometimes lead to notable delays for patients (Rosalie, Louise, 2018) because patients must walk all the way to the Physiotherapy Department which in most hospitals is not close to ED. The presence of physiotherapists also shortens patients' extent of stay in the ED (Morris, Vine, Grimmer, 2015) and this will reduce overcrowding of patients in ED. Physiotherapists as a part of the ED team might have potential in reducing the cases by identifying patients through screening that can receive complete intervention from the physiotherapist without passing by other ED healthcare worker e.g., if a patient has soft tissue injury they can be assessed, treated, given walking aid and a home programme and go home without having to be seen by other ED healthcare workers.

Understanding of physiotherapist role in ED by healthcare workers will help in strengthening the referral system. Physiotherapists who understand their role in the ED will acknowledge their role, competency gaps and training needs. They can make the community and emergency department healthcare professional aware of the services they can provide for their skills (expertise) to be recognized and used properly (Rosalie, Louise, 2018).

1.5 AIM OF THE STUDY.

To explore the knowledge and perceptions of healthcare workers regarding Emergency Department Physiotherapy (EDP), assess the current staffing composition in Emergency Departments (EDs), and determine the perceived need for the placement of physiotherapists in these settings.

1.6 OBJECTIVES OF THE STUDY.

1.6.1 To determine current staffing composition in Gauteng Emergency Departments.
1.6.2 To determine the need for physiotherapists' placement in the Emergency Department.
1.6.3 To determine the knowledge and perception of Emergency Department healthcare workers (nurses & doctor) on the role of Emergency Department Physiotherapy.
1.6.4 To determine the knowledge and perception of Physiotherapists on their role in Emergency Department.

1.7 RESEARCH QUESTIONS.

What is the current staffing composition of Emergency Departments in Gauteng, what is the perceived need for the placement of physiotherapists in these departments, and what are the knowledge and perceptions of healthcare workers (doctors, nurses, and physiotherapists) regarding Emergency Department Physiotherapy?

1.8 CONCLUSION.

This chapter introduced the study by presenting its background, significance, aim, and objectives, as well as outlining the research question. These elements form the foundation for understanding the study's focus on Emergency Department Physiotherapy. The next chapter presents a comprehensive literature review, structured around the study's key objectives, to contextualize the research within existing knowledge.

CHAPTER 2.

LITERATURE REVIEW.

2. INTRODUCTION.

In this chapter, the objectives of the study are addressed through a critical review of published research literature relevant to the topic. The scope of the literature reviewed is aligned with the key themes of the study. The chapter explores the following sub-topics: the staffing of physiotherapists in Emergency Departments (ED), the need for their placement in EDs, healthcare professionals' perceptions of Emergency Department Physiotherapy (EDP), and physiotherapists' own knowledge and perceptions regarding their placement in ED.

2.1 STAFFING COMPOSITION IN THE EMERGENCY DEPARTMENTS.

The Ministry of Health in 2012 in Asia developed a standard for ED with an aspiration to achieve higher efficiency, clearer communication, and uniformity of services in the ED throughout the health system. The national standard of ED indicated that the organizational chart of the ED must include the head of the department, chief medical officer, chief nurse, medical officers, trauma nurse, triage nurse, staff nurse and supporting staff. It further mentioned that the ED collaborates in various ways that includes the wards, ICU, police, all the wards, occupational therapy, diagnostics, district hospitals, management, other departments such as physiotherapy and social workers, other related agencies, and the blood bank. The support staff is indicated as the receptionist, porters and cleaners (National Standard for Emergency Department, 2012).

In a few emergency departments, staffing has been redesigned to meet the changing demand for services. The study by Schofield (2009) reported that ED are mostly staffed by senior staff members as it gives efficient emergency department operation and the patients with minor injuries are allocated to less skilled staff such as the triage nurse. The presence of senior medical, nurse and therapeutic healthcare workers such as physiotherapists are needed in fast track (Schofield, 2009).

Emergency Department Physiotherapy (EDP) is still a new discipline, and this could be a reason why little is known by regarding the impact that physiotherapists can have on patients in the emergency department (Barrett & Terry, 2018; Fisher, 2020). At first other healthcare professionals acknowledged confusion around the placement of physiotherapists in ED because they had no understanding of the remit and role of physiotherapy ED services but reported understanding after working with them (Lebec et al, 2010). The confusion on these may have the

impact on the local and national political in the United State of America and Australia, and the economic influencers as they were likely to have led to the development of EDP posts, and the delay could be due to the fact that there are currently no set guidelines, competencies or agreed job descriptions for these EDP posts (Barrett & Terry, 2018).

The use of suitably trained and experienced physiotherapists as primary contact clinicians has been enforced (Scott, 2014). Physiotherapists have begun to practice in Australia's emergency departments (EDs) as autonomous, primary contact clinicians and this has also been implemented in EDs in the United Kingdom and the United States, in an attempt to reduce waiting times for ED patients, and to reduce clinical loads placed upon medical staff (Farrell, 2014). According to the study done by Farrell (2014) prior to the 1970s, physiotherapists practiced under the direct supervision of their medical colleagues, requiring a doctor's referral to treat a patient, however, in 1976, the profession in Australia began to practice as primary contact healthcare providers autonomously while still working in close consultation with medical practitioners. Emergency Department physiotherapists first emerged in the United Kingdom with the role subsequently spreading to Australia and the presence of the physiotherapists in the ED improves the waiting times of the patients and length of stay of patients in the hospital (Farrell, 2014; Stephen & Julian, 2013). In the United States there are physiotherapists placed in ED and their services are valued (Lebec te al., 2010).

The study done by Fischer (2020) supports the placement of full-time physiotherapists in ED. The study shows that their placement reduces unnecessary hospital admission, and it can ultimately reduce costs for hospitals. Ninety seven percent of the healthcare professionals who participated in their study reported positive experiences of working regularly with the physiotherapist in the ED. Restricted availability of physiotherapists in ED such as their unavailability during weekends, or during certain shifts on weekdays is perceived as a negative aspect, preventing the effective integration of the physiotherapist into the ED staff (Ferreira, Traeger, O'Keeffe & Maher, 2018). Healthcare professionals that have positive experience with the students' physiotherapist ED placement recommend similar placements in the future (Withers, Zavitz, Nguyen, Baglole, Kashetsky, Graham, Brison, Law, Booth & Miller, 2022). Patients' surveys have indicated that introduction of ED physiotherapist service has improved the care at the ED (Ferreira, Traeger, O'Keeffe, Maher, 2018; Greensitt et al., 2019).

Placement of the physiotherapists with the inclusion of physiotherapy students in the ED is considered essential by the healthcare professionals and physiotherapy students because it offers a unique role and provides learning opportunities for students with assessments of patients who had a variety of musculoskeletal conditions (Withers et al., 2022). This placement of physiotherapists, including physiotherapy students, is perceived to reduce workload for the staff.

However, given the low number of reported attendances and the high levels of reported stress and anxiety associated with treating patients requiring emergency duty physiotherapy, a reconsideration of service provision may be justified (Dunford, Reeve & Larmer, 2011).

In other hospitals physiotherapists are not available during weekends or do certain shifts on weekends. This restricted availability in ED is perceived as a negative aspect, preventing the effective integration of the physiotherapist and some ED staff expressed concerns regarding the additional time that physiotherapists spent with patients in the ED (Ferreira; Traeger; Maher, 2019). Emergency physicians consistently report a desire to expand EDP hours of service including evening and night shift (Lebec et al., 2010), hence in South Africa no study was conducted yet confirming the staff composition ED.

2.2 THE NEED OF PHYSIOTHERAPISTS' PLACEMENT IN EMERGENCY DEPARTMENT.

Primary contact practitioner physiotherapists are increasingly common in emergency departments and provide targeted care to people with uncomplicated musculoskeletal conditions such as sprains, strains, and simple fractures (Taubert et al., 2022). Physiotherapists appear to have similar clinical effectiveness and cost compared to other health providers because they are associated with increased efficiency and reduced low-value care in emergency department (Ferreira, Traeger, Maher, 2019). The emergency department for physiotherapists has a unique set of skills to apply to patient management that appear to benefit patients accessing the health service and may improve the overall service delivery in this department (Scott, 2014). Early intervention by a physiotherapist in the emergency department has the potential to speedy recovery of patients and prevent complications (Lebec et al., 2010). The effectiveness of the EDP was also reflected in the study done by Gill (2013) whereby improved waiting times and length of stay were shortened as 91% of the patients that were seen at EDP were discharged home within four hours.

In recent years, Physiotherapy performance in the emergency room has been expanded, aiming at reducing complications, length of hospital stays and providing identification and early action in cardiopulmonary and kinesi-functional problems (Braz, Curitiba, 2019). Reducing the length of stay is evidenced in the study done by Jibuike et al., (2003) in which medical time was saved in emergency and trauma clinic. Fifty-nine percent of patients were treated and discharged from the service without further medical review, and ninety-five per cent of patients referred to Acute Knee Screening Service (AKSS) were seen within one week. In the study that was done in 2019 in Oxford in John Radcliffe hospital, it was found that after introducing ED physiotherapy, over a short period the number of bed days saved was 26 with a significant cost saving overall (Greensitt et al, 2019). Doctors and nurses felt that the depth of musculoskeletal knowledge of

physiotherapists could be most useful in the early screening, assessment and intervention of acute musculoskeletal conditions, relieving staff to attend to more urgent cases (Lefmann, Sheppard, 2014).

The impact of the physiotherapist service in emergency unit is evidenced in Oxford in John Radcliffe Hospital whereby in a two months period following introduction of the service, 76 new patients were seen; 89% were discharged on the same day; 17% had admission avoidance directly due to therapy intervention; 28% and 14.5% of referrals were referred to community therapy and nursing respectively and 66% of patients were provided with information on services available (Greensitt et al., 2019). The EDP presence in ED enables early diagnosis and management as well as having the potential to capture cases that may have been inadvertently sent home from the acute and Emergency Department without any follow up (Jibuike et al., 2003).

Where possible, the physiotherapist helps to avoid admission of the patients to hospital but note that secondary contact physiotherapy services often involve complex presentations (Lefmann, Crane, 2016). Patients discharged with a thorough understanding of their diagnosis because of the EDP intervention were thought to have greater satisfaction with their care and recommendations for follow up were viewed as beneficial within the patient's continuum of care (Lebec et al., 2010).

According to Scott (2014) improving efficiency of patient management in EDs is a significant goal of modern healthcare delivery. It was also mentioned that patients presenting mechanical musculoskeletal pathologies can experience long waiting times in busy departments, as medical staff must prioritize higher triage category patients with more urgent medical issues. Physiotherapists' consultation at an earlier stage can decrease some patients' need for radiography, pain medication, and decrease further overall patient waiting time for patients with musculoskeletal complaints (Fleming-McDonnell et al., 2010).

A physiotherapy practitioner working with an extended role is an important addition to an acute and emergency department (Jibuike et al.,2003). Their presence in the emergency unit helps build interdisciplinary relationships between doctors, surgeons and radiologists (Jibuike et al., 2003). Physicians solicited advice from physiotherapists regarding outpatients' specialty referrals (Lebec et al.,2010). The AKSS improves the quality of care of acute knee injuries, saves medical time, and fosters cooperation across services within the NHS (Jibuike et a., 2003).

The study done by Scott (2014) found that it is important to note as well that EDP roles are intended to be undertaken by experienced physiotherapists that have undertaken further training in basic orthopedics and radiology as applicable to the ED, to ensure that a high standard of clinical care and patient safety are maintained. It was further mentioned that not every

physiotherapist is suitable for the role, and as such for the role to continue to develop and improve, appropriate training opportunities and quality assurance measures must be in place in health services implementing ED Physiotherapy.

Available evidence suggests that physiotherapists may be as effective as other health providers in managing low urgency conditions in the Emergency Department (Ferreira; Traeger; Maher, 2019). Practice in the hospital ED enables physiotherapists to fully use their knowledge, diagnostic skills, and ability to manage acute pain and musculoskeletal injury (Fleming-McDonnell et al., 2010). Emergency department physiotherapists are responsible for the management of patients with semi urgent and non-urgent musculoskeletal complaints (Farrell, 2014). They evaluate and treat patients with many different medical diagnoses and assist, differential diagnosis of complex medical condition (Fleming-McDonnell et al., 2010).

Physiotherapists in ED provide patient education, non-pharmacological pain management, activity resumption especially through exercise therapy and they are recognized as experts in the management of musculoskeletal conditions by patients and ED staff. These provisions of education, exercises and encouragement are aimed at improving patients' function (Ferreira, Traeger & Maher, 2019). The effectiveness of the EDP in musculoskeletal condition was evidenced in the study conducted by Taylor et al., in 2011 whereby it showed improved patient flow with an average reduction in length of stay in the ED of almost 60 minutes. Patients with simple peripheral musculoskeletal injuries were treated by physiotherapists as first contact by passing the doctors demonstrating their skills and knowledge on management of simple peripheral musculoskeletal injuries.

The role of Physiotherapy ED also includes undertaking patient interviews, examinations, ordering investigations such as X-rays, prescribing medication, making a diagnosis, implementing suitable interventions, referring for on-going management, safety assessment, pain management and arranging patient discharge (Scott, 2014; Ferreira, Traeger & Maher, 2019; Fleming-McDonnell, Czuppon, Deusinger, Deusinger, 2010). Several countries such as United Kingdom, Namibia, Brazil and the United States have introduced non-medical prescribing rights, however in South Africa physiotherapy scope of practice does not allow them to prescribe medication hence South African physiotherapists favour an extended scope of practice and be allowed in the inclusion of prescription rights and they are aware of educational shortcomings and have interest in undergoing training (Kakono et al., 2023).Training levels of ED physiotherapist are unclear (Ferreira, Raeger & Maher, 2019). There is Acute and Emergency Physiotherapy practitioner in other countries such as in United Kingdom who underwent further training in radiation protection, analysis of plain radiographs and MRI scans and specific training (Jibuike et al., 2003), however South African physiotherapists are not trained in radiation protection and safety, but the

undergraduate training program/module has been proposed (Munro, 2021). Physiotherapy consultations afford doctors/physicians access to expertise in recommending an appropriate assistive device and strategies for maximizing patient safety and through a functional evaluation, they could also provide input on the proper discharge destination including returning home, referral to long term care, or inpatient admission (Lebec et al., 2010).

Emergency department physiotherapists may also contribute to the care of patients with acute respiratory conditions like secretion clearance interventions (Scott, 2014). Their contribution in acute respiratory conditions is supported by the study done in Brazil which showed that the ED physiotherapy served the population of patients with chronic obstructive pulmonary disease, congestive heart failure, asthma, and respiratory failure. The study further indicated that physiotherapists may also act in prophylaxis of deep vein thrombosis, early mobilization, and optimization of the ventilatory pattern (Braz, Curitiba, 2019). Another demand on the EDP is for the role they play in a leading care coordination and supporting patients to transition back to appropriate community settings with aids and equipment in place and with community services informed of patients' circumstances (Lefmann, Sheppard, 2014). The facilitation of discharging patients from ED into the community reduces preventable hospital admissions (Scott, 2014).

Emergency Department Physiotherapy assists the medical doctors in the management of simple fractures (Scott, 2014). The study conducted in United Kingdom ED physiotherapy shows that initial diagnosis of patients with acute knee injuries referred received the service for meniscal injuries (38%), cruciate ligament injuries (18%), fractures (2%), patellofemoral joint injuries (10%), and others (32%). The role of physiotherapist in the Emergency Department includes requests for MRI. In this study, 44% of patients had MRI scans performed as requested by the physiotherapist. Eighty-eight percent (15) of these scans showed significant abnormality that are anterior cruciate ligament tears, posterior cruciate ligament tears, and meniscal tears (Jibuike et al.,2003).

There are identified contrasting views about the role of movement and exercise by patients in ED, while some felt this was an important part of the care plan, others felt this approach to be painful, unproductive, and that it should only be used in the later stages of care. Physiotherapists prescribing this treatment should communicate clearly about predicted benefits and harms for the patient (Ferreira, Traeger, Maher, 2019). Furthermore, where necessary and feasible, physiotherapy must address concerns that may arise in ED in order to enhance safe and effective service provision such as likely incompetence skills in ED by physiotherapists. These strategies may include provision of specific continuous professional development (CPD) opportunities in ED physiotherapy. Determining differences between novice and expert physiotherapists in undertaking emergency on-call duties (Dunford, 2011).

There is still room for further education and potentially increasing capacity of the service by expanding the workforce (Greensitt, Bowen, Singh, Vaziri, Bambarvajane, Price & Rajwani, 2019). In Australia physiotherapists were mostly well accepted by patients and emergency department staff, and their work was perceived to improve the emergency department. Characteristics that facilitated their role in the ED were having good interpersonal communication skills and being good team workers (Ferreira et al., 2018; Greensitt et al., 2019). The good communication with the patient, which generally has a significant influence on patient satisfaction, self-care, and compliance with advice and intervention (Lau, Chow, Pope, 2008). Having broad knowledge to assess and treat different health conditions was seen as facilitating the work of physiotherapists in the ED (Ferreira al et., 2018; Greensitt et al., 2019).

The provision of extensive patient education includes instruction in exercises specific to patient's condition or other advice for independent management (Lebec et al., 2010). Patients and healthcare professionals acknowledge that physiotherapists play a major role in education. Patients value the breadth of information they are provided with about their injury and after-care, including how to manage once they leave the ED (Rosalie & Louise, 2018).

Beside physical intervention, the ED physiotherapist provides advice on staying active, adequate information, reassurance, and practical advice (Lau, Chow, Pope & 2008). Early physiotherapy intervention for patients who presented at an Accident and Emergency Department led to improved outcomes in pain and is considered to be effective intervention at least in the acute phase and patients are more satisfied with the intervention outcome (Lau, Chow & Pope, 2008). The presence of EDP eases the suffering of patients in the very acute stage, provides timely and appropriate advice, empowers the patient with better self-management skills, and leads to better self-perception of the overall condition (Lau et al., 2008). The South African Society of Physiotherapy clearly summarizes the role of physiotherapists as to assess and treat neuro muscular, Musculo-skeletal, cardio-vascular and respiratory impairments conditions by use of movement and exercise; massage and manipulative techniques; electro-physical modalities; counselling and education (standards of practice of physiotherapy in South Africa, 2012).

2.3 KNOWLEDGE AND PERCEPTION OF EMERGENCY DEPARTMENT HEALTHCARE WORKERS ON THE ROLE OF EMERGENCY DEPARTMENT PHYSIOTHERAPY (EDP).

The emergency department physiotherapy role remains poorly understood by healthcare workers in ED, and this identifies that the physiotherapy profession needs to consider how it raises awareness about the skill set physiotherapists can offer and how physiotherapy markets itself, both to the public (patients) and to ED healthcare workers, to ensure their expertise is acknowledged and used appropriately (Rosalie, Louise ,2018). Some emergency department healthcare workers strongly expressed that prior to working with physiotherapists, they did not have a complete understanding of physiotherapy scope of practice and therefore had difficulty envisioning the services therapists might provide in the ED setting (Lebec, et al, 2010). Upon first hearing of the EDP programme many were skeptical of its potential for success, and they struggled with how this new service would mesh with the typical ED culture of providing all Interventions within one health care visit, however after the experience with the programme the understanding improved on how physiotherapists function (Lebec et al, 2010).

Healthcare workers perceive physiotherapists to have a wide-ranging skill set (Barrett & Terry, 2018). As a result of lack of awareness of physiotherapist in the ED-by-ED staff and patients in Australia, it was recommended that physiotherapists communicate well with the ED team to ensure that their role is understood (Ferreira;Traeger; Maher, 2019). The most challenging role has been to educate other ED providers about the knowledge and skills a physiotherapist contributes to managing musculoskeletal problems (Fleming-McDonnell et al., 2010). In the early stages, primary contact physiotherapists need to define and describe their role to help staff understand the scopes of practice on offer. The secondary contact role must also be properly defined to encourage consistency of patient management (Lefmann, Crane, 2016). Scott (2014) realized the need for comprehensive assessment of the strengths and weaknesses of current EDP practice, as well as whether the current ED physiotherapy model is achieving the desired goal of enhancing ED operation.

Acknowledging perception and experience on EDP can provide valuable insights into how new ED healthcare services should be developed and delivered and it adds a unique in- depth human perspective to the current ED physiotherapy literature (Rosalie, Louise, 2018). Although the frequency of ED physiotherapy consults continues to increase in America, the ED healthcare workers perceive the EDP service differently (Fleming-McDonnell et al., 2010). There is high healthcare workers' satisfaction with physiotherapy services in the emergency department (Fleming-McDonnell et al.; 2010), however, some healthcare workers reported only understanding physiotherapy ED services after they have started working with them (Barrett & Terry, 2018).The satisfaction by professionals was not automatic, unconditional, or implied and

represented a continuum from physiotherapist being tolerated as transient visitors to being subsumed as integrated members of the ED team. Acceptance of the service and its members was contingent upon the physiotherapists demonstrating three interdependent qualities: being trustworthy, valuing learning, and complementing (not competing with) ED practices to achieve ED goals (Taubert, Burns, Ward & Bassett, 2022).

Nurses have gained positive view regarding introduction of EDP as they believe it improves quality, timeliness, access and patient flow, organizing of onward referral or by freeing up other ED multidisciplinary team members (Morris, Vine & Grimmer, 2015). The presence of EDP results in patients' shorter length of wait and length of stay and facilitate quicker discharges compared to other clinical professionals in the emergency department (Morris, Vine & Grimmer, 2015; Barrett & Terry, 2018). Emergency physicians found EDP service to be of value for themselves, their patients and the department as a whole and describe specific manner in which consultation enhance emergency care. They furthermore perceive EDP essential because it enhances clinical practice through an expanded scope of management options and this perception has resulted in increased referrals to EDP (Lebec et al., 2010; Fleming-McDonnell et al., 2010; Barrett &Terry, 2018).

Doctors in Canada have positive perception and high acceptability of physiotherapy care in the ED (Matifat, Lavoie-Côté, Kounda, Charrier, Perreault, & Desmeules, 2021). They believing it assists in treating patients with geriatric conditions, falls, mobility disorders, and Muscular-skeletal disorders and think the EDP could optimize resources usage, reducing wait times in the ED, and allowing doctors to focus more on patients that need more attention (Matifat et al., 2021). It is of notice that there are no studies done yet in South Africa on perception and knowledge of ED healthcare workers on EDP.

2.3.1. TABLE ON KNOWLEDGE AND PERCEPTION OF EMERGENCY DEPARTMENT HEALTHCARE WORKERS ON THE ROLE OF EMERGENCY DEPARTMENT PHYSIOTHERAPY.

Summary of knowledge and perception on role of Physiotherapy in Emergency Department by other healthcare workers.
They did not have a complete understanding of physiotherapy scope of practice (Lebec, et al, 2010).
They had difficulty envisioning the services physiotherapist might provide in the ED setting (Lebec, et al, 2010).
They were sceptical of EDP potential for success, and they struggled with how this new service would mesh with the typical ED culture of providing all Interventions within one health care visit (Lebec et al, 2010).
Physiotherapists to have a wide-ranging skill set of treating patients in ED (Barrett & Terry, 2018).
The Emergency Department Physiotherapy can provide valuable insights into how new ED services should be developed (Rosalie, Louise, 2018).
Healthcare workers' who have worked with physiotherapists have satisfaction towards physiotherapy services in the emergency department (Fleming-McDonnell et al.; 2010).
Acceptance of the EDP services was contingent upon the physiotherapists demonstrating trustworthy, valuing learning, and complementing ED practices (Taubert, Burns, Ward & Bassett, 2022).
Positive view towards Emergency Department Physiotherapy is accompanied by the believes that it improves quality, timeliness, access and patient flow, organizing of onward referral (Morris, Vine & Grimmer, 2015).
Emergency Department Physiotherapy shortens patients' length of stay and facilitates quicker discharges (Morris, Vine & Grimmer, 2015; Barrett & Terry, 2018).
Emergency Department Physiotherapy enhances clinical practice through an expanded scope of management options and increase referrals to EDP (Lebec et al., 2010; Fleming-McDonnell et al., 2010; Barrett &Terry, 2018).
Emergency Department Physiotherapy assists in treating patients with geriatric conditions, falls, mobility disorders, and muscular-skeletal disorders (Matifat, Lavoie-Côté, Kounda, Charrier, Perreault, & Desmeules, 2021).
Emergency Department Physiotherapy optimizes resources usage and allows doctors to focus more on patients that need more of their attention (Matifat et al., 2021).

2.4 KNOWLEDGE AND PERCEPTION OF PHYSIOTHERAPISTS ON THEIR ROLE IN EMERGENCY DEPARTMENT.

Physiotherapists that had worked in ED believe that new physiotherapists and students' physiotherapists in ED need to be provided with more support to reduce their stress levels and to increase experience for working in the emergency on-call environment (Dunford, Reeve & Larmer, 2011). Hence, students' physiotherapists considered themselves to require a greater level of support than the experts when undertaking on-call duties which indicated that despite their anxieties, they are better prepared than they may believe (Dunford et al., 2011). Physiotherapy students perceived adapting to working in ED to be challenging as they experience difficulties in building collaborative relationships with ED professionals and sometimes, they lack clarity on the processes for order of care and patient flow. Other barriers include students' inability to chart in the electronic medical record, lack of bed space, and lack of clarity about students' scope and abilities (Withers et al., 2022). Physiotherapy students undergo emergency response training in sport injuries, and this is evidenced in the study done by Karges (2013) proving the effectiveness of emergency response in acute sport injuries. The study showed improvement in the effectiveness in response to acute sport injuries after the physiotherapy students received training and students felt more prepared to handle acute sports injuries (Karges, Cross, Hauer, Blom, Burcham, Myers & Grimsrud, 2013).

Physiotherapists who were exposed to working in ED reported that nurses and doctors understand their role after they have worked with them. At first physiotherapists felt that feeling accepted into the ED multidisciplinary team was a struggle and they needed to prove their ability first to be accepted and acknowledged. They also felt isolated as they missed the peer support and had to seek it elsewhere (Barrett & Terry, 2018). However, Physiotherapists perceive their role in ED to be advantageous for the entire department because they believed that patients can receive specialized care and additional services as compared to traditional settings (Lebec, Cernohous, Tenbarge, Gest, Seveson & Howard, 2010) and that their generalist skill base and lateral thinking abilities were more valuable to the ED professionals and the patients (Lefmann, Sheppard, 2014). This impact on patients and healthcare professionals to perceive their professional to have a wide-ranging skill set (Rosalie, Louise, 2018)

2.5 CONCLUSION.

This chapter provided a comprehensive literature review addressing key subtopics relevant to the study, including staffing composition in Emergency Departments (EDs), the need for physiotherapist placement within EDs, and the knowledge and perceptions of healthcare workers regarding the role of Emergency Department Physiotherapy (EDP). It also explored physiotherapists' own knowledge and perceptions on their role in ED. A summary table was included to consolidate the main findings from the literature. The next chapter outlines the research methodology used in conducting this study.

CHAPTER 3.

METHODOLOGY.

3.1 INTRODUCTION.

This chapter introduces and explains the rationale for the research methodology used in the study which entails an overview about the research design, population, study sites, the sampling design, data collection process and how data will be analyzed. The chapter includes the discussion of the concern of validity and reliability as it pertains to the study and the end of the chapter is completed with a conclusion.

3.2 STUDY DESIGN.

It was a quantitative cross-sectional study using RedCap link to an electronic questionnaire and record review data collection methods. The time frame was from the 01 January 2023 to 31 December 2023. This study design was chosen as it allows for the efficient collection of data from a large and potentially geographically diverse population using online questionnaires and provides a cost-effective way to access existing records (Kraemer, Yesavage, Taylor & Kupfer, 2000).

3.3 STUDY POPULATION.

Study population defines the group in which the study will be carried out providing the setting for which the research has relevance. It describes how one can be certain that the result can be generalized to the population identified (Enarson, Kennedy, Miller, 2004). Information will be shared for each study objective in 3.4.

3.4 STUDY METHODS PER EACH OBJECTIVE.

3.4.1 TO DETERMINE CURRENT STAFFING COMPOSITION IN GAUTENG EMERGENCY DEPARTMENTS.

Targeted population: Emergency Department (ED) managers in all Gauteng units.
Inclusion criteria: Emergency Department managers at public hospitals.
Exclusion criteria: Healthcare workers at ED (nurses, doctors, and physiotherapists) who are not ED managers.

Sample size: It is necessary to estimate how big the sample needs to be to answer the question posed (Enarson et al., 2004). A link to an electronic questionnaire was sent to all ED managers (28 ED managers from all levels of care) in all Gauteng hospitals with ED (28 hospitals). There were 20 ED managers that participated in the study.

Study sites: All Gauteng Province public hospitals with Emergency Department (ED) were used in this study.

Sampling method: Sampling can be used to make inference about a population or to make generalization in relation to existing theory (Hamed, 2016). A convenience sampling method was used to select ED managers who participated in the study.

Sampling procedure: All managers in charge of the Gauteng Emergency Department.

Data collection procedure.

It is important to indicate the way in which data will be collected to decide on the outcomes and the determinants that are planned to be studied (Enarson et al., 2004). A RedCap link (https://redcap.core.wits.ac.za/redcap/surveys/?s=CLT3FRR3448F99FT) to an electronic questionnaire with specific questions about number of staff including their profession was sent to ED managers in all Gauteng hospitals with ED. A link was sent once to ED managers mid July 2024 and followed with a weekly reminder. Extension of data collection was done twice due to poor response, until the supervisor advised closer on the 11 of October 2024. The participants completed the online questionnaire, the RedCap link.

3.4.2 TO DETERMINE THE NEED OF PHYSIOTHERAPISTS' PLACEMENT IN EMERGENCY DEPARTMENT.

Targeted population: Emergency Department patients' files

Inclusion criteria: All emergency department patients

Exclusion criteria: ED patients' files without patient's diagnosis.

Sample size:

It is necessary to estimate how big the sample needs to be to answer the question posed (Enarson et al., 2004). Review of records in ED took over a period of 1 year, in one hospital per category of hospitals in Gauteng. A sample of 341 files or more per category of hospital (central, tertiary, regional and district = 1364 ED patient files) were needed (50% expected frequency, 5% expected margin of error and 2.5 design effect). An additional 10% (34) of the files was considered to make up for possible pulling of files without clear patient diagnosis. Total number of files to be pulled: 375 (32 per month per category of hospital). There were 2242 records reviewed in the study.

Study sites:

Public hospitals in Gauteng with ED were used in this study (Categories include Central, Tertiary, Regional and District hospitals).

Sample method: A simple random sampling method was used to select a record reviewed. In simple random sample, every case of the population has an equal probability of inclusion in sample (Hamed, 2016).

Sampling procedure: A random pulling of 32 files monthly from four hospitals, one hospital per category (central, tertiary, regional and district) of public hospitals with Emergency Department (ED) in Gauteng Province were used in this study.

Data collection procedure:

It is important to indicate the way in which data will be collected to decide on the outcomes and the determinants that are planned to be studied (Enarson et al., 2004).

A record review of ED patient files over a period of 1 year (01 January to 31 December 2023) was used to check type of patients / conditions, any assistive technologies needed, were they referred for physiotherapy, and if yes, were they attended at ED or Physiotherapy Department. Approval was received from four hospitals, one hospital per category of public hospital with ED in Gauteng Province (see appendix F, pg. 101-4). The researcher made arrangement with ED and patient affairs managers, then he started with the data collection at Bertha Gxowa District Hospital and Charlotte Maxeke Johannesburg Academic Hospital in the beginning of July 2024, followed by Tambo Memorial Regional Hospital and the last was Helen Joseph Tertiary Hospital until the closer of data collection on 20 September 2024.

3.4.3 TO DETERMINE THE KNOWLEDGE AND PERCEPTION OF THE EMERGENCY DEPARTMENT HEALTHCARE WORKERS (NURSES AND DOCTOR) ON THE ROLE OF EMERGENCY DEPARTMENT PHYSIOTHERAPY.

Targeted population**:** ED Healthcare workers (nurses & doctors) in Gauteng public hospitals.

Inclusion criteria: ED Healthcare workers (nurses & doctors) public hospitals.

Exclusion criteria: students, interns, and community service (nurses and doctors).

Sample size:

It is necessary to estimate how big the sample needs to be to answer the question posed (Enarson et al., 2004). A link to electronic questionnaire was sent to doctors and nurses through ED managers in all Gauteng hospitals with ED: estimation of 25 doctors and 20 nurses per hospital as these are the numbers that were needed to have a confidence level of 95% that the real value is within ±5% of the measured/surveyed value. There were 21 doctors and 21 nurses that participated in the study.

Study sites:

Public hospitals in Gauteng with ED were used in this study (Categories include Central, Tertiary, Regional and District hospitals).

Sample method: A convenience sampling method was used to select ED healthcare workers (Nurses and Doctors) who participated in the study. Convenience sampling is selecting participants because they are often readily and easily available (Hamed, 2016).

Sampling procedure:

Nurses and doctors working at ED in all hospitals that participated in the study.

Data collection procedure:

It is important to indicate the way in which data will be collected to decide on the outcomes and the determinants that are planned to be studied (Enarson et al., 2004). A link to an electronic questionnaire was sent by the researcher to all hospitals through ED managers who were asked to disseminate to doctors and nurses, and the link was shared also through medical & nursing social media platforms where link generated within RedCap reached them in the public sector. WhatsApp group platforms targeting public service were used. A link was sent once by the researcher to all ED managers who agreed to assist to disseminate the link to their platform in mid July 2024 and followed with a weekly reminder. Extension of data collection was done twice due to poor response, until the supervisor advised the closer of data collection on the 11 of October 2024. The participants completed the online RedCap link questionnaire.

3.4.4 TO DETERMINE THE KNOWLEDGE AND PERCEPTION OF PHYSIOTHERAPISTS ON THEIR ROLE IN EMERGENCY CARE DEPARTMENT.

Targeted population: Healthcare workers (physiotherapists) in Gauteng public hospitals with ED.

Inclusion criteria: Healthcare workers (physiotherapists) public hospitals with ED

Exclusion criteria: students, and community service physiotherapists.

Sample size:

It is necessary to estimate how big the sample needs to be to answer the question posed (Enarson et al., 2004). A link to electronic questionnaire was sent to all physiotherapists through Physiotherapy heads in all public hospitals with ED. (195 physiotherapists in Gauteng). A minimum number of 130 physiotherapists in Gauteng measurements / surveys were needed to have a confidence level of 95% that real value is within ±5% of the measured/surveyed value. There were 42 Physiotherapists participated in the study.

Study sites:

Public hospitals in Gauteng with ED were used in this study. Physiotherapists that participated in the study were working at these sites / hospitals.

Sample method: A convenience sampling method was used to select Physiotherapists who participated in the study. This sampling method selects participants because they are often readily and easily available (Hamed, 2016).

Sampling procedure:

Physiotherapists in Gauteng hospitals participated in the study.

Data collection procedure:

It is important to indicate the way in which data will be collected to decide on the outcomes and the determinants that are planned to be studied (Enarson et al., 2004). A RedCap link to an electronic questionnaire was sent to heads of Physiotherapy who were asked to disseminate it to all physiotherapists in Gauteng and the link was shared also through physiotherapy social media platforms where links were generated within RedCap to reach the participants in the public sectors, such as WhatsApp group platforms targeting public service. A link was sent three times to heads of Physiotherapy mid July 2024 and followed with 2 - 3 times weekly reminder. Extension of data collection was done twice due to poor response, until the supervisor advised closer on the 11 of October 2024.

3.5 DATA COLLECTION TOOL.

Questionnaires / surveys were developed using the following EDP literature as no standardized tools already existed: Physiotherapy's role in emergency department settings: A qualitative investigation of emergency stakeholders' perceptions (Sophie,2008). Emergency Department physical therapist service: pilot study examining Physician perceptions (Lebec, Cemohous, Tenbarge, 2010). Can physiotherapists contribute to care in the emergency department? (Farrell, 2014). Management of soft tissue knee injuries in an accident and emergency department: the effect of the introduction of a physiotherapy practitioner (Jibuike, Maulvi, Richmond, Fairclough, 2003). To determine current staffing composition in Gauteng emergency care departments and to determine the knowledge and perception of emergency department healthcare workers (doctors and nurses) on the role of EDP. To determine the knowledge and perception of physiotherapists on their role in emergency care department. To determine current staffing composition and the need for physiotherapists placement in ED.

The 1st questionnaire was about the ED managers entailing the demographic details, information about the managers' occupations, information on their knowledge and perception regarding the EDP and the ED staff composition see Appendix C, pg. 86).

The 2nd questionnaire was about record review data capturing sheet on ED. There was information about the categories of the sites, diagnosis of the patients, information about the assistive devices and the ED (Appendix C, pg. 88).

The 3rd questionnaire was for healthcare workers (doctors and nurses). It consisted of demographic information, occupational information, knowledge and perception about the EDP (Appendix C, pg. 89).

The 4th questionnaire was for physiotherapists. It had demographic information, the information on their occupations, knowledge and perception about the EDP (Appendix C, pg. 91).

3.6 RELIABILITY AND VALIDITY OF THE STUDY.

The questionnaire was developed based on information obtained from relevant literature. Its content was validated by two senior physiotherapists, nurses, and doctors, each with over five years of experience in the emergency department. Adjustments were made to align the questionnaire with the essential aspects of the study. Although no direct questions were raised by participants during the pilot study, their suggestions were incorporated to enhance the questionnaire's representativeness. Some items were rephrased to improve clarity based on this feedback.

The research protocol was submitted and presented to the Wits postgraduate assessor group. It was also reviewed by a statistician and discussed with both the supervisor and the statistician to ensure the research methodology and questionnaire appropriately addressed the study's aim and objectives.

To minimize data collector bias, the researcher personally administered the questionnaire and maintained consistent personal attributes across all interactions with respondents.

3.7 PILOT STUDY.

Pilot testing, as a component of pre-testing, was conducted to evaluate the questionnaire under actual survey conditions. This process aimed to identify any potential issues before implementing the full survey, including verifying whether the questions functioned as intended and were clearly understood by the target respondents (Chaudhary & Israel, 2017; Hilton, 2017). The pilot study assessed participants' comprehension of the questions, the time required to complete the questionnaire, and any flaws in the data collection process.

The pilot study included six participants—two doctors, two nurses, and two physiotherapists (Including ED managers). An electronic questionnaire link was sent to them to assess their ability to access the link, complete the questionnaire, and record the time taken for completion. In addition, the supervisor tested the questionnaire in relation to three study objectives (Objectives 1, 3, and 4) using the REDCap platform. This was done to determine whether participants had a shared understanding of the questions and to evaluate both intra-rater and inter-rater reliability.

Results of the Pilot study.

All participants demonstrated a clear understanding of the questionnaire items, and no concerns regarding clarity or content were raised. The questionnaire was completed within the anticipated time frame of 10 minutes, with completion times ranging from a minimum of 6 minutes to a maximum of 10 minutes. No flaws were identified or reported during the data collection process. Additionally, participants encountered no difficulties in accessing the electronic link or in completing the questionnaire.

3.8 DATA MANAGEMENT.

Data collection was conducted through an electronic questionnaire hosted by REDCap; a secure web-based platform designed for managing research data and surveys. REDCap ensures data privacy and security through controlled access. The researcher had an individual REDCap account, which provides access to the data and records for a period of one year, extendable upon request via admin@witsredcap.co.za. Both supervisors were also granted access to the project and its data.
All data collected is securely stored within REDCap and is preserved in a structured format for at least 10 years after study completion, after which it will be destroyed in accordance with data retention policies.

The researcher received training on the use of REDCap, including procedures for exporting and extracting data. Data were exported to an Excel spreadsheet and shared with both supervisors, who reviewed it for completeness and accuracy. The dataset was also shared with statisticians for further analysis.

Preliminary data cleaning was conducted within REDCap to identify outliers and inconsistencies. Following data export, an in-depth data cleaning process was undertaken. This involved reviewing the dataset to detect and address errors, duplicate entries, incomplete responses, inconsistencies, formatting issues, and outdated information. Corrections and

updates were made as necessary, and any irrelevant or erroneous data were removed to ensure a clean and accurate dataset for analysis. Additionally, REDCap facilitated the generation of tables and summary statistics, streamlining the data analysis process.

3.9 DATA ANALYSIS.

This section outlines the measures taken to ensure the completeness and accuracy of the data, the methods used to present the results, and the statistical tests applied for analysis (Enarson, Kennedy, & Miller, 2004).

Once data collection was completed, the researcher exported the dataset from REDCap to an Excel spreadsheet. A preliminary analysis was conducted by the statistician, followed by a comprehensive analysis performed by the researcher. Descriptive statistics were used to analyze the data. Findings were summarized using frequency tables, cross-tabulations, and graphical representations such as charts and graphs.

Responses to open-ended questions were categorized into themes, with items within each theme summarized using frequencies and percentages. Quantitative and categorical variables—such as participant characteristics (e.g., profession, age), patient demographics (e.g., gender), diagnoses, and the number of patients per category—were analyzed using means, standard deviations, frequencies, and percentages as appropriate.

Results were then presented using charts, graphs, and tables to facilitate clear visualization and allow for meaningful comparisons.

Table 3.1 Data analysis.

Objectives	Type of data	Type of Analysis
1. To determine current staffing composition in Gauteng emergency care departments.	Nominal data: Number of staff, profession, participant roles, and hospital category.	Categorical data were summarized using frequencies and percentages, while continuous data were described using means and standard deviations.
2. To determine the knowledge and perception of Emergency Department healthcare workers (nurses & doctor) on the role of Emergency Department Physiotherapy.	Nominal data: Perceived role of physiotherapy, perceived need for EDP, prior education on EDP.	Categorical data analyzed using frequencies, percentages, means, and standard deviations.

3. To determine the knowledge and perception of physiotherapists on their role in Emergency Department.	Nominal data: Perceived role of physiotherapy, knowledge of EDP, staff education, training, work exposure, and relevant skills.	Categorical data is summarized using frequencies and percentages.
4. To determine the need for physiotherapists placement in the Emergency Department.	Nominal and numerical data: Diagnoses, referral patterns, use of assistive devices, patient age and gender, and EDP staffing.	Descriptive statistics included frequencies, percentages, means, and standard deviations for both categorical and numerical data.

3.10 BIAS.

Bias is explained as unfair bias that puts a stop to objective thought of the matter or circumstances. In statistics it is the likelihood to guess any deviation in one direction from a correct value Pannucci & Wilkins, 2010). The following are biases that may be encountered in the study:

Participant bias can occur when participants do not provide fully accurate information due to external pressure, such as being rushed to complete the questionnaire or misunderstanding the questions (Pannucci & Wilkins, 2010). To minimize this bias, participants were assured that they could freely ask for clarification if they did not understand any part of the questionnaire. They were also given sufficient time to complete it at their own pace. Additionally, the questions were designed to be simple and easy to understand, and participation in the study was entirely voluntary.

Sampling bias is a systematic error that arises from the way participants are selected for a study (Pannucci & Wilkins, 2010). In this study, efforts were made to minimize sampling bias by clearly defining the target population and ensuring that the selected sample closely represents it. While all participants are part of the intended sample, convenience sampling was employed to include individuals who met the established inclusion criteria.

3.11 ETHICAL CONSIDERATIONS.

Ethical approval and permissions.

Ethical clearance to conduct the study was obtained from the University of the Witwatersrand Human Research Ethics Committee (Clearance Certificate – Appendix D; Ethics Clearance Number: M2211112). In addition, permission to conduct the study was granted by the Gauteng Department of Health, along with approval letters for record review from the Chief Executive Officers and Emergency Department (ED) Managers of the respective hospitals (Permission Letters – Appendix F).

Study information (Informed consent and confidentiality).

Information regarding the study—including the researcher's name, study title, aim, objectives, and estimated time to complete the survey—was provided via a link to the electronic questionnaire hosted on REDCap. It was explicitly stated that participation in the study was entirely voluntary, with no pressure to take part. Participants were assured that all responses would remain anonymous, and every effort would be made to maintain confidentiality. All data collected would be securely stored and used solely for research purposes. No personal information would be shared with anyone outside of the research team.

The survey link also included the following statement for inquiries or further information:
“If you would like any further information or have any questions, please feel free to contact me at the details below.”
Researcher: Edward Mosiamo.
Email: 2515277@students.wits.ac.za.
Mobile: 082 726 1019.
Tel: 011 488 4206.

Participants were further informed that, if they had concerns regarding the conduct of the study, they could contact the Chairperson of the ethics committee, Professor Paul Ruff, at +27 11 717 2301 or via email at Paul.Ruff@wits.ac.za. The committee secretariat could also be reached at 011 717 2700/1234 or via email at Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za.
At the end of the information section, participants were asked to provide informed consent. By clicking “Yes,” they agreed to participate and were taken to the next section of the survey. If they clicked “No,” the survey ended immediately, and a message thanking them for their time was displayed.

Data management.

Access to the research data is restricted to the researcher and both supervisors. All data is securely stored on REDCap, a secure, web-based application designed for managing research data. The data will be retained in a structured and confidential format for a minimum of ten years following the completion of the study, in accordance with institutional and ethical guidelines. After this period, the data will be securely destroyed to ensure confidentiality.
Further details on data management procedures are outlined in Section 3.8 above.

3.12 CONCLUSION.

This chapter outlined the research methodology, including the study population, sampling methods, and data collection instruments. It also detailed the strategies used to ensure ethical compliance, as well as the reliability and validity of the study. All necessary permissions were secured to conduct the research. The next chapter presents the findings of the study.

CHAPTER 4.

RESULTS.

4.1 INTRODUCTION.

This chapter presents and describes the results of the data analysis conducted from both participant responses and record reviews. It begins with a demographic profile of the participants, including descriptive statistics related to age, gender, marital status, and level of education.

The results are displayed in order of the research objectives, and they are as follows:

- To determine current staffing composition in Gauteng Emergency Departments
- To determine the need of physiotherapists' placement in Emergency Department.
- To determine the knowledge and perception of Emergency Department healthcare workers on the role of Emergency Department Physiotherapy
- To determine the knowledge and perception of physiotherapists on their role in Emergency Department.

4.2 DEMOGRAPHIC DETAILS OF THE STUDY PARTICIPANTS.

The professions, age, gender, and hospital categories of the healthcare professionals (doctors, nurses, physiotherapists) and Emergency Department managers who participated in the study are presented in Table 4.1. Although the total number of participants was 200, only 104 provided complete information regarding their profession, age, gender, and hospital category.

Table 4.1. Demographic details of the study participants (N=200).

Demographics details of the study participants (N=200)			
	Categories	Frequency (n)	Percentage (%)
Study Participants (Profession / rank)	Doctors	21	10.5%
	Nurses	21	10.5%
	Physiotherapists	42	21%
	Emergency Department (ED) Managers	20	10%
	Not indicated	96	48%
	Categories	Frequency (n)	Percentage (%)
Age of the participants	21 – 30 years	8	4%
	31 – 40 years	36	18%
	41 – 50 years	25	12.5%
	51 – 60 years	30	15%
	61 – 70 years	5	2.5%
	Not indicated	96	48%
Gender	Female	41	20.5%
	Male	63	31.5%
	Not indicated	96	48%
Hospital category	District	22	11%
	Regional	24	12%
	Tertiary	34	17%
	Central	24	12%
	Not indicated	96	48%

Number of Years Working in Your Profession			
Category	**ED managers (n=20)**	**Healthcare workers (doctors and nurses) (n=42)**	**Physiotherapists (n=42)**
0 – 10 years	0%(n=0)	33,3%(n=14)	43%(n=18)
11 – 20 years	25%(n=5)	26,2%(n=11)	33%(n=14)
21 – 30 years	60%(n=12)	26,2%(n=11)	12%(n=5)
31 – 40 years	15%(n=3)	14,3%(n=6)	12%(n=5)

Number of Years Working in Emergency Department			
Category	**ED managers (n=20)**	**Healthcare workers (doctors and nurses) (n=42)**	**Physiotherapists (n=42)**
0 – 10 years	30%(n=6)	74%(n=31)	24%(n=10)
11 – 20 years	55%(n=11)	12%(n=5)	33%(n=14)
21 – 30 years	10%(n=2)	0%(n=0)	24%(n=10)
31 – 40 years	5%(n=1)	14%(n=6)	19%(n=8)

The table 4.1 above shows that the majority of healthcare workers who participated in the study were physiotherapists, representing 21% (n=42) of the sample. This was followed by equal representation of nurses and doctors, each comprising 10.5% (n=21). The most represented age groups among participants were 31–40 years (18%, n=36) and 51–60 years. In terms of gender, males made up the majority of participants at 63% (n=31). Most participants were from tertiary hospitals, accounting for 31.5% (n=63). Regarding work experience in the Emergency Department (ED), many ED managers had between 11 and 20 years of experience. Among doctors and nurses, the majority had 0–10 years of experience (74%, n=31), while 33% of physiotherapists reported having 11–20 years of experience in the ED.

4.3 STAFFING COMPOSITION IN GAUTENG EMERGENCY DEPARTMENTS.

The staff composition entails the participants from Gauteng Emergency Department (ED) managers from 28 Gauteng public hospitals with Emergency Department. Emergency Department managers who participated in the study (n=20), with two ED managers from district, four from regional, six from tertiary and eight from central (for more on demographic of ED managers refer to table 4.1 above).

Table 4.2. ED managers indicated the current staffing composition in ED.

STAFFING COMPOSITION AT THE EMERGENCY DEPARTMENT (N=770)							
Healthcare worker	Central	Tertiary	Regional	District	Not Specified	Total	%
Doctor	154	42	17	4	5	222	29%
Nurse	391	67	35	7	10	510	66%
Porter	1	1	4	2	2	10	1,3%
Physiotherapist	3	1	5	0	0	9	1,2%
Operator	1	2	0	0	1	4	0,5%
Cleaner	1	1	0	0	2	4	0,5%
Social Worker	1	0	2	0	0	3	0,4%
Occupational Therapist	2	0	0	0	0	2	0,3%
Clinical Technology	1	0	1	0	0	2	0,3%
Dietetic	0	1	0	0	0	1	0,1%
Radiographer	1	0	0	0	0	1	0,1%
Psychology	1	0	0	0	0	1	0,1%
General Assistant	0	1	0	0	0	1	0,1%
Total	**557**	**116**	**64**	**13**	**20**	**770**	**100%**

Table 4.2 presents the composition of staff in Gauteng Emergency Departments (based on the responses from ED managers that participated in the study). The staff includes doctors, nurses, porters, physiotherapists, operators, cleaners, social workers, occupational therapists, clinical

technologists, dietitians, radiographers, psychologists, and general assistants. Among these, nurses and doctors constituted the majority at 66% (n=510), and the doctors at 29% (n=222). They were followed by the porters (1.3%, n=10) and physiotherapists (1.25%, n=9).

Professional interactions with the Emergency Department.

All ED managers (n=20) who participated in the study responded that they are working in the Emergency Department and have professional interactions with ED on a regular basis.

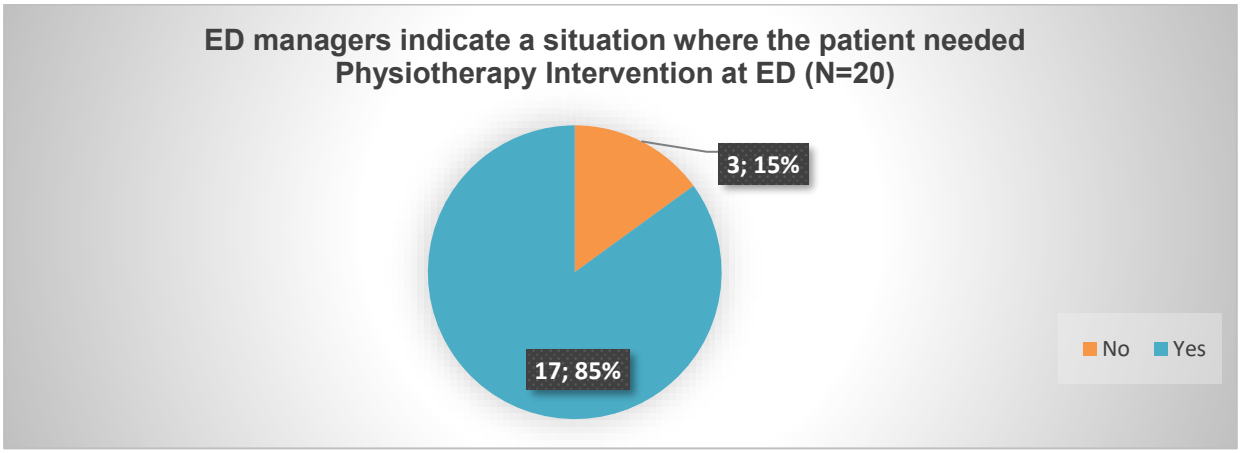


Figure 4.1. Situation where the patient needed Physiotherapy intervention at the ED.

The figure above shows that 85% (n=17) of ED managers reported encountering situations where patients required physiotherapy intervention in the Emergency Department. In contrast, 15% (n=3) indicated that they had not encountered such cases.

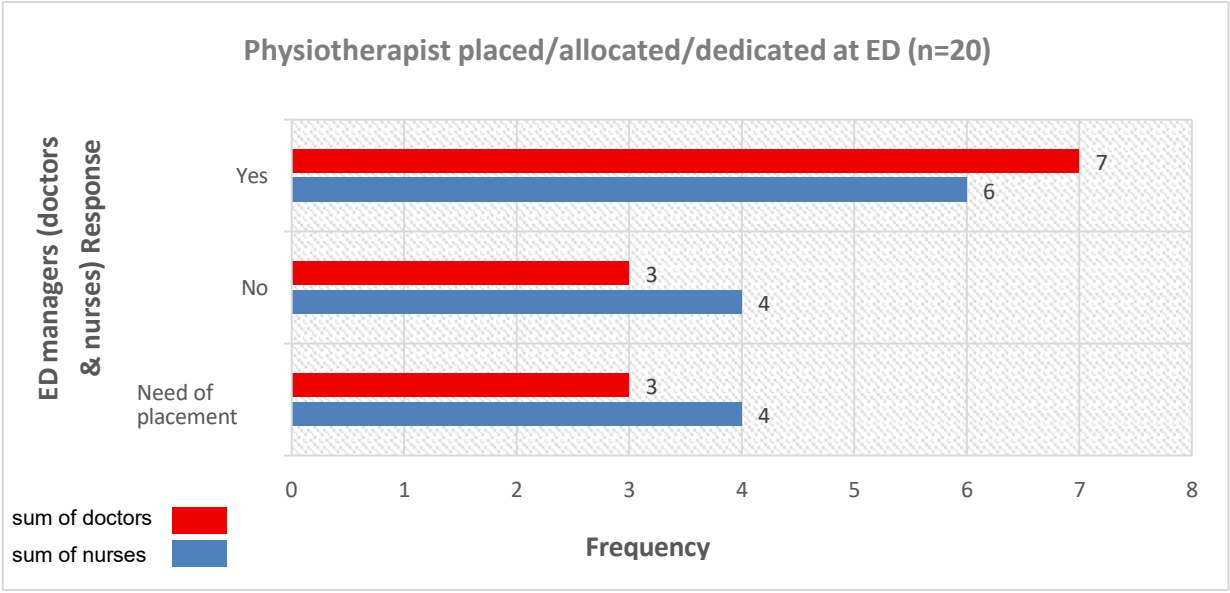


Figure 4.2: Placement of Physiotherapists in the Emergency Department (ED).

Table 4.2 above, according to the responses from ED managers (doctors and nurses), 65% (n=13) indicated that physiotherapists are currently placed, allocated, or dedicated to the ED. However, 35% (n=7) reported that not all EDs have dedicated or allocated physiotherapists.

Among 35% (n=7) ED managers who indicated not all EDs have dedicated physiotherapy placement, all of them, 100% (n=7) expressed that there is a need for the placement of physiotherapists in their departments.

Table 4.3. Emergency Department managers (n=20) response on what they think the role of physiotherapist are in the Emergency Department.

Key roles of physiotherapist in the Emergency Department	Emergency Department (ED) Manager response (N=20)	%
Chest Physiotherapy and nebulizer of patient with shortness of breath	16	80%
Early patient mobility management (walking, transfer)	13	65%
Rehabilitation (neuro, musculoskeletal & sports injuries)	12	60%
Giving patient Physiotherapy exercises	11	55%
treatment of acute respiratory, ortho, trauma at ED	11	55%
Contribute to Screening/triage and diagnosis	10	50%
Early intervention to acute cases	9	45%
Issuing of walking aids	8	40%
Investigation (Request x-ray, sputum induction)	8	40%
Health promotion and education of patient & family	7	35%
Multidisciplinary team Emergency therapy and resuscitation	5	25%
Emergency therapy during resuscitation	5	25%
Preventing complication	3	15%
Patient referral	3	15%
Pain management	2	10%

Table 4.3 presents the response of ED managers regarding the role of physiotherapists in the Emergency Department (ED). The top three roles identified—each endorsed by more than 59% of respondents—were: **c**hest physiotherapy and nebulization for patients with shortness of breath**,** reported by 80% (n=16); Early patient mobility management**,** including walking and transfers, indicated by 65% (n=13) and **r**ehabilitation of neurological, musculoskeletal, and sports-related injuries, noted by 60% (n=12). These findings highlight the perceived value of physiotherapists in managing acute and functional patient needs within the ED setting.

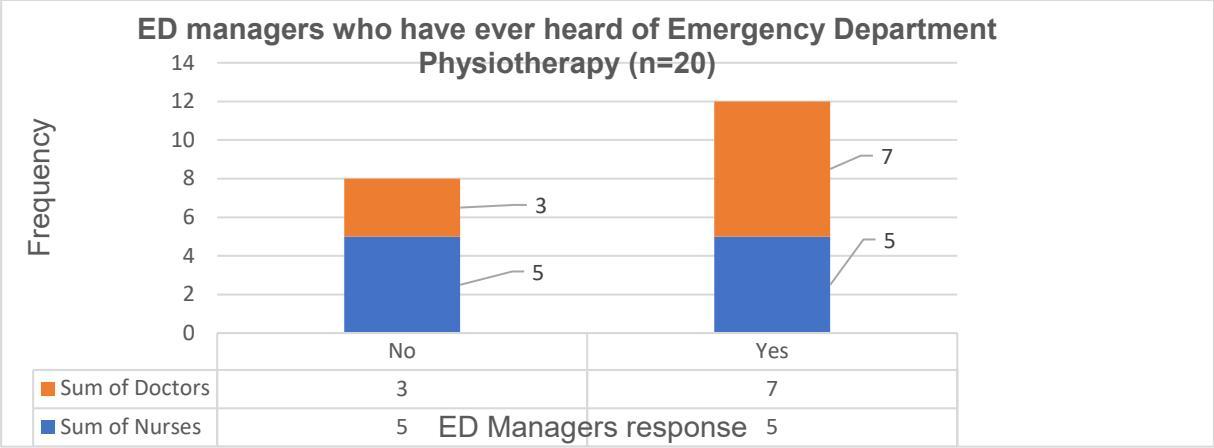


Figure 4.3. The ED managers who have ever heard of EDP.

A total of 60% (n=12) of ED managers (doctors & nurses) indicated that they had frequently heard of Emergency Department Physiotherapy (EDP), suggesting a moderate level of awareness within this group.

Table 4.4. Emergency Department managers (n=20) responded on what skills or attributes are needed in the Emergency Department.

Emergency Department (ED) Manager response (N=20).
Key skills/attributes needed in the Emergency Department indicated by ED managers.
Acute phase interventions such as early physiotherapy for orthopaedic cases, chest physiotherapy, and prevention of complications like chest infections.
Early mobility support, including assisting patients with transfers, ambulation, and the provision of walking aids such as crutches and braces.
Cardiorespiratory management, including chest percussion, nebulisation for patients with respiratory distress (e.g., shortness of breath, stabbed chest), and exercises for conditions such as Haemopneumothorax.
Diagnostic support, such as contributing to patient assessments, screening and triaging musculoskeletal conditions, and supporting doctors in the diagnostic process.
Rehabilitation services, particularly for patients with acute neurological conditions like cerebrovascular accidents (CVA), as well as the management of simple fractures and burns.
Therapeutic interventions, including passive and active physical exercises, pain management, patient education, and teaching the use of incentive spirometry.
Airway clearance techniques, including assistance with sputum removal.

Table 4.4 presents the overall responses of ED managers, highlighting their recognition of the multifaceted skills or attributes of physiotherapists. These include their essential role in

enhancing patient care, supporting clinical teams, and contributing to improved patient outcomes within the Emergency Department setting.

4.4 NEED OF PHYSIOTHERAPISTS' PLACEMENT IN EMERGENCY DEPARTMENT.

The need of Physiotherapists' placement in Emergency Department entails the record review of records in Emergency Department (ED) over period of 1 year (01 January to 31 December 2023) in one hospital per each category out of four category in Gauteng was used to check type of patients / conditions, any assistive technologies needed, where they referred for physiotherapy and if yes, where they attended at ED or physiotherapy department.

Table 4.5. Record Review demographic and results.

Record Reviewed in Emergency Department over period of 1 year (01 January to 31 December 2023) in one hospital per each category out of four categories in Gauteng (N=2242)			
Hospital and category name	Category	Frequency	Percentage (%)
	Tambo hospital (Regional)	588	26%
	Bertha Gxowa (District)	566	25%
	Helen Joseph (Tertiary)	564	25%
	Charlotte Maxeke (Central)	524	24%
	Category	Frequency	Percentage (%)
Condition / Diagnosis (N=2242)	Pain	675	30.1%
	Soft tissue injury	585	26.1%
	Respiratory conditions	315	14
	Neurological conditions	206	9%
	Fracture	131	6%
	General body weakness	93	4.1%
	Burns	90	4%
	Infection	37	1.7%
	Dislocations	35	1.6%
	Gyanecological condition	20	0.9%
	Mental health disorder	17	0.8%
	Organophosphate	15	0.6%
	Vascular conditions	8	0.4%
	Retroviral diseases	6	0.3%
	Arthritis	3	0.1%

	Haemophillia	2	0.01%
	Necrosis	2	0.01%
	Crush injury	1	0.04%
	Epistasis	1	0.04%
Assistive technology needed for condition / diagnosis and type of assistive device recorded in ED patient file (N=2242)			
	Category	**Frequency**	**Percentage (%)**
Assistive technology needed for the condition / diagnosis	Yes	595	27%
	No	1647	73%
	Category	Number issued	Percentage (%)
Assistive technology recorded in ED patient file (n=595)	Walking aids (WA)	461	77%
	Armsling	61	10%
	Corset	37	6%
	Orthopaedic support	14	2%
	Soft collar	11	1.8%
	Orthopaedic brace	6	1%
	Wheelchair	2	0.3%
	Ring cushion	1	0.1%
	Wrist splint	1	0.1%
	Ankle foot orthosis	1	0.1%
Record review to check patients that were referred for Physiotherapy services, department where patients were attended, gender and age of patients (N=2242)			
	Category	**Frequency**	**Percentage (%)**
Patients referred for Physiotherapy service	No	1641	73%
	Yes	519	23%
	Screened by Physiotherapy	82	4%
	Category	**Frequency**	**Percentage (%)**
Department where patients were attended (n=601)	Emergency Department	306	51%
	Physiotherapy Department	295	49%
	Category	**Frequency**	**Percentage (%)**
	0 – 10 years	149	6.6%
	11 – 20 years	180	8%
	21 – 30 years	566	25%
	31 – 40 years	535	23%

Age of the patients	41 – 50 years	366	16.3%
	51 – 60 years	237	10.6%
	61 – 70 years	129	5.8%
	71 – 80 years	59	2.6%
	81 – 90 years	19	0.8%
	91 – 100 years	2	0.09%
	Category	**Frequency**	**Percentage (%)**
Gender of the patients	Male	1324	59%
	Female	918	41%

The table 4.5. Shows that the most frequently treated conditions in the Emergency Department were pain (30%, n=675), soft tissue injuries (26%, n=585), and respiratory conditions (14%, n=315). Among patients requiring assistive technology, the majority needed walking aids, accounting for 77% (n=461). Overall, 23% (n=519) of patients seen in the ED were referred for physiotherapy services.

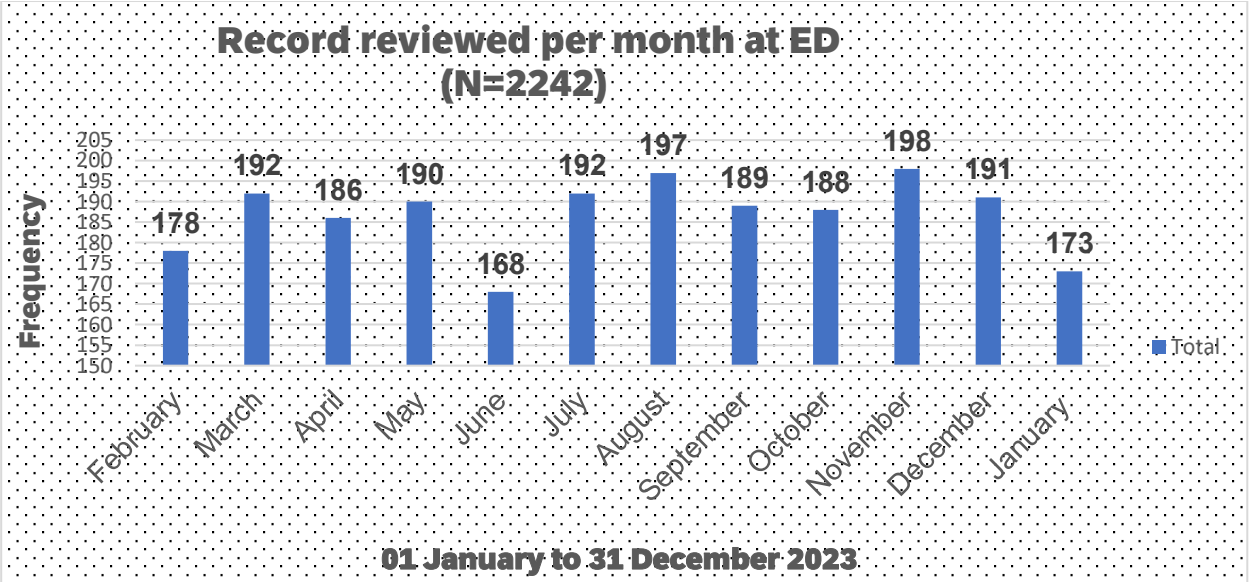


Figure 4.4. Record review per month (January to December 2023).

The highest number of records reviewed was in **November 2023** (n=198, 9%), while the **lowest** was in **June 2023** (n=168, 7%).

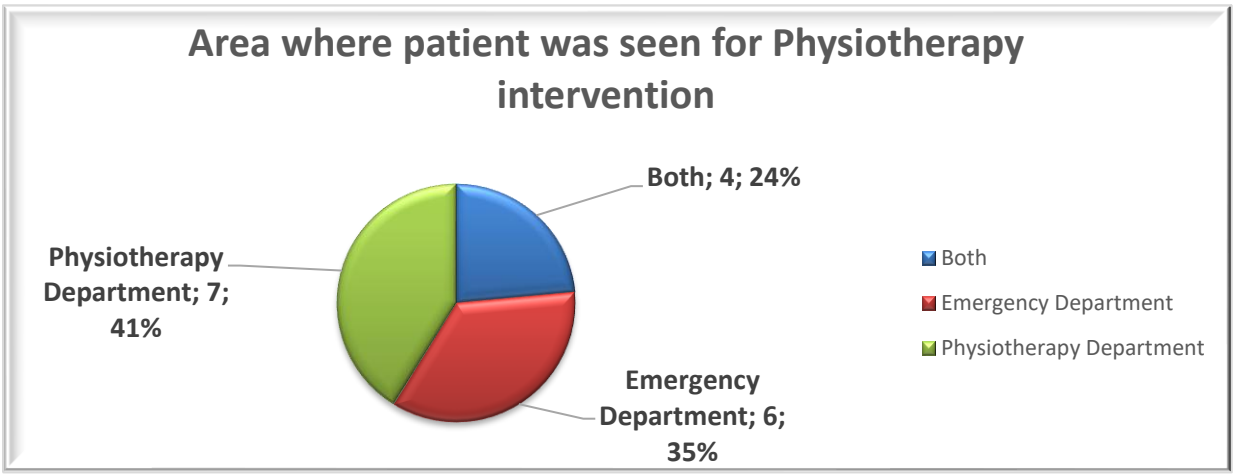


Figure 4.5. Area where the patients was seen for Physiotherapy Intervention.

According to responses from ED managers, 85% (n=17) provided information on where patients received physiotherapy intervention. Of these, 41% (n=7) indicated that patients were referred to the Physiotherapy Department, 35% (n=6) reported that patients were treated within the Emergency Department, and 24% (n=4) stated that patients received physiotherapy in both areas.

4.5 KNOWLEDGE AND PERCEPTION OF EMERGENCY DEPARTMENT (ED) HEALTHCARE WORKERS (NURSES AND DOCTOR) ON THE ROLE OF EMERGENCY DEPARTMENT PHYSIOTHERAPY (EDP).

The healthcare worker (HCW) entails the number of Gauteng Emergency Department (nurses & doctors) in Gauteng public hospitals. Healthcare workers who participated in the study (n=42), with 8 Healthcare workers (HCW) from the district, 13 from regional, 15 from tertiary and 6 from central (for more on demographic of the study participants (table 4.1 above).

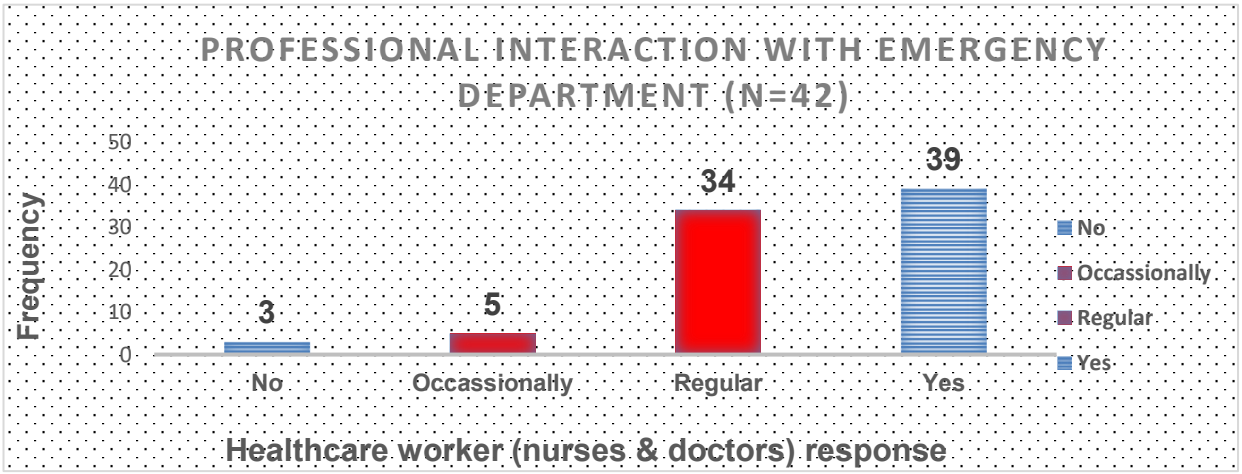


Figure 4.6. Healthcare workers (nurses and doctors) professional interaction with ED.

A total of 93% (n=39) of healthcare workers (nurses and doctors) reported having professional interaction (collaboration with physiotherapists) regarding the Emergency Department, and 87% (n=34) of them indicated that these interactions occur on a regular basis.

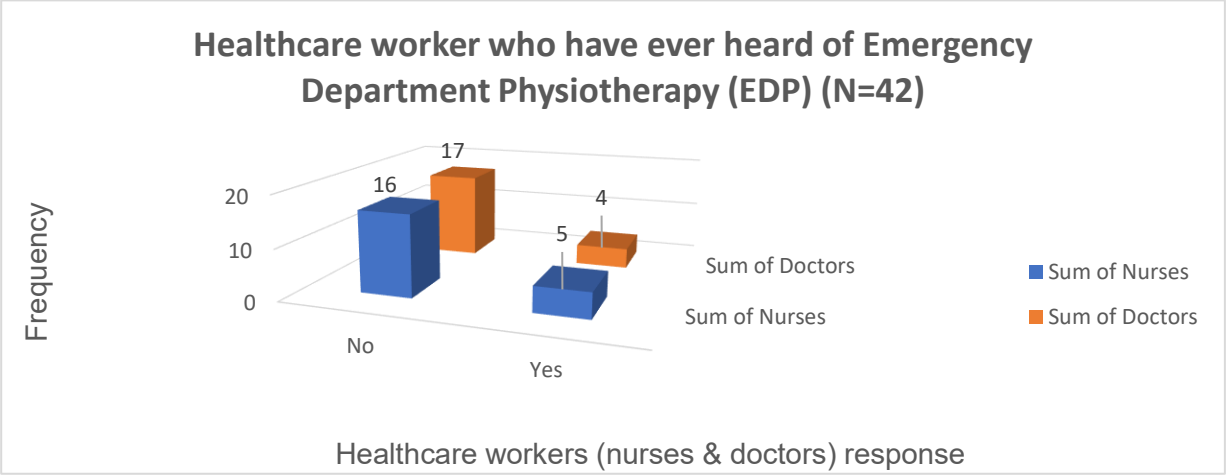


Figure 4.7. The HCW (nurses & doctor) who have ever heard of EDP

A total of 79% (n=33) of healthcare workers reported that they had never heard of Emergency Department Physiotherapy (EDP), while 21% (n=9) indicated that they had heard of EDP before.

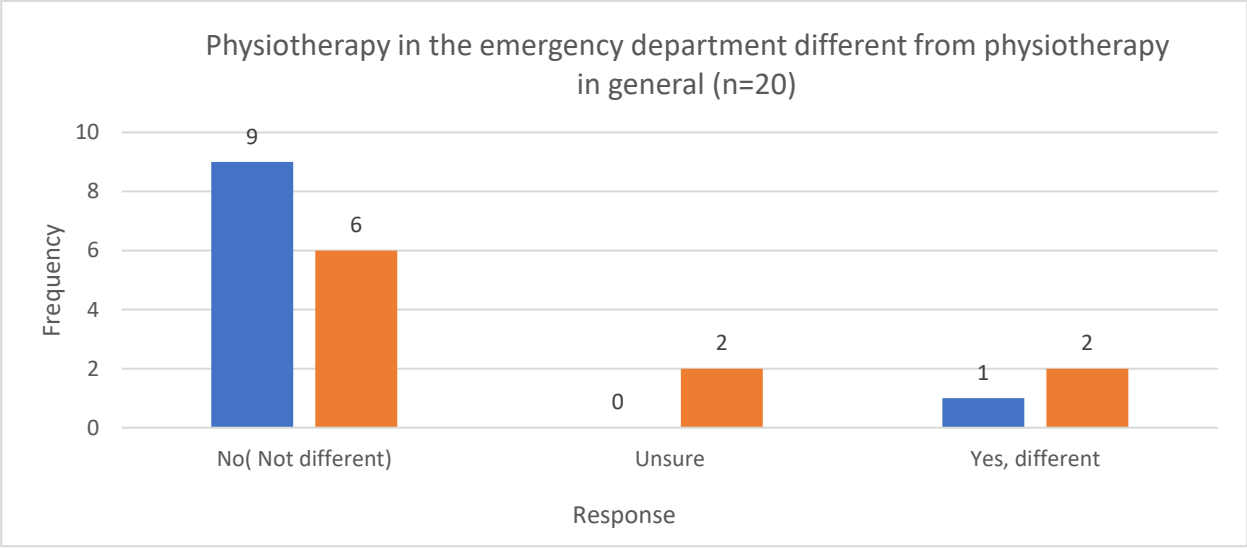


Figure 4.8. Emergency Department managers response to how do they think Physiotherapy in the ED is different from the Physiotherapy in general.

Figure 4.8 illustrates that most ED managers (75%, n=15) responded that they believe physiotherapy in the Emergency Department is not different from physiotherapy in general.

Table 4.6. Emergency Department (ED) managers (N=20) responded on what does their role have in common with that of Emergency Department Physiotherapy.

Key common roles that ED managers have with that of Emergency Department Physiotherapy (EDP)	ED Manager response (N=20)	%
Early identification, intervention & Acute management	11	55%
Bed mobility assessment, transfer and patient ambulation	9	45%
Taking vitals and monitoring vitals on ventilated patients	8	40%
Screening / triaging	7	35%
Chest physiotherapy, Suctioning, Breathing exercises	6	30%
Patient Referrals.	6	30%
Collaboration and consultation	6	30%
Resuscitation (stabilize critical patients)	5	25%
Multidisciplinary teamwork and Holistic patient care	5	25%
Investigation (X-ray,)	3	15%
Health Promotion, Education and Prevention	3	15%
Patient assessment, management and education on their condition	3	15%
Attend to critical ill patient	3	15%
Patient positioning	2	10%
Application of Ice and wound care management	1	5%
Provide Quality of patient care	1	5%
As an orthopedic nurse I do training patients with crutches post Physio/ Doctors prescription	1	5%
Primary and secondary prevention of complication	1	5%

Table 4.6. above shows identified wide range of roles for physiotherapists within the Emergency Department by ED managers. The most frequently mentioned roles included early identification, intervention, and acute management (55%), followed by bed mobility assessment, transfers, and patient ambulation (45%), and monitoring of vitals, particularly in ventilated patients (40%). These responses reflect the recognition of physiotherapists as integral contributors to acute care, patient recovery, and interdisciplinary collaboration in the ED setting.

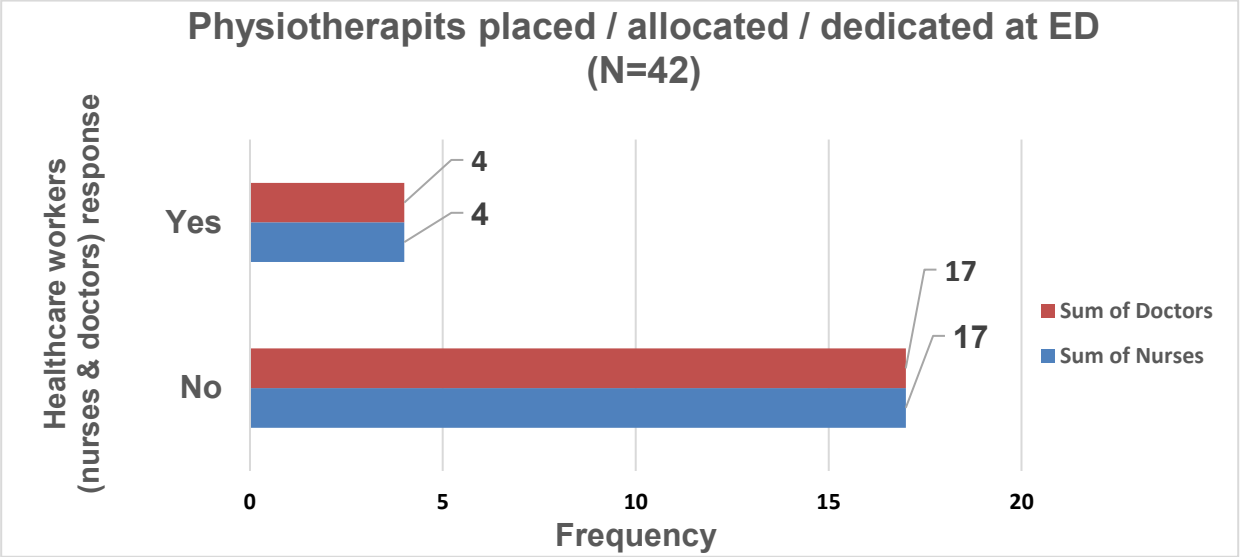


Figure 4.9 Physiotherapist placed/allocated/dedicated at the ED

Healthcare workers (81%, n=34) reported that **no physiotherapists are placed** in the Emergency Department, while **19% (n=8)** indicated that there **is a dedicated or allocated physiotherapist** in their ED.

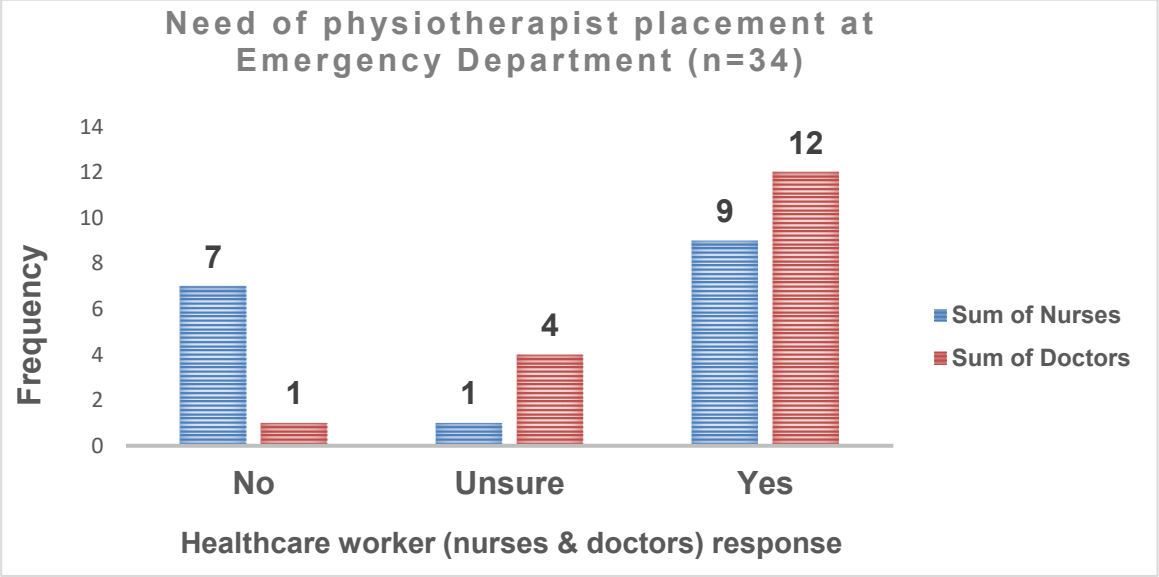


Figure 4.10 Need of physiotherapist placement at Emergency Department.

Healthcare workers (**62%, n=21)** indicated that there **is a need** for the placement of physiotherapists in the Emergency Department (ED). In contrast, **24% (n=8)** responded that there is **no need**, while **15% (n=5)** were **unsure**.

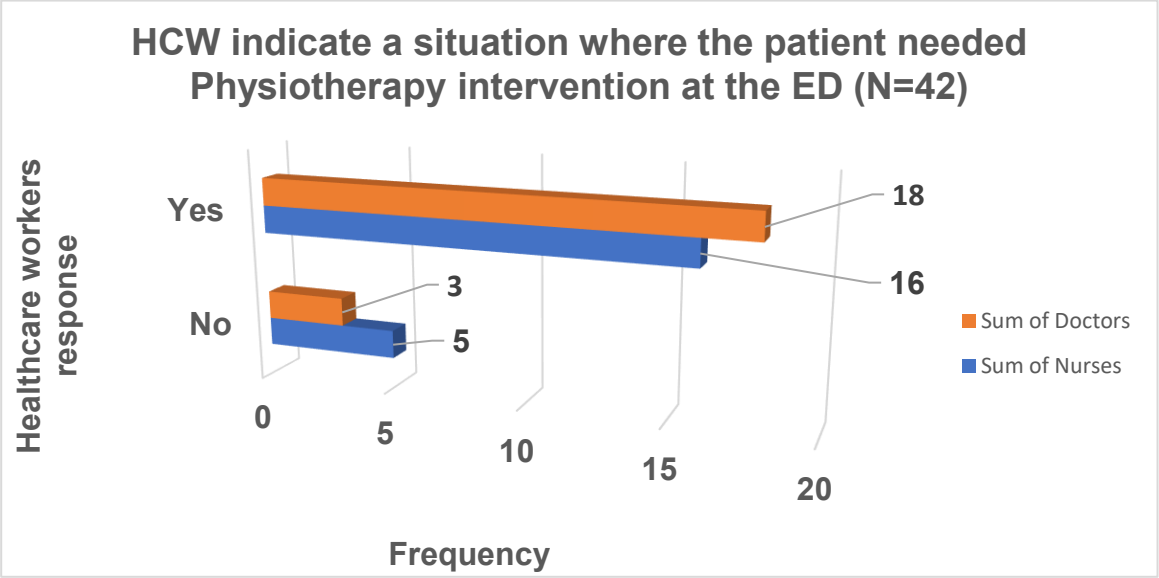


Figure 4.11. Situation where the patient needed Physiotherapy intervention at the ED.

A total of 81% (n=34) of healthcare workers reported having encountered situations in the Emergency Department (ED) where patients required physiotherapy intervention, while 19% (n=8) indicated that they had not encountered such situations.

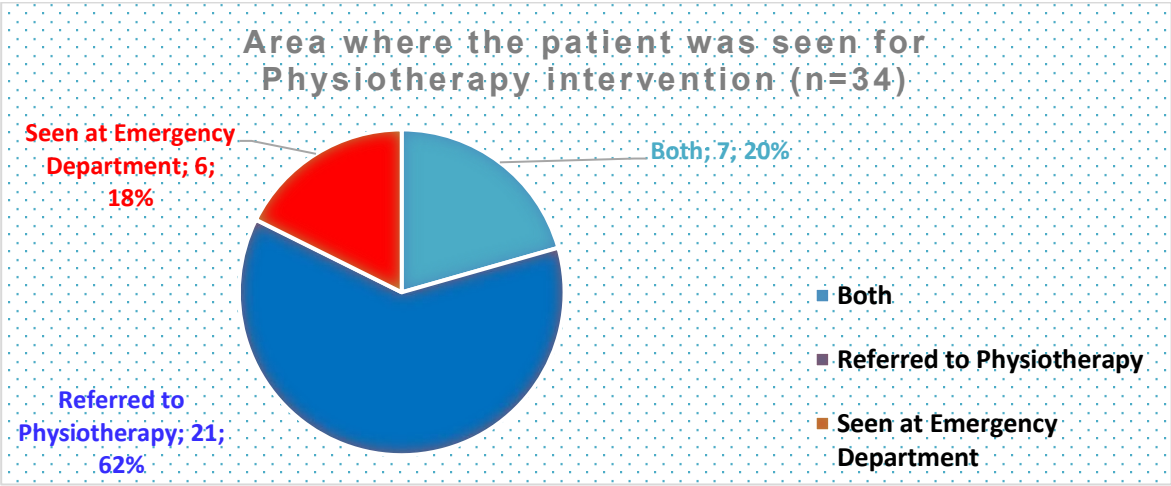


Figure 4.12. Area where the patient was seen for Physiotherapy Intervention.

A total of 81% (n=34) of healthcare workers (nurses and doctors) reported that patients had received physiotherapy intervention. Of these, 62% (n=21) indicated that patients were referred to the Physiotherapy Department, 18% (n=6) stated that patients were seen within the Emergency Department, and 20% (n=7) reported that patients received physiotherapy in both areas (Emergency and Physiotherapy Department).

Table 4.7. Healthcare worker (n=42): doctors and nurses responded on what they think the role of physiotherapist are in the emergency department.

Key roles of physiotherapist in the Emergency Department by healthcare workers (nurses & doctors)	Healthcare workers (HCW) response (n=42)			
	Nurses (n=21)	Doctors (n=21)	Total	%
Chest Physiotherapy	12	13	25	60%
Issuing of walking aids	11	2	13	31%
Rehabilitation	6	5	11	26%
Early mobilization & ambulation	5	5	10	24%
Giving patient exercises	6	3	9	21%
Treatment of acute respiratory, ortho, trauma.	4	4	8	19%
Early intervention to burns	3	4	7	17%
Treatment of musculoskeletal & sports injuries	6	1	7	17%
Multidisciplinary team (MDT) Support	1	3	4	10%
Investigation (Request x-ray, sputum induction)	2	2	4	10%
Contribute to Screening/triage and diagnosis	3	1	4	10%
Referral.	0	3	3	7%
Emergency therapy and resuscitation.	0	2	2	5%
Contribute to Screening/triage and diagnosis.	0	2	2	5%
No idea, I do not know.	1	1	2	5%

Table 4.7 shows that healthcare workers identified various roles for physiotherapists in the Emergency Department (ED), with the most cited being chest physiotherapy**,** mentioned by 60% (n=25) of respondents. This was followed by the issuance of walking aids (31%, n=13), rehabilitation (26%, n=11), and early mobilization and ambulation (24%, n=10). These findings reflect a general awareness among healthcare workers of the diverse and clinically valuable roles that physiotherapists can fulfil in the ED setting, particularly in respiratory care, mobility support, and rehabilitation.

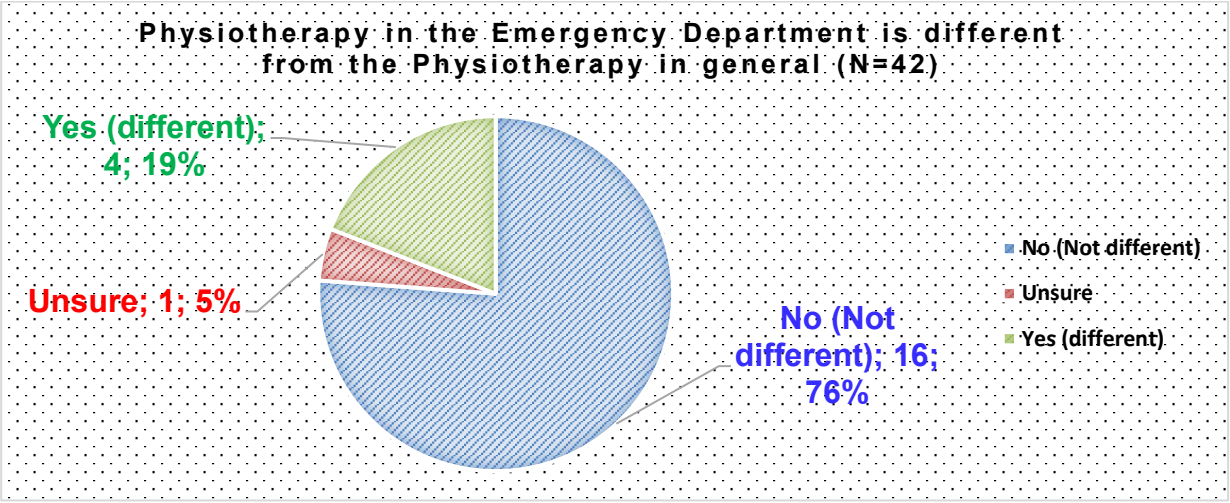


Figure 4.13. Physiotherapy in the Emergency Department is different from the Physiotherapy in general. A total of 76% (n=16) HCW (nurses & doctors) responded that Physiotherapy in the Emergency Department is not different to Physiotherapy in general.

Table 4.8. Healthcare workers (n=42): nurses and doctors responded on what skills or attributes are needed in the Emergency Department.

Healthcare workers (HCW) response (Nurses & Doctors) (n=42)
Key skills/attributes needed in the Emergency Department indicated by HCW
Ability to manage acute cases across orthopaedic, medical, Paediatric, and trauma care skills which are part of their scope and support safe discharge planning.
knowledge of resuscitation and the ability to respond effectively to rapidly changing acute conditions, and the competence to manage emergency situations confidently and efficiently.
I think they able to initiate early treatment during the first patient encounter and facilitate appropriate follow-up care or promote continuing care.
Physiotherapists in the ED would offer primary consultation in acute and plan suitable care for patients. Some ED patients may not require admission, however presenting as potentially unsafe to discharge home in terms of mobility.
Physiotherapists need acute care skills similar to those used in ICU settings, including managing critical patients. However, they must also be able to assess and manage less severe cases like sprains and strains, which can be treated in the physiotherapy department
Delaying physiotherapy for patients needing immediate intervention by booking later appointments can lead to poor or detrimental outcomes.
The physiotherapy interventions performed in the ICU, such as chest physiotherapy and issuing walking aids, can also be effectively applied in the Emergency Department, particularly for patients with conditions like post-POP leg injuries.
In OPD is most stable patient not acute. However, the scope of Physiotherapy skills is the same. The setting is different from the emergency department.
Early intervention and quicker diagnostic skills.

Table 4.8 displays the key skills and attributes that healthcare workers believe physiotherapists should possess in the Emergency Department. These include acute care competency, resuscitation and emergency response capabilities, as well as skills in primary consultation and safe discharge planning.

Table 4.9. Healthcare worker responded on what does their role have in common with that of Emergency Department Physiotherapy.

Key common roles that HCW have with that of Emergency Department Physiotherapy (EDP)	Healthcare Workers (HCW) response (N=42)			
	Nurses (n=21)	Doctors (n=21)	Total	%
Identify the need and Referrals to Physiotherapy	5	9	14	33%
Screening / triaging and Investigation	3	11	14	33%
Chest physiotherapy	6	6	12	29%
Patient discharge	4	7	11	26%
Attend to critical ill patient	2	6	8	19%
Early intervention & Acute care	4	3	7	17%
Monitor vitals on ventilated patients	4	3	7	17%
Resuscitation skills (stabilize critical patients)	4	2	6	14%
Role cut across that of physio	1	5	6	14%
Reduce bed stay & increase availability	3	3	6	14%
Patient care, management and counselling	2	4	6	14%
Health education, promotion and preventative role	3	2	5	12%
MDT team and work together in ED	1	3	4	10%
Cardiovascular, ICU and trauma management skills	2	2	4	10%
Nothing in common	4	0	4	10%

Table 4.9 above highlights the perceived common roles among, nurses, doctors and physiotherapists in the Emergency Department (ED). The most frequently identified roles include identifying the need for and referring patients to physiotherapy (33%, n=14), as well as participating in screening, triaging, and investigations (33%, n=14). Chest physiotherapy was noted by 29% (n=12), followed by roles in patient discharge (26%, n=11) and attending to critically ill patients (19%, n=8). Other notable roles include early intervention and acute care, monitoring vitals on ventilated patients, and possessing resuscitation skills.

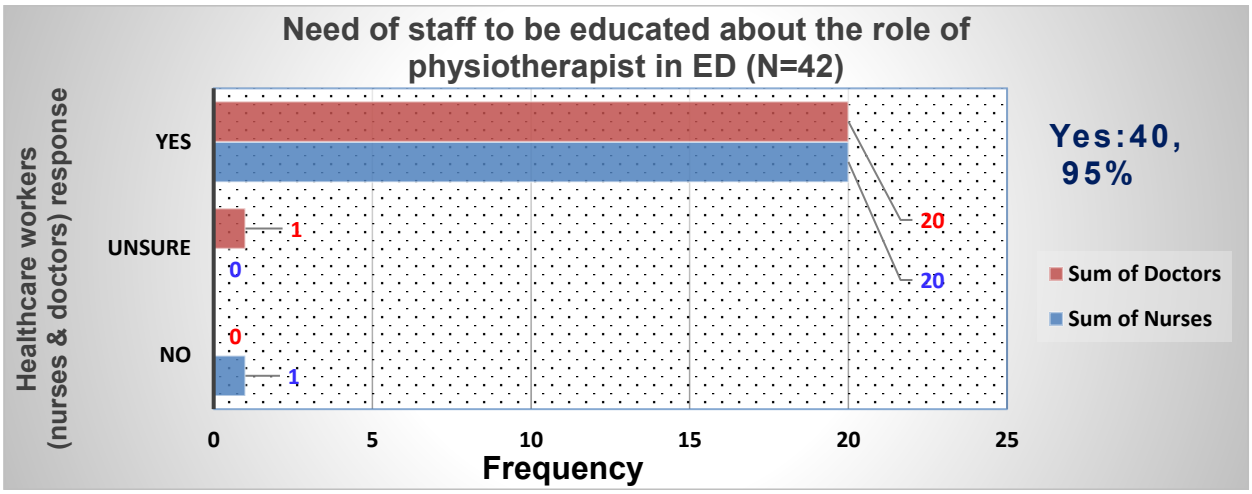


Figure 4.14. Need of staff to be educated about the role of physiotherapist in ED.

A total of 95% (n=40) Healthcare workers indicated the need of staff to be educated about the role of physiotherapist in the Emergency Department (ED).

Table 4.10. Healthcare workers (nurses & doctors)(n=42) responded on why they think Physiotherapy is starting to be used by hospital Emergency Department.

Key common theme on why HCW think Physiotherapy is starting to be used by the hospital Emergency Department.	Healthcare Workers (HCW) response (N=42)			
	Nurses (n=21)	Doctors (n=21)	Total	%
Reduce patients' workloads, waiting time and long stay of patients at Emergency Department (ED).	9	7	16	38%
Recognition of growing profession and the need of Physiotherapy in ED.	8	4	12	29%
Noticed Physio Impact in ED global.	8	2	10	24%
Multidisciplinary team - holistic patient care approach.	3	6	9	21%
Physiotherapy contributes to bed availability.	5	3	8	19%
Covid-19 contributed to Physiotherapy to exercise their expertise of ICU and Respiratory skills.	2	5	7	17%
Physiotherapy scope of practice (Firstline practitioner), competency skills & expertise at ED.	3	4	7	17%
Attendance of acute cases in short stay, ICU & High care.	2	4	6	14%
Its necessity, they make difference in ED.	0	6	6	14%
Physiotherapy is involved in lots of hospital clinical projects, and they are vocals.	2	3	5	12%
Nurses are unlikely to know the scope of Physiotherapy.	2	2	4	10%
Prevent complication and Improve patient satisfaction.	2	2	4	10%
Attendance of acute cases in short stay, ICU & High care.	1	3	4	10%
Collaboration & consultation.	2	2	4	10%
Marketing, awareness and education on scope/ role of physiotherapy.	4	0	4	10%

Early intervention & better ED treatment outcome for patients.	1	2	3	7%
ED staff overwhelmed by duties that can be taken up by other specialities.	0	2	2	5%

Table 4.10 outlines healthcare workers' views on the justification for physiotherapy placement in the Emergency Department (ED)**.** The most common reason cited was the reduction of workload, waiting times, and prolonged patient stays (38%, n=16). Recognition of the growing role and need for physiotherapy in the ED was reported by 29% (n=12), while 24% (n=10) acknowledged its global impact. Respondents also noted the importance of a multidisciplinary team approach (21%, n=9), physiotherapy's contribution to bed availability (19%, n=8), and the profession's expanded role during COVID-19, particularly in ICU and respiratory care (17%, n=7).

Table 4.11. Healthcare workers (n=42) responded on how they think EDP may influence the efficiency or effectiveness of the emergency department in their hospital.

Key theme on how Healthcare workers (HCW) think Emergency Department Physiotherapy (EDP) may influence the efficiency or effectiveness of Emergency Department in their hospital	Healthcare Workers (nurses & doctors) response (N=42)			
	Nurses (n=21)	Doctors (n=21)	Total	%
Early intervention & identification.	10	16	26	62%
Improve (decrease) patient waiting time.	14	9	23	55%
Multidisciplinary team (MDT) holistic approach & second opinion.	8	9	17	40%
Decrease LOS.	9	5	14	33%
Decrease queues, patients load and easy doctors' patients' treatment delay	6	9	15	36%
Improve patient treatment outcomes & quality of care & life	1	12	13	31%
Prevent unnecessary admission through screening	0	8	8	19%
Bed availability	1	6	7	17%
Improve patient experience of care.	0	5	5	12%
Decrease incident of hospital acquired disease & cost of care.	0	4	4	10%
Not really sure.	1	3	4	10%
Strengthen discharge plan, follow up and continuity of care	0	4	4	10%
ED can benefit from Physiotherapy expertise	0	3	3	7%
Improve Pre and post operative intervention	0	2	2	5%
Improve referral	0	2	2	5%
Decrease complication of critical illness.	0	2	2	5%
Mobility & Normal breathing	0	2	2	5%
Strengthening implementation of Batho Pele	0	1	1	2%
Save resources patient and porters up and down to physio	0	1	1	2%

Table 4.11 highlights the perceived benefits of having physiotherapists in the Emergency Department**,** as indicated by healthcare workers. The most frequently cited benefit was early intervention and identification**,** reported by 62% (n=26) **of** participants. This was followed by the ability to improve or decrease patient waiting time **(**55%, n=23**)** and support **a** multidisciplinary team (MDT) holistic approach and second opinions (40%, n=17). Other notable benefits included reducing length of stay (LOS) **(**33%, n=14**),** decreasing queues and patient load **(**36%, n=15**),** and improving patient treatment outcomes and quality of life **(**31%, n=13**).** Additional responses emphasized preventing unnecessary admissions through screening **(**19%, n=8**),** enhancing bed availability **(**17%, n=7**)** and improving patient care experience **(**12%, n=5**).**

Table 4.12. Healthcare workers (n=42) responded on how EDP could improve the Emergency Department system.

Key response by healthcare workers on how EDP could improve the Emergency Department system.	Healthcare worker (nurses & doctors) response (n=42)			
	Doctors (n=21)	Nurses (n=21)	Total	%
Decrease patient waiting time & improve patient experience of care	14	7	21	50%
Early intervention & better Diagnosis	5	9	14	33%
Prevent inappropriate referral & strengthen early referral	3	10	13	31%
Save time and hospital resources and reduce unnecessary porter movement	5	7	12	29%
address efficiency indicates challenges at ED such bed available and utilization, lesser LOS & treatment space	6	6	12	29%
Strengthen MDT holistic approach and triaging by involving Physiotherapist	8	4	12	29%
Better & improve treatment outcome, lesser complication and improve quality & patience of care	9	2	11	26%
Improve staff workforce & medical resources	6	4	10	24%
Strengthen collaboration, consultation and second opinion	0	6	6	14%
Improve awareness, health education on the role of Physiotherapist	4	2	6	14%
Issuing of Assistive devices/ technologies	2	2	4	10%
Review of structure, staff establishment & Physiotherapist allocation to ED	1	2	3	7%
Strengthening tracking and follow ups	0	3	3	7%
Screening & prioritize patients that need urgent treatment	0	2	2	5%
prevent unnecessary admission through screening	0	2	2	5%
Decongest or reduce doctors & nurses patients load	2	0	2	5%

Table 4.12 highlights healthcare workers' perspectives on how integrating physiotherapists into the ED can enhance operational efficiency, care quality, and resource management. The top benefit, cited by 50% (n=21) of respondents, is reducing patient waiting times and improving patient experience of care. Early intervention and better diagnosis were the second most recognized contribution (33%, n=14), followed by the prevention of inappropriate referrals and strengthening early referral pathways (31%, n=13). Several responses tied at 29% (n=12), including: Saving time and hospital resources, and reducing porter movement, addressing ED efficiency challenges (e.g., bed availability, length of stay, treatment space), Strengthening MDT collaboration and triaging with physiotherapist involvement.

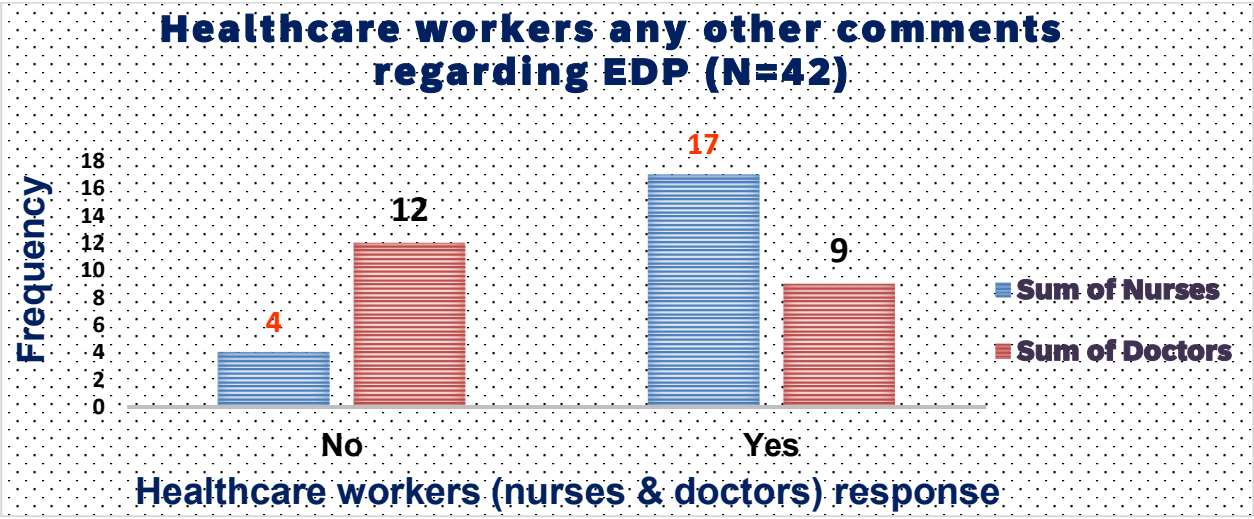


Figure 4.15. Healthcare workers (HCW) any other comments regarding EDP.

A total of 62% (n=26) healthcare workers indicated that they had additional comments regarding the Emergency Department Physiotherapy (EDP). Conversely, 38% (n=16) of the respondents reported **no** additional comments.

Table 4.13. Healthcare workers (n=42) highlighted any other comments regarding EDP.

Healthcare workers (nurses and doctors) response (n=26)
Key themes / other comments regarding Emergency Department Physiotherapy (EDP)
Need for Physiotherapy Presence in ED: EDs should have a dedicated physiotherapist, especially due to the increasing number of ventilated and critically ill patients. At least one physiotherapist should be allocated in the ED. Holistic multidisciplinary team approach. Doctors cannot keep on calling other healthcare professionals to attend to patients. Physiotherapists must come to the ED when we have a patient, not a patient going to them.
Staffing and Accessibility Issues: Shortage of Physiotherapy staff to ED. Rotation or full-time allocation of Physiotherapy in ED to enhance service delivery.
Awareness and Education: There is a lack of awareness among HCWs about the role and scope of physiotherapists in ED. There is a need of education and in-service training on EDP for doctors and nurses. Physiotherapists must tell us if they have a role in ED because others like me have never heard of it.
Public vs. Private Sector Gaps: Why do Physiotherapy services in public and private differ. Why does the scope of practice differ despite uniform training. May be National Health Insurance (NHI) will address the gap in South Africa. I believe Physiotherapy public service are not doing enough for their profession.
Growing Recognition and Role Expansion: Physiotherapy is a growing profession, and they must implement their role in ED. Physiotherapists should be more visible in the ED.
Calls for Systematic Integration: There is a need for formal establishment of EDP services. A call for hospitals to standardize EDP systems to avoid reliance on ad hoc referrals by doctors. It would be good if their service or EDP be introduced or put into practice if it exists in ED.
Referral: there is a need to research more on Physiotherapy profession for better referrals and treatment outcomes.

Table 4.13 indicate general comments expressed by the healthcare workers. They highlighted the importance of physiotherapists' presence in ED, rotational / full time placement at ED; provide awareness and education on EDP, public sectors to provide the service same as at the private sectors and improve on referral system.

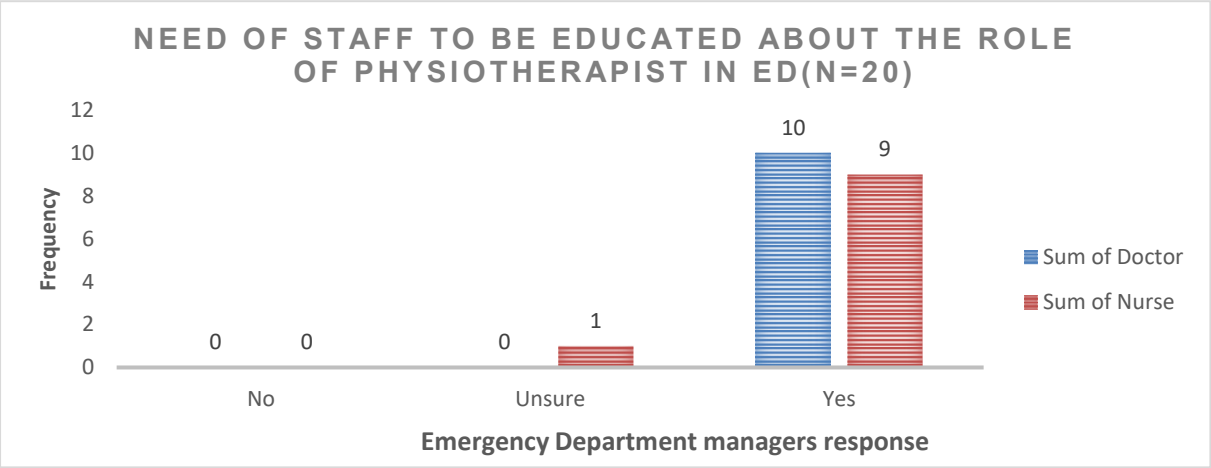


Figure 4.16. **Need of staff to be Figure educated about the role of physiotherapist in Emergency Department.** A total of 95% (n=19) ED managers indicated the need of staff to be educated about the role of physiotherapist in the Emergency Department & 5% (n=1) unsure.

Table 4.14. Emergency Department managers (n=20) responded on why they think Physiotherapy is starting to be used by hospital ED.

Key common theme on why ED managers think Physiotherapy is starting to be used by the hospital Emergency Department.	Emergency Department (ED) Manager response (N=20)	%
Physiotherapy scope of practice, awareness and education about the profession and its expertise at ED	7	35%
Contribute to bed availability	6	30%
Recognition of growing profession and the need of Physiotherapy in ED	5	25%
Reduce patients' workloads & long stay of patients at ED.	4	20%
Necessity, however, everything with the profession is political & they are starting to advocate for their profession	4	20%
Prevent complication and Improve patient satisfaction	3	15%
Most hospitals started to research more on role after profession was recognized by president.	3	15%
Early intervention and better treatment outcome	3	15%
Acknowledgement of physiotherapy services at ED	3	15%
Involvement in studying & research	3	15%
Advocate for patients & challenge the system	3	15%
MDT Holistic patient care	2	10%
Other hospitals indicated help decrease waiting times and delays of service at ED	2	10%
Attendance of acute cases in trauma, short stay, ICU & High care	2	10%

Recognition & sharing impact & best physio practice at ED by other hospital	2	10%
Essential during covid-19, need and growing service	2	10%
Rehabilitation of patients and speedy recovery	1	5%
Active in hospital clinical services	1	5%
Expertise and recognition by President during covid-19 as frontline, due to their voice & active intervention	1	5%
System and leadership changes contributed.	1	5%
Profession was under utilized	1	5%
sustainable awareness & conference yearly	1	5%

Table 4.14 highlights ED managers perspectives on why Physiotherapy is starting to be used in ED. The most cited theme was the need to increase awareness and education about the scope of practice and expertise of physiotherapists in the ED (35%). This was followed by their contribution to bed availability (30%) and the growing recognition of physiotherapy as a vital profession in emergency care (25%). Other themes included the role of physiotherapists in reducing patient workload and length of stay (20%), their advocacy in a politically influenced healthcare system (20%), and their impact on improving patient satisfaction and preventing complications (15%).

Table 4.15. ED managers (n=20) responded on how they think EDP may influence the efficiency or effectiveness of the emergency department in their hospital.

Key theme on how ED managers think EDP may influence the efficiency or effectiveness of the Emergency Department in their hospital.	ED Manager response (N=20)	%
Decrease Hospital LOS and increase bed availability	15	75%
MDT holistic approach and second opinion will influence, improve and better treatment outcome & quality of care & life	14	70%
Collaboration & consultation with Physiotherapy will contribute to decrease queues, patients load and easy doctors' patients' treatment delay in ED	13	65%
Screening & triaging reduces emergency queues; patients load and easy doctors' patients' treatment delay	12	60%
Improve (decrease) patient waiting time	11	55%
Early intervention & identification of patients with chest, stabbed or Patient with ICD, Soft tissue injury, trauma etc. will prevent unnecessary admission	10	50%
Strengthen discharge plan, follow up and continuity of care	6	30%
Improve referral, early mobilization and discharge	6	30%
Decrease incident of hospital acquired disease & cost of care	6	30%
Improved self-worth and independence and patient experience of care	6	30%
Access to walking aids & prevent wrong prescription of WA	5	25%

Improve patient treatment outcomes & quality of care and life	4	20%
Improve patient centered care and experience of care	4	20%
The role of physiotherapy in the Emergency Department influences efficiency in Emergency Department	4	20%
Improve patient centered care and experience of care	3	15%
ED can benefit from Physiotherapy expertise	3	15%
Save resources patient and porters up and down to physio	2	10%
Decrease complication of critical illness.	2	10%
Quicker treatment and speedy recovery	1	5%

Table 4.15 ED managers expressed key benefits of integrating physiotherapy into the ED. The most cited benefit was that physiotherapists help decrease hospital length of stay (LOS) and increase bed availability (75%), followed closely by the multidisciplinary team (MDT) approach improving treatment outcomes and patient quality of life (70%). Other significant benefits included enhanced collaboration and consultation, which contributes to reduced patient queues, workload, and treatment delays (65%), and the role of physiotherapists in screening and triaging, which streamlines ED processes (60%). Physiotherapy was also credited for reducing patient waiting times (55%) and preventing unnecessary admissions through early intervention (50%).

Table 4.16. ED managers (n=20) responded on how EDP could improve the Emergency Department system.

Key response by ED managers on how EDP could improve the Emergency Department system.	ED Manager response (n=20)	%
Early intervention, mobilization, better diagnosis & improve discharge system	14	70%
Decrease patient waiting time & improve patient experience of care.	11	55%
Strengthening MDT holistic approach, triaging, screening and resuscitation by involving Physiotherapist.	11	55%
Review of structure, staff establishment & Physiotherapist allocation to ED and organogram from province.	10	50%
Strengthen collaboration, consultation and second opinion.	9	45%
Improve ED staff workforce, medical resources & daily routine round for patients.	8	40%
Better & improve treatment outcome, lesser complication and quality of patient care.	8	40%
Prevent inappropriate referral & strengthen early referral.	7	35%
Save time, hospital resources & reduce unnecessary porter movement.	5	25%
Prevent unnecessary treatment delay, workload of the patients to the doctors and admission through screening	4	20%
Improve ED service package and change setting	4	20%

Reduce the number of admissions and long stay of patients	2	10%
Decrease mortality and morbidity	2	10%
Help with managing ED patient flow	2	10%
Issuing of Assistive devices/ technologies	2	10%
Decrease PSI and complaints by keeping patients informed about their condition and treatment	2	10%
Addressing efficiency indicates less challenges at ED such bed available and utilization, lesser LOS	1	5%

Table 4.16 highlights ED managers responses on how EDP could improve the ED system. The most frequently was early intervention, mobilization, better diagnosis, and improved discharge systems (70%). This was followed by the ability of physiotherapists to reduce patient waiting times and enhance the patient experience of care (55%), and their role in strengthening multidisciplinary teamwork, triaging, screening, and resuscitation (55%). Less frequently, responses were preventing inappropriate referrals, saving time and resources, and reducing unnecessary delays or admissions. A small number pointed to contributions in device issue, reduction in patient complaints (PSI), flow management, and decreasing mortality and morbidity (10% or less).

Table 4.17. ED managers (n=18): highlighted other comments regarding EDP.

ED Manager response (n=20)
Key other comments regarding Emergency Department Physiotherapy (EDP)
ED needs teams approached and physiotherapy placement is needed for part of the team.
There is a hope that the research will facilitate placement of Physiotherapy Staff in ED.
Physiotherapy in the ED is very crucial for reducing hospital stay of patients.
An improved structure for Physiotherapy that supports the emergency department is required than depending on rotation or calling them.
Physiotherapy to start allocating their staff to ED.
Physiotherapy should advocate for patients' care based on their expertise.
Physiotherapy staff must stop relaxing in their department and advocate for their profession We need a change in hospital approach to patients.
Physiotherapy should make their role known by other professionals
We must start seeing physiotherapists in the emergency department
Integrating Physiotherapy services should be across not Tertiary or Central hospitals

Table 4.17 ED managers strongly expressed the need for the integration of physiotherapy into Emergency Department (ED) teams. Many called for dedicated physiotherapy staff in the ED, rather than relying on rotation or ad hoc referrals. There was hope that ongoing research into this area would facilitate formal placement of physiotherapists in ED settings. Respondents emphasized that physiotherapy is crucial for reducing hospital stay, improving patient care, and contributing meaningfully to the ED. A more structured and permanent physiotherapy presence is recommended to replace inconsistent involvement.

4.6 KNOWLEDGE AND PERCEPTION OF PHYSIOTHERAPISTS ON THEIR ROLE IN EMERGENCY DEPARTMENT.

The physiotherapists in Gauteng public hospitals with Emergency Department (ED). Physiotherapists who participated in the study (n=42), with 10 physiotherapists from district, 5 from regional, 12 from tertiary and 12 from central (for more on demographic to table 4.1 above).

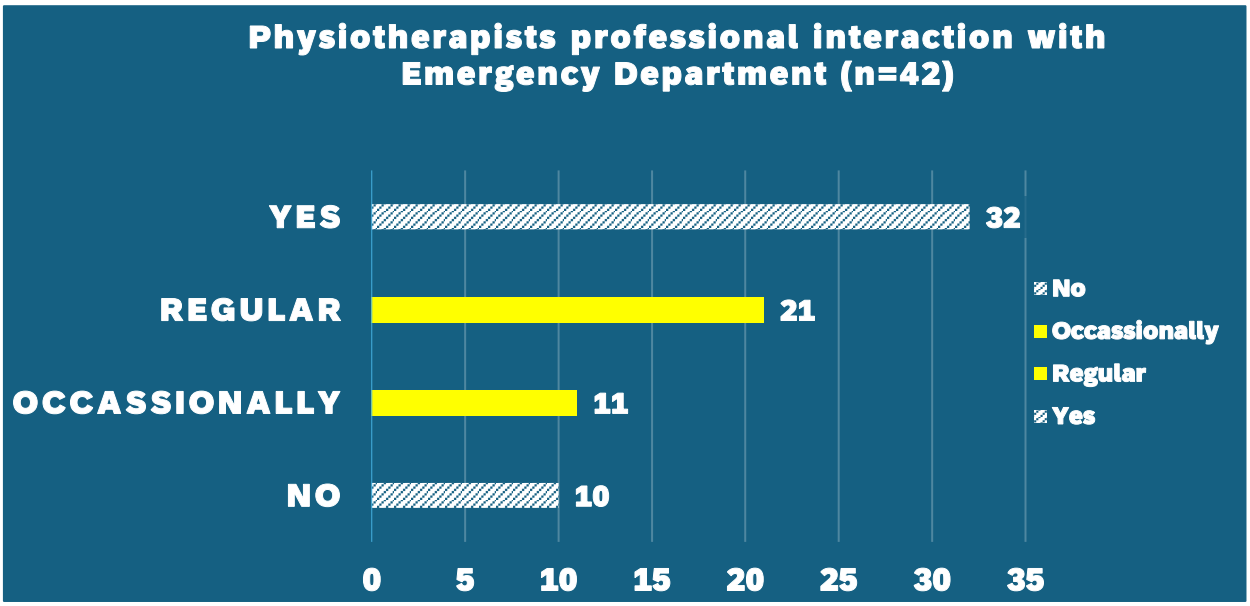


Figure 4.17 Physiotherapist professional interaction with ED.

A total of 76% (n=32) physiotherapists has professional interaction and 65% (n=21) on a regular basis with Emergency Department.

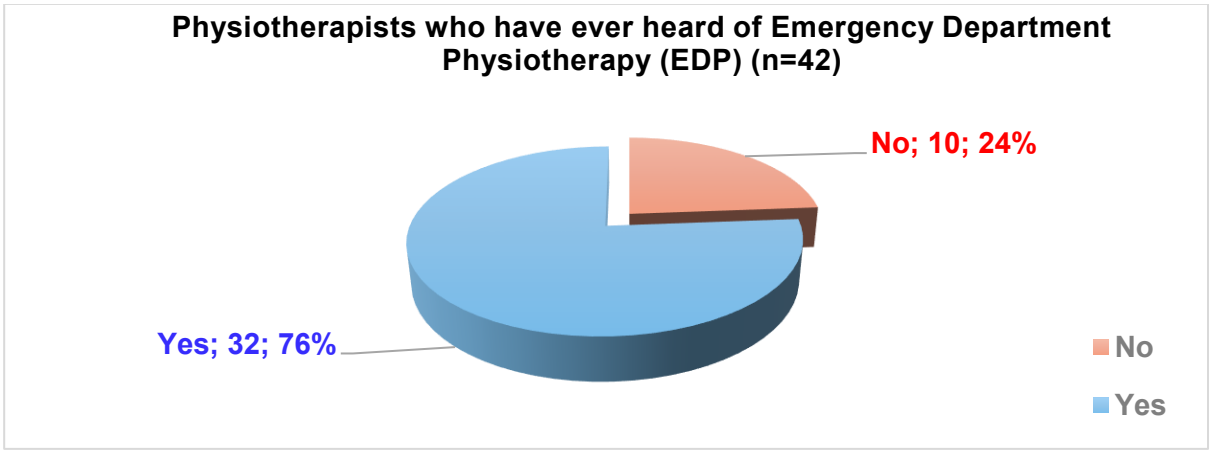


Figure 4.18 The physiotherapists who have ever heard of EDP.

Physiotherapists (76%, n=32) indicated they have heard of EDP before and 24%(n=10) never heard of EDP before.

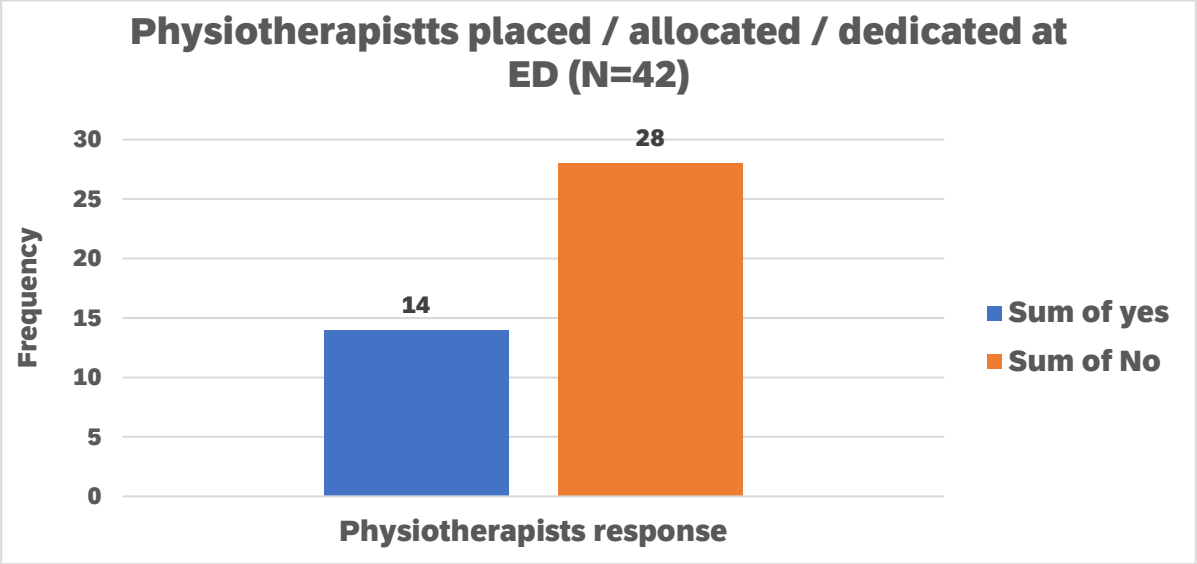


Figure 4.19 Physiotherapist placed/allocated/dedicated at the ED.

A total of 67% (n=28) Physiotherapists indicated no physiotherapist are placed at ED, however 33% (n=14) responded yes, they have dedicated/ allocated physiotherapist at ED.

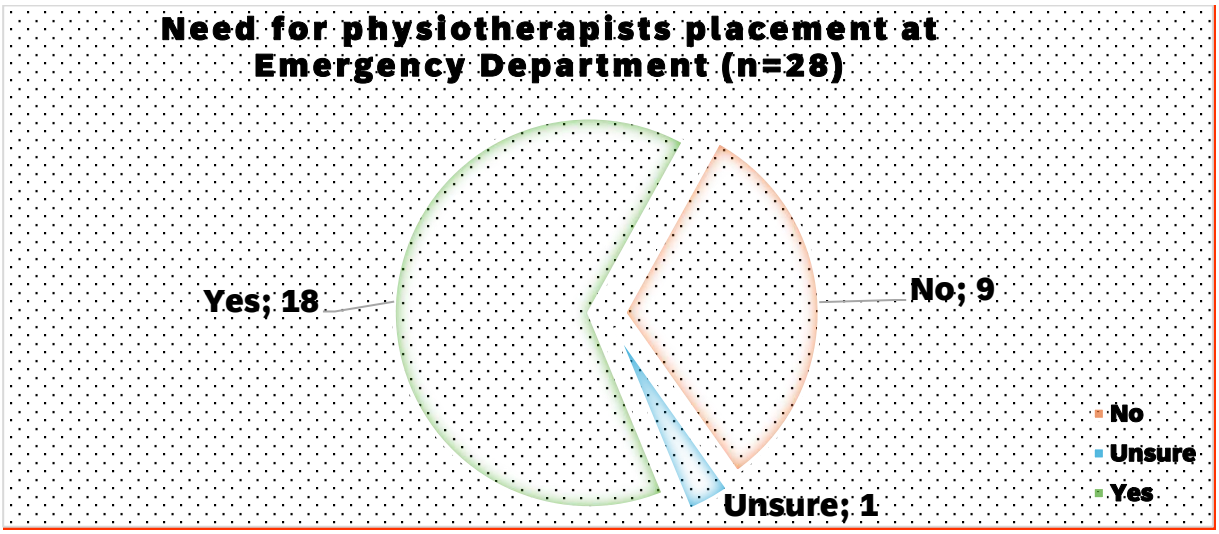


Figure 4.20 Need for physiotherapist placement / dedicated at the ED.

Physiotherapists (67%, n=28) indicated that no physiotherapists are currently placed in the Emergency Department (ED) (Figure 4.25). However, 64% (n=18) responded yes to the need for physiotherapist placement at ED, while 32% (n=9) said no, and 4% (n=1) were unsure.

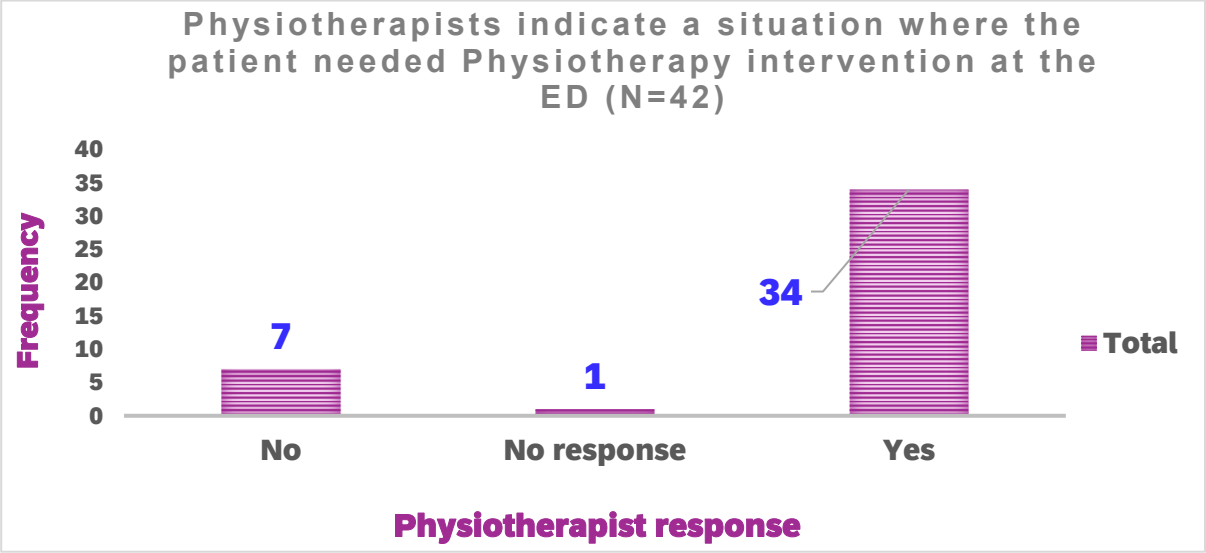


Figure 4.21. Situation where the patient needed Physiotherapy intervention at the ED.

A total of 81% (n=34) physiotherapists indicated situation where patient needed Physiotherapy intervention at the ED, whereas 17% (n=7) not & 2% (n=1) did not respond.

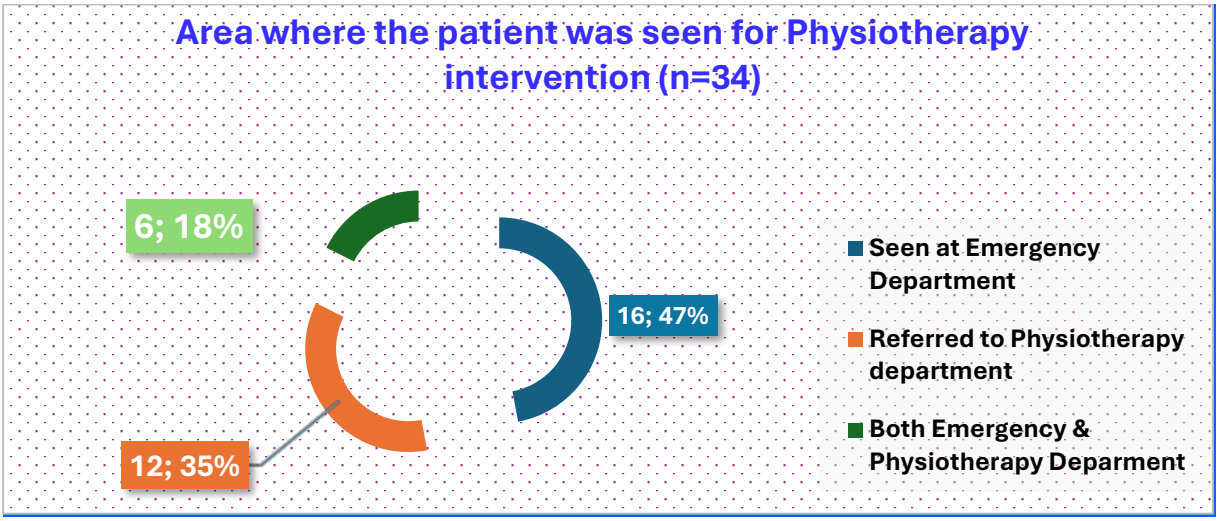


Figure 4.22. Area where the patient was seen for Physiotherapy Intervention.

A total of 81% (n=34) of physiotherapists indicated involvement in Emergency Department (ED) care. Of these, 47% (n=16) reported that patients were referred to the Physiotherapy Department, 35% (n=12) treated patients directly in the ED, and 18% (n=6) provided physiotherapy in both the ED and Physiotherapy Department areas.

Table 4.18. Physiotherapists (n=42) responded on what they think the role of physiotherapist are in the Emergency Department.

Key roles of physiotherapist in the Emergency Department by physiotherapists	Physiotherapists response (n=42)	
	Total	%
Early treatment intervention (Early intervention, Screening, Assessment, Diagnosis & Acute care / Treatment).	28	67%
Chest Physiotherapy (ICD, Ventilated Patients).	24	57%
Issuing assistive device / technology (Prescribe, issue & gait - reeducation).	13	30%
Reduce length of stay (RLOS).	8	19%
Prevention.	6	14%
Rehabilitation & Referral.	4	10%
Health Education, MDT Support (resuscitation), Investigation (Request x-ray, sputum induction).	3	7%
Medicolegal (RAF, IOD, Reduce medico legal risk).	2	5%
Cardiorespiratory, Advocacy, not sure.	1	2%

Table 4.18 shows that the majority of physiotherapists *(67%,* n=28*)* highlighted their role such as early treatment intervention—including screening, assessment, diagnosis, and acute care—as a key role in the ED. This was followed by chest physiotherapy *(57%,* n=24*),* especially for patients with intercostal drains (ICDs) and those who are ventilated.

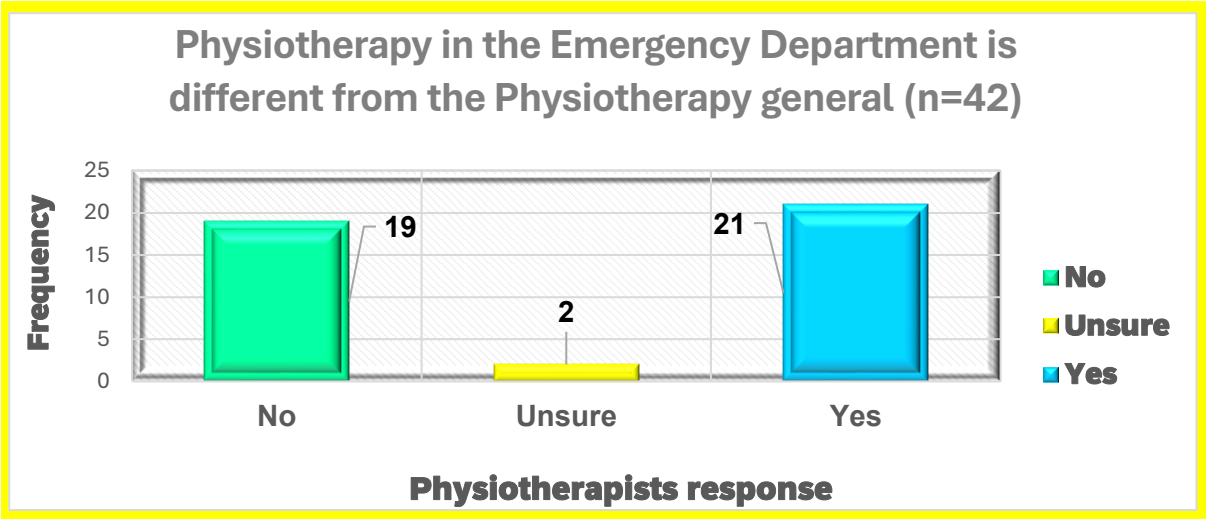


Figure 4.23. Physiotherapy in the ED is different from the Physiotherapy in general.

Table 4.23 shows that half of the physiotherapists (50%, n=21) who participated in the study indicated that Physiotherapy in the Emergency Department (ED) is different from general physiotherapy practice. In contrast, 45% (n=19) perceived no difference, while a minority (5%, n=2) were **unsure**.

Table 4.19. Physiotherapists (n=42) responded on what skills or attributes are needed in the Emergency Department.

Physiotherapists response (n=42).
Key skills / attributes of physiotherapist in the Emergency Department by physiotherapists.
Acute Care and Life-Saving Interventions: Physiotherapists in the ED must manage emergency and trauma cases requiring urgent stabilization, including respiratory (chest), orthopaedic, paediatric, and mental health emergencies. Play a vital role in maintaining life, such as ensuring airway clearance, improving oxygen saturation, and preventing further clinical deterioration through prompt interventions.
Rapid Clinical Reasoning and Decision-Making: Need to be quick, accurate clinical assessments, swift diagnosis, and immediate initiation of treatment (e.g., strapping, gait training). Decision-making skills under pressure; ready to act quickly and independently.
Specialized Skills in Emergency Care: Emergency physiotherapists possess advanced life support certifications, including Basic Life Support (BLS)**,** Advanced Cardiac Life Support (ACLS)**,** Advanced Paediatric Life Support (APLS)**,** First Aid and Cardiorespiratory Care Must have knowledge of emergency medications and their side effects is also essential.
Triage and Diagnostic Skills: triage and clinical prioritization, screening and identifying patients needing urgent physiotherapy intervention. Ability to recognize red flags and appropriately refer or escalate care when necessary.
Adaptability and Improvisation: Must adapt to limited equipment, improvising while maintaining patient safety. Demonstrate flexibility and resilience in a fast-paced, unpredictable environment.
Holistic and Continuum of Care Approach: to ensure continuity of care through rehabilitation, functional restoration, and integration back to work, home, or school. Plan for outpatient follow-ups and ensure effective discharge planning.
Communication, Teamwork and Assertiveness: to communicate assertively, often working within a multidisciplinary team. To advocate for patients and assert the physiotherapy role within the ED setting.
Personal Attributes and Mindset: a mindset shift, alertness, and critical thinking under pressure, fast thinker in ED. Time management, assertiveness, and a strong understanding of priorities are crucial in ensuring effective care delivery.

Table 4.19 indicate skills or attributes needed in the ED expressed by the physiotherapists. They highlighted competency of acute care and life-saving Interventions, the need for rapid clinical reasoning and decision-Making, specialized skills in emergency care, triage and diagnostic skills, should be able to adapt and improvise in different environments, holistic and effective discharge planning, communicate, teamwork and assertiveness, personal attributes and mindset shift.

Table 4.20. Physiotherapists responded on what does their role have in common with that of Emergency Department Physiotherapy.

Key common roles that physiotherapists have with that of Emergency Department Physiotherapy (EDP).	Physiotherapists response (n=42)	
	Total	%
Curative care, holistic patients' treatment (exercises, strapping)	13	31%
Respiratory, Chest Physiotherapy role	11	26%
Unsure	8	19%
Physiotherapist role is the same	7	17%
Diagnostic support service (request of x-rays)	6	14%
Primary assessment of patients, Cardiovascular, ICU and trauma management skills.	5	12%
Resuscitation skills (stabilize critical patients), rehabilitation, reduce length of stay and Improve patient quality of life, health education, promotion and preventative role, patient discharge, multidisciplinary and referral role.	4	10%
Issuing of assistive devices / technology, advocacy, 24 hours services, early intervention & acute care, screening / triaging & taking vitals.	2	5%

Table 4.20 highlight physiotherapists responses on what does their role have in common with that of EDP. The most commonly roles indicated was curative and holistic patient care (31%), followed by respiratory / chest Physiotherapy (26%). A notable perception gaps of 19% were unsure of the role, and 17% believed ED physiotherapy was no different from general physiotherapy—indicating a need for greater awareness and role clarity.

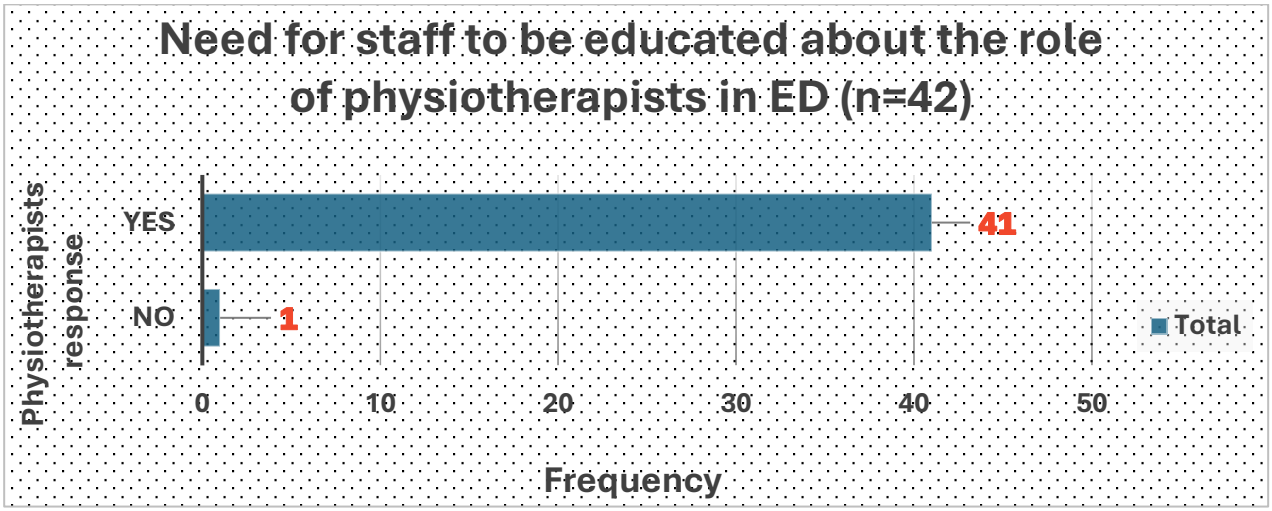


Figure 4.24 Need of staff to be educated about the role of physiotherapist in ED.

A significant majority of physiotherapists (98%, n=41) expressed that there is a clear need for staff in the Emergency Department to be educated about the role and contribution of physiotherapists. Only 2% (n=1) did not see this as necessary.

Table 4.21. Physiotherapists (n=42) responded on why they think Physiotherapy is starting to be used by hospital Emergency Department.

Key theme on why physiotherapists think Physiotherapy is starting to be used by the hospital Emergency Department.	Physiotherapists response (n=42)	
	Total	%
Increased awareness and recognition		
Awareness on scope / role of physiotherapists in ED.	10	24%
Notice of physiotherapy's impact globally (e.g., Canada).	4	10%
Belief that the profession makes a difference.	3	7%
Efficiency and resource optimization.		
Play pivotal role on reduction of patient hospital stay (LOS).	9	21%
Its contribution to the decrease in patient waiting times.	6	14%
Saving costs and reducing unnecessary patient/porter movements to Physiotherapy.	5	12%
Contribute to reduction of litigations	2	5%
Improving Patient Outcomes		
Early acute intervention and patient care at ED.	7	17%
Early Identification of conditions to be treated.	4	10%
Chest Physiotherapy as an early intervention.	3	7%
preventing further complication and reducing mortality.	4	10%
Multidisciplinary team (MDT) contribution.		
Support for holistic MDT approaches	2	5%

Table 4.21. Physiotherapists responded on why they think Physiotherapy is starting to be used by hospital ED. Table above shows the most common responses by physiotherapists (24%, n=10) for the introduction of physiotherapy in hospital EDs was increasing awareness of the scope and role of the profession in emergency care. This was followed by 21% (n=9) who noted its pivotal role in reducing patients' length of hospital stay. Additionally, 17% (n=7) emphasized physiotherapy's contribution to early acute intervention and patient care in the ED, while only 5% (n=2) highlighted support for a holistic multidisciplinary team approach.

Table 4.22. Physiotherapists responded on how they think EDP may influence the efficiency or effectiveness of the Emergency Department in their hospital.

Key theme on how physiotherapists think Emergency Department Physiotherapy (EDP) may influence the efficiency or effectiveness of Emergency Department in their hospital	Physiotherapists response (n=42)	
	Total	%
Early Identification, Screening & Triage		
Cases might be attended early, early identification of patient needs through needs analysis, screening & triaging of patients.	8	19%
Contribution to proper diagnosis, timely interventions, and can be lief saving, especially for chest-related conditions (e.g. Asthma, COPD).	2	5%
Prevention of Recurrence and Complications		
Education on device use (e.g., asthma pumps) and breathing techniques can prevent repeat ED visits.	8	19%
Improve turn over & patient outcomes. Patient health outcomes might be improved because management will have started promptly.	4	10%
Reduced Length of Stay (LOS) and Waiting Times		
Decrease length of hospital stay (LOS) at Emergency Department (ED)	7	17%
It will decrease waiting times, speed up patient flow & improve Patient Experience of Care (PEC) and overall, ED efficiency.	6	14%
With soft tissue injury Physiotherapy can play a big role and reduce delays in treatment and queues waiting for the doctor.	5	12%
This will lead to positive client satisfaction surveys, decreased waiting times, decreased hospital length of stay,	1	2%
Improved Patient Management and Care Quality		
Early and safe mobilization (exercises) of chest, lower limb fractures that were managed conservatively.	5	12%
Immediate management of uncomplicated chest wall trauma e.g. ICD's, medical chest COPD would benefit.	3	7%
Through early intervention we contribute to reduce unnecessary admissions, correct diagnosis and early ambulatory of patients. Through screening or triaging we reduce unnecessary delays of patients' treatment waiting for the doctor.	4	10%
Better treatment outcomes, providing holistic approach and improving quality of life for patients.	4	10%
It will improve effectiveness in managing certain conditions, pre & post care.	3	7%
Decreased morbidity caused by delayed care and pain management and issuing of assistive devices / technologies	2	5%
Enhanced-Multi-Disciplinary Team (MDT) Collaboration		
Holistic patient management within MDT framework promotes continuity of care through collaboration and consultation of healthcare workers.	4	10%
Integration of Physiotherapy in the ED to improve hospital stay experiences, reduce the number of admissions, enhance patients' quality of life, ensure the provision of discharge-related home advice aligned with Physiotherapy standards, and facilitate better communication with family members.	4	10%
Prevent unnecessary revisit and admission esp. with ICD & minor injuries	3	7%
Offering integrated treatment within the ED is essential, as some patients fail	2	5%

to follow through with physiotherapy referrals made outside the unit.		
Collaboration with nursing staff contributes to reducing the workload related to airway maintenance.	2	5%
The medical team will appreciate the contribution once they see the advantages. For now, they are not aware of the benefits.	1	2%
Will help with referrals, and less complications related Physiotherapy conditions.	1	2%
Optimized Resource Use and Bed Management		
Bed availability and utilization. Fewer admissions, as patients will be discharged at ED.	5	12%
Patients will receive care and be discharged from the ED directly, avoiding transport delays to physiotherapy departments. Reducing unnecessary waste of resources.	2	5%
System and Workforce Improvements		
Training and awareness campaigns to educate healthcare worker and patients about the role and value of EDP and its setting.	3	7%
I believe that staff who are aware they are assigned to work in the ED would be able to manage their schedules effectively to ensure they are consistently available.	1	2%

Table 4.22. Physiotherapists responded on how why they think EDP may influence the efficiency or effectiveness of the ED in their hospital. Table above shows the most common responses and a tied by physiotherapists (19%, n=8) education on device use (e.g., asthma pumps) and breathing techniques can prevent repeat ED visits and early identification through needs analysis, screening and triaging of patients. This was followed by 17% (n=7) who indicated decrease length of hospital stay (LOS) at ED. Additionally, 14% (n=6) emphasized EDP may influence efficiency or effectiveness by decrease waiting times, speed up patient flow & improve Patient Experience of Care (PEC) and overall, ED efficiency. The themes highlight the importance of early intervention, collaborative care, and structural readiness to maximize the benefits of Physiotherapy services in ED settings.

Table 4.23. Physiotherapists responded on how EDP could improve the ED system.

Key response by physiotherapists on how EDP could improve the Emergency Department system.	Physiotherapists response (n=42)	
	Total	%
MDT holistic acute care / treatment.	10	24%
Strengthening referral system.	9	21%
Triaging / screening and early intervention (esp. Chest patients).	8	19%
Improve staff workforce.	7	17%
Improve patient management time & patient waiting time.	7	17%
Better outcome & quality of patient care.	6	14%
Unsure.	5	12%
Collaboration & consultation, Communication (meetings)	5	12%
Save hospital & patients resources and unnecessary transport of patients to Physiotherapy.	4	10%
Review of structure, staff establishment & Physiotherapist allocation to ED.	4	10%
Improve awareness, health education on the role of Physiotherapist.	4	10%
Decongest or reduce doctors & nurses patients load.	3	7%
Improve bed availability & treatment space.	3	7%
Round and prevent unnecessary admission.	3	7%
Improve Patient Experience of Care (PEC).	2	5%
Issuing of Assistive devices/ technologies	2	5%

Table 4.23. Physiotherapists responded on how EDP could improve the Emergency Department system. Table above illustrated the highest responses by physiotherapists (24%, n=10) indicated through Multidisciplinary team (MDT) holistic acute care / treatment. This was followed by 21% (n=9) who indicated through referral system and 19% (n=8) triaging / screening and early intervention (especially chest patients). Additionally, a tied of 17% (n=7) on improve staff workforce and improve patient management time and patient waiting time. While a tied of 5% (n=2) highlighted improve patient experience of care (PEC) & issuing of assistive devices / technologies.

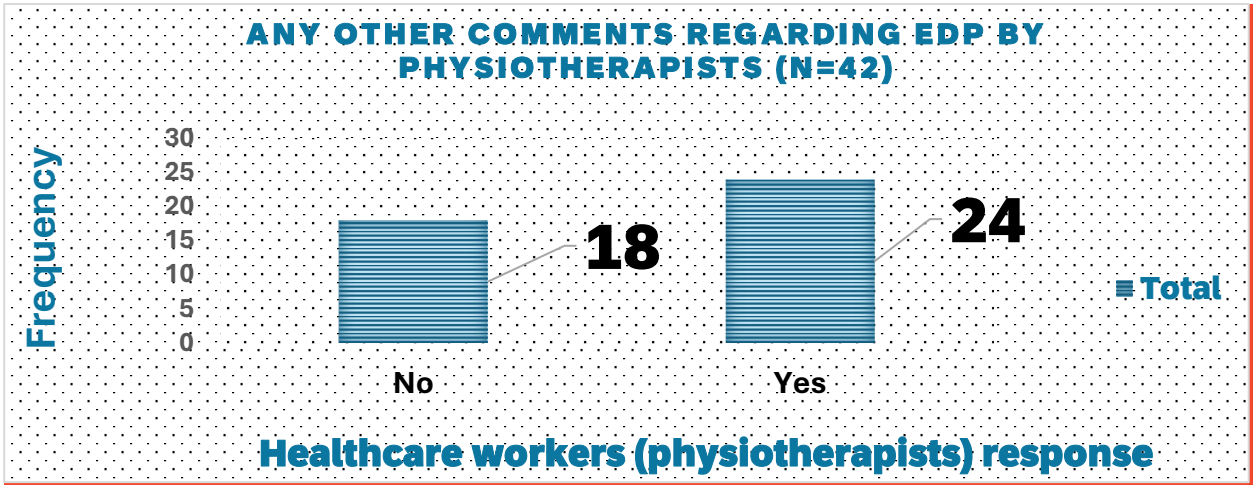


Figure 4.25. Any other comments regarding EDP by physiotherapists. A total of 57% (n=24) physiotherapists does have any other comments regarding EDP & 43% (n=18) do not.

Table 4.24. Physiotherapists (n=42) highlighted any other comments regarding EDP.

Physiotherapists response (n=24)
Any other comments regarding Emergency Department Physiotherapy (EDP) from physiotherapists.
Strong Support for Physiotherapy in Emergency Departments (EDs):
Physiotherapy in EDs is essential, beneficial, and long overdue. Contribute to better patient outcomes, such as reduced hospital stays, appropriate use of assistive devices, and early discharge. It can really be beneficial at tertiary hospitals. It's an essential & necessary role that must be expanded.
Need for Policy, Regulation, and Structural Change:
Policy reform is needed to support the integration of physiotherapists into ED. Hospital needs to benchmark against countries like Canada where EDP is successfully implemented. NHI-aligned advocacy and institutional support for Physiotherapy in ED.
Curriculum and Training:
HPCSA should update Physiotherapy curriculum to include ED training. I recommend that universities review their curriculum and consider training of Physiotherapy students in emergency department. We must be versatile, prepared, and committed to working in high-paced ED environments. Physiotherapists are first line practitioners, everything that we cannot handle we were trained to refer accordingly. It is high time physiotherapy started to advocate for their profession and research more.
Staffing and Resource Challenges:
Staff shortages and resource constraints hinder implementation of EDP. Physiotherapy in EDs must be adequately staffed with designated personnel to avoid overburdening therapists or burnout. It is needed. can have a physiotherapist dedicated specifically for this ED. Managers in different hospitals don't allocate patients because they believe it's not a priority area due to a shortage of staffing. Nurses also believe that issuing crutches is something they can do but that has caused many patients to issue crutches that are not measured correctly.

Casualties or ED need Physiotherapy placement.
Role Clarity and Professional Advocacy:
Our need, role and scope in ED settings must be clearly define. Physiotherapists and leaders must advocate for the profession, engage in more research, and educate stakeholders on the value of EDP. Most of the time health care workers don't understand the role of physiotherapy in emergency departments and which makes them not refer to patients. The physiotherapy profession must put their practice of scope in place. they must establish physiotherapy emergency department.
Patient-Centered Benefits:
The integration of physiotherapists in EDs promotes early intervention, accurate diagnosis (especially in musculoskeletal conditions), and cost-effective care. Help in reducing hospital stay length or avoid hospitalization altogether. All hospitals will have 24-hour Physiotherapy services. It would be highly beneficial for the patients and there will be strengthened quality of service. It will save time and money especially for patients who receive medical attention and refer to Physiotherapy immediately.
Others:
Physiotherapists do a thorough job in this regard to history taking which is crucial for ED.
This will lead to accurate diagnosis in musculoskeletal problems.
It would be an amazing thing to have in all hospitals across the country an EDP and It should be an essential component of Physiotherapy.
As much as it is uncomfortable environment to be at, but the physio will be able to assist with treating and discharge of patients with appropriate assistive devices
Physiotherapists also need to be committed to the service. This is a vital service and should be managed by Physiotherapist who are willing to provide the service. We cannot overburden the therapist with the work. There should be designated physiotherapist at the emergency facility.
It is a needed service in all hospitals and It's an important service to be rendered to. Patients who need acute care.
Heads and seniors need to advocate for physiotherapy structure in casualty looking at NHI. Just excited about the study, was not expecting it

Table 4.24. Physiotherapists (n=42) highlighted additional comments regarding the integration of Emergency Department Physiotherapy (EDP) into Emergency Department (ED) teams. Many physiotherapists strongly supported the implementation of EDP. Others emphasized the need for policy reforms, regulatory support, and structural changes within ED. They cited the importance of conducting more research and benchmarking against countries like Canada, where EDP is already in place. Curriculum development, training, and addressing staffing and resource challenges were also noted as key considerations. Furthermore, participants highlighted a widespread misunderstanding of the Physiotherapy role in EDs, underscoring the need for clearer role definitions and professional advocacy. Strengthening EDP education for all stakeholders was recommended to bridge this gap. All these efforts should be pursued with a focus on patient-Centered benefits.

Table 4.25. Additional question specific for physiotherapists.

Additional question specifically for physiotherapists only (n=42)			
Questions	**Response**		**Comments**
	Yes	**No**	
During your undergraduate studies, were you trained/ got exposure working in the Emergency Department (ED)?	**6**	**35**	**83%** of physiotherapists were not trained / exposed to ED during undergrade studies.
Since your employment, have you been exposed to Emergency Department Physiotherapy?	**32**	**10**	**76%** of physiotherapists have been exposed to EDP since employment.
Do you feel fully equipped / competent in working in the Emergency Department Physiotherapy (EDP)?	**33**	**9**	**79%** of physiotherapists feel they are fully equipped & competent to work in EDP
21% of physiotherapists that feel they are not fully equipped & competent for EDP highlighted the following reasons (n=9):			
Not sure how other health care professionals will accommodate physiotherapists in the ED			
I am unsure of my role and not receive enough training to be placed in ED			
Will need specific training on key ED service requirements and what is core business. will it be a 24-hour service etc. what kind of condition s to expect, what to prioritize, the best pathway from triage to physio etc.			
Training is incomplete, needs training, and extra training required in pharmacology			
I am not based in the Emergency Department. Therefore, I miss most of the conditions relevant to me. I only rely on the Dr or Nurse to call if they think I'm needed.			
I haven't worked in an acute care environment for a while and will need to hone my skills and update my pharmacology and acute care knowledge			
No exposure to the Emergency Department, I am not confident to practice there.			
I need to equip myself with a basic Life support course, and other related workshops. Also, exposure to add on my available clinical skills.			
I feel like I need better skills to be able to cope well, not well trained/ had exposure before			
I need skills in ICU; I have not been working in ICU for long and interpretation of X-rays			
It's an emergency department, mostly patients who are consulting are in a critical condition			
Not confident in being part of the emergency team during e.g. resuscitation.			
It is overwhelming in an emergency hence one is not always ready for the emergency.			
	Yes	**No**	**Comments**
Would you like to be trained in the ED?	**37**	**5**	**A total of 88%** of physiotherapists indicated they need training
Have you ever been placed/ allocated/ dedicated to the ED?	**16**	**26**	**A total of 62%** never placed / allocated / dedicated to ED.
Have you ever received a referral from the emergency department?	**34**	**8**	**A total of 81%** have received a referral from the Emergency Department (ED).
A total of 81% of physiotherapists who received a referral from the Emergency Department attended the patients at the following areas (n=34)			
Emergency Department	**8**	**24%** of patients attended at ED	
Physiotherapy Department	**12**	**35%** of patients attended at Physio	
Emergency & Physiotherapy Department	**14**	**41%** of patients attended both areas	

Table 4.25. Additional Question Specific to Physiotherapists. Table above shows a total of 83% of physiotherapists reported that they were not trained or exposed to the Emergency Department (ED) during their undergraduate studies. Similarly, 76% indicated that they have exposure to the ED since beginning employment. Despite this, 79% of physiotherapists felt they are fully equipped and competent to work in an Emergency Department Physiotherapy (EDP) setting, while 21% reported that they do not feel fully equipped or competent for EDP. 88% expressed the need for additional training specific to the ED. Furthermore, 62% of physiotherapists reported that they have never been placed, allocated, or dedicated specifically to work in the ED. Notably, 81% stated that they have received referrals from the Emergency Department. Some of these patients were seen in both ED and Physiotherapy, while others attended either one of the two departments.

4.7. CONCLUSION

This chapter presented the data findings using tables, graphs, and charts. The results clearly highlighted the staffing composition in Gauteng hospitals, based on information provided by Emergency Department (ED) managers who participated in the study. Among the participants, doctors accounted for 29% (n=222), nurses 66% (n=510), porters 1.3% (n=10), physiotherapists 1.2% (n=9), operators 0.5% (n=4), cleaners 0.5% (n=4), social workers 0.4% (n=3), occupational therapists 0.3% (n=2), clinical technologists 0.3% (n=2), dietitians 0.1% (n=1), radiographers 0.1% (n=1), psychologists 0.1% (n=1), and general assistants 0.1% (n=1).

The results also indicated that 23% (n=519) of patients attending the ED were referred to physiotherapy. Additionally, 19% (n=8) of healthcare workers reported that physiotherapists were placed in the ED at their hospitals. However, there were only 9 physiotherapists (1.2% of the ED staff composition) serving across the Gauteng province. Furthermore, 62% (n=21) of healthcare workers believed that there is a need for dedicated physiotherapy placement within the ED. The following chapter will discuss these findings in relation to the study objectives and the reviewed literature.

CHAPTER 5

DISCUSSION

5.1 INTRODUCTION

The aim of this study was to explore the knowledge and perception of healthcare workers towards emergency department physiotherapy. The study was set to answer four objectives. The first objective was to determine current staffing composition in Gauteng Emergency Departments; the second objective was to determine the need of physiotherapists' placement in Emergency Department, followed by the third objective that was to determine the knowledge and perception of Emergency Department health care workers on the role of Emergency Department Physiotherapy. The final objective was to determine the knowledge and perception of Physiotherapists on their role in Emergency Department. The discussion will be guided by these objectives.

5.2 CURRENT STAFFING COMPOSITION IN GAUTENG EMERGENCY DEPARTMENTS.

According to the National Emergency Standard (2012) the organizational chart of the emergency department must have head of the department, medical officers, nurses and supporting staff. This correlates with the results of the study because Gauteng hospitals categories (central, tertiary, regional & district) have the managers, medical officers, nurses and support staff in the emergency departments. The managers of the ED in the study were equally distributed among the doctors and the nurses by 50% each. The staffing differs accordingly to hospital categories. The higher the category the higher the number of staff, the lower the category the lower the staff.

Other than the doctors and the nurses, the emergency departments in Gauteng is also composed of therapeutic healthcare works and support staff because there was general assistant, psychologist, radiographer, dietician, technicians, occupational therapists, social workers, cleaners, operators, porters, physiotherapists). Physiotherapists were the second highest staff composition following the porters. The presence of support staff and therapeutic healthcare workers are supported by the National Standard of Emergency Department (2012) and Schofield (2009) when elaborating on the fact that the Emergency Department collaborates with various ways that are needed in fast track. It includes staff support and therapeutic healthcare workers such as occupational therapy, physiotherapy, the social workers, receptionists, cleaners, porters and other related agencies such as the blood bank. The total of the ED staff (N=770), central

hospital staff (n=557, 72%), tertiary hospital staff (n=116, 15%), regional hospital staff (n=64, 8%) and the district hospital staff (n=13, 2%) and not specified staff (n=20, 3%).

The placement of physiotherapists was 9 (1.2% of staff composition) at the hospitals whereby 33% (n=3) of physiotherapists were placed at the central hospitals, 11% (n=1) at tertiary hospital, and 56% (n=5) at regional hospitals and none (0%, n=0) at the district hospital. According to the results of the study high number of patients being referred at ED for EDP, 41% was seen at the physiotherapy department and a smaller number of referrals of 35% were seen at EDP. Patients seen at the EDP exceeded the expectations by the research with the thoughts that there might not be referrals to the EDP as others healthcare workers may not be aware of the EDP. ED managers indicated that not all ED are placed with physiotherapists and there is a need of placements as there are referrals for physiotherapists. The unavailability of the physiotherapist at the ED is of concern in such that the service has to be advocated to be available throughout including on weekends and expand hours of service on evening and night shifts (Ferreira; Traeger; Maher, 2019; Lebec, Cernohous, Tenbarge, Gest, Seveson, Howard, 2010). Nevertheless, the limited posts could still be influenced by political and economic influencers, and by the absence of job descriptions for the ED posts (Barrett & Terry, 2018). The concern over the EDP posts was as well expressed in the study when half of the ED managers (50%) raised concern about the limited posts and recommended review of staff establishment, organogram, ED structure and the allocation physiotherapists to ED. The doctors (8) and the nurses (8) in the study recommended the permanent placement of the physiotherapists in the emergency department (table 4.9).

5.3 THE NEED OF PHYSIOTHERAPISTS' PLACEMENT IN EMERGENCY DEPARTMENT.

In this study, the clinical records revealed patients that were seen in the ED for the period of 12 months, 26% (n=585) of them had soft tissues injuries and 6% had fractures (n=131) (figure 4.14). This indicated the need of Physiotherapy placement at the ED because physiotherapist in ED intervene in the management of uncomplicated musculoskeletal conditions such as sprains, strains, and simple fractures (Taubert, Clare, Burns, Elizabeth, Ward & Bassett, 2022). They do clinical assessments, diagnosis and non-pharmacological management for musculoskeletal conditions providing therapy such as manual therapy , strapping and issuing of walking aids, tapping and exercises (Ferreira, Traeger & Maher, 2019; Scott, 2014). Their presence relieves doctors from attending minor or non-urgent acute musculoskeletal conditions to attend to urgent cases (Lefmann, Sheppard, 2014; Farrell, 2014). This is also evident in this study because from the hospitals that EDP patients 4% were screened and given the intervention. The study done by Rosalie and Louise in 2018 support the presence EDP as it had identified that patients likely to prefer to be treated for musculoskeletal conditions in ED by physiotherapists and addition to this

the ED healthcare workers acknowledged the physiotherapists as an expert in ED in this regard of musculoskeletal conditions. Many ED are adding physiotherapists to their team thereby allowing doctors to see more cases that are urgent as they are moving away from the old act of referring patients to the Physiotherapy department whereas they can be seen at the same spot at the ED (Rosalie & Louise, 2018). This study is likely similar with study of Rosalie & Louise as the result shows that 20% of managers agreed with the addition of physiotherapists to the ED because it shall further prevent unnecessary treatment delay, workload of the patients to the doctors and admission through screening and others (35%) added by saying it could strengthen early referral & prevent inappropriate referral (table 4.8).

Pain (n=675, 30%) was the highest condition that was attended in ED (figure 4.14). Physiotherapists have skills in management of acute pain and their early intervention (Fleming-McDonnell, Czuppon, Deusinger, Deusinger, 2010). The presence of EDP shortens the patients' length of stay or waiting period at the emergency department and from the effectiveness of the services patients receives are likely to experience speed recovery and non-complications (Gill, 2013 & Lebec; Cernohous; Tenbarge; Gest; Seveson; Howard, 2010). Just about more than half (55%) of the ED managers in this study agreed with the study done by Gill (2013) when they believed that the functioning EDP could decrease patient waiting time & improve patient experience of care. Based on the records of the records review 315 respiratory cases (n=315, 14%) were attended to at the ED. EDP early intervention in respiratory cases such as cardiopulmonary aims at preventing or minimizing the complications and reducing the length of stay at the hospital (Braz, Curitiba, 2019). The effectiveness of the EDP was proved by the study conducted by Jibuike, Paul-Taylor, Maulvi, Richmond & Fairclough (2003) whereby patients had short stay at the ED and some patients that were treated were discharged on spot without further re-evaluation. This improvement of discharged system was expressed in this study when most of the ED managers (70%) believed that the EDP could improve the discharge system. They further mentioned that early intervention, mobilization, and diagnosing could improve (table 4.8).

Neurological conditions (n=206, 9%) were among the highest conditions including 6% fractures' cases and 4% cases on general body weakness that were seen in the hospitals that the research study was conducted at. This shows that EDP is essential because Physiotherapy plays a crucial role in simple fractures and in neurological conditions as it addresses the specific challenges that arise from damage to the nervous system and the neurological conditions often lead to muscle weakness and other client factors (Dr JHA'S Physio world, 2023; Taubert et. al.,2022).Their role in EDP can also save beds of admissions within the hospitals as this was proven in the study done by Greensitt , Bowen , Singh ,Vaziri ,Bambarvajane ,Price & Rajwani, (2019) whereby the initiation of EDP saved costs for reducing number of admissions or occupied beds. The reflection of savings was highlighted in this study when 25% of the managers reported that EDP could save

time, save hospital resources and reduce unnecessary porter movement. Once more the importance of the service in the study was reflected when there were referrals that were made, and patients were seen by physiotherapist at ED in hospitals that offer the service.

In the study it was found that cases were attended at the ED including burns (n=90,4%). Early involvement of physiotherapy in the acute burns management is crucial to aid in the best comprehensive recovery of the burned patient, however, the obstacle to early Physiotherapy of receiving late referral by the doctors should be avoided since holistic recovery is a goal of treating burned patients (Sharma, Sunil, Gupta & Deepti, 2022). Just more than half of ED managers (55%) in the study thought that strengthening multidisciplinary holistic approach by involving the physiotherapists in screening and resuscitation on patients could improve ED service outcomes. Other managers (45%) believed EDP could strengthen collaboration, consultation and second opinion on treatment given to patients. Their thought is supported by Sharma et. al. (2022) when saying a multidisciplinary approach involving the physiotherapists is essential when the whole team work toward a common goal for the optimal recovery of patients.

About 95% ED managers in the study indicated the need of education and awareness on role of physiotherapist in the Emergency because the EDP is not well known and is less understood by other healthcare workers (Rosalie, Louise ,2018). Doctors and nurses had different opinions on why the EDP is starting to be put into practice. They think Physiotherapy started being active in ED because of the changes in the system and leadership; and the acknowledgement during covid - 19 epidemic when the state president announced that physiotherapists are front-line expertise (Terkamo-Moisio, Karki, Kangasniemi, Lammintakanen, Häggman-Laitila, 2021; Palacios-Ceña, Fernández-de-las-Peñas, Palacios-Ceña, de-la-Llave-Rincón, Florencio, 2021). Yet others believe physiotherapists have recognized their need in ED and have started advocating for their profession and for patients for early intervention, speed recovery and prevention of complications to better outcomes (Vickery, Brett & Jones, 2024; Lebec; Cernohous; Tenbarge; Gest; Seveson; Howard, 2010). Contribution to reducing patients' waiting time, admissions rate and unnecessary workload to the doctors were also indicated as reasons why the EDP is starting to be active once more with the perception that the profession is underutilized (Gill, 2013, Braz & Curitiba, 2019).

5.4 KNOWLEDGE AND PERCEPTION OF EMERGENCY DEPARTMENT HEALTH CARE WORKERS (NURSES AND DOCTOR) ON THE ROLE OF EMERGENCY DEPARTMENT PHYSIOTHERAPY.

About 93% of the healthcare workers (doctors and nurses) that formed part of the study had professional interaction with the emergency department, nonetheless 87% of them were on a

regular basis with the ED (figure 4.22). The high number of healthcare workers (79%) in this study never heard of the Emergency Department Physiotherapy (figure 4.23), this shows that many healthcare workers are not aware of the EDP service (Ferreira,Traeger & Maher, 2019). The establishment of the EDP in all hospitals may help other workers understand the role of physiotherapy in ED like in United State when the ED workers started understanding the role of Physiotherapy when they started working with them after establishment of EDP services (Lebec, Cernohous, Tenbarge, Gest, Seveson & Howard, 2010).

Healthcare workers that reported on similarity between EDP and Physiotherapy in general believed that patients with sprains and strains can be seen at the Physiotherapy Department not EDP, chest physiotherapy and issuing of walking aids can be done in ED and Physiotherapy Department, however early intervention in ED may have better outcomes as the booking of patients to be seen at the later stage results in poor outcome (Barrett &Terry, 2018).

Few placement of the physiotherapists in ED could have impact in the HCW not knowing the EDP because it was reported in this study by 81% of the HCW that there were no EDP in their hospitals (figure 4.24), however, 62% of HCW expressed there is a need of Physiotherapy placement in ED (figure 4.25) and there should be posts for physiotherapists in ED (Ferreira; Traeger; Maher & 2019;Barrett & Terry, 2018). The study also shows that the high number of referrals from ED were seen at physiotherapy department, only 18% were seen in ED (figure 4.27).

Physiotherapists are knowledgeable in the management of the respiratory conditions and provision of assistive devices (Scott, 2014; Lebec, Cernohous, Tenbarge, Gest, Seveson & Howard, 2010). The roles were mentioned by majority of the healthcare workers (60%) of “Chest Physiotherapy” as the role of physiotherapist in ED, followed by the issuing of walking aids (31%) and physical therapy (26%) (table 4.12). Other HCW reported roles of EDP such as early mobilization & ambulation, giving exercises, treatment of acute respiratory, ortho and trauma related conditions (Ferreira, Traeger & Maher, 2019). some roles that were mentioned included the early provision of intervention to burns patients, musculoskeletal and sport injuries (Taubert, Clare, Burns, Elizabeth, Ward & Bassett, 2022). They also contribute to investigations on x-rays and the sputum, screening and diagnosis of patients (Scott, 2014; Fleming-McDonnell, Czuppon, Deusinger & Deusinger, 2010). It is not unexpected when about 76% of the healthcare workers mentioned that Physiotherapy in the Emergency Department is not different to Physiotherapy in general because other HCW are not aware of EDP services and some of the services are not well understood (Ferreira;Traeger; Maher, 2019).

Healthcare workers expect physiotherapists to have a variety of wide-ranging sets of skills (Barrett &Terry, 2018). It was reflected in the study when HCW expects the physiotherapists to have EDP

skills that include the ability to deal with emergency cases, treating acute ill patients, resuscitating patients, being independent in initiating treatment and promoting continuing care and should have more skills in management of patients that can be in Intensive Care Unit.

Doctors and nurses who have been exposed to working with the physiotherapists understand their roles (Barrett & Terry, 2018), however, Physiotherapy has the duty to educate others HCW about the EDP, hence the HCW (95%) in this indicated the need of the staff to be educated about the role of physiotherapist in ED (figure 4.29). in the study. There are common roles of doctors and nurses that are similar with the EDP. They are to Identify the need and referrals to physiotherapy, attend to critical ill patient, screen, and investigate, provide early intervention & acute care and patient discharge. Other roles include monitoring of vitals on ventilated patients, resuscitation skills to stabilize critical patients, reducing bed stay & increasing bed availability. Other HCW mentioned patient care, counselling, health education, promotion and preventative role. The Emergency Department requires collaboration among multidisciplinary teams such as the physiotherapist, doctors, nurses and others (National Standard for Emergency Department, 2012).

Establishment of Emergency Department Physiotherapy is starting to grow (Taubert, Clare, Burns, Elizabeth, Ward & Bassett, 2022) and its growth was considered as well by the participants of the study thinking is growing in order to reduce patients' workloads, waiting time and long stay of patients at ED. The recognition of growing profession and the need of Physiotherapy in ED with its positive impact in ED are other factors EDP is being put into practice. Offering hand to other ED staff with the workload, marketing of the profession and the good outcomes post early intervention to patients' facts are also considered as the influencing factors for implementation of EDP. The result of this study shows that the participants were positive on inclusion of the EDP in the emergency department table (4.7).

This study found that healthcare workers (nurses and doctors) 50% believes that the presence of the EDP could improve on decreasing patient waiting time & improve patient experience of care, facilitate early intervention and bettering diagnoses, prevent inappropriate referral and strengthen early referral, save time and hospital resources and reduce unnecessary porter movement and saving of beds by reducing admission rate (table 4.17 & table 2.3.1). The findings of the study correlate with the study done by Gill (2013) about improvement on waiting and shortening the length of stay. The study further indicated that the strengthening of MDT holistic approach to better and improve treatment outcome, lesser complication and improve quality and patience of care, issuing of assistive devices, review of structure, staff establishment and Physiotherapist allocation to ED, strengthening tracking and follow ups were mentioned as other factors that can impact EDP positively.

5.5 KNOWLEDGE AND PERCEPTION OF PHYSIOTHERAPISTS ON THEIR ROLE IN EMERGENCY DEPARTMENT.

According to the study done by Rosalie & Louis (2018) it shows that others healthcare workers are not aware of EDP but in this study 24% of the physiotherapists were not aware of their service they offer in ED. This shows that there is a need of awareness and education about EDP to other healthcare workers (Rosalie & Louis, 2018) should include the physiotherapists that do not know about EDP. However, 76% of physiotherapists reported they have professional interaction with the Emergency Department (figure 4.31) and 76% have heard of EDP before (figure 4.32). Provision of training sessions such as continuous professional development activities on EDP to physiotherapists crucial (Dunford, 2011). Eighty-three percentages (83%) of the physiotherapist reported they were never trained nor exposed in EDP and 88% of them confirmed their need in EDP training (table 4.26). The percentage of untrained physiotherapy is higher since they are responsible professionals on EDP.

Restricted availability of EDP is considered as a negative impact on service delivery (Ferreira et al., 2018). This shows that in Gauteng province the limited EDP services are having negative impact on service delivery because 67% of Physiotherapists indicated no placement of physiotherapists in ED at their hospitals (figure 4.34). Hence 81% of them reported the essential of the services it offers (table 4.26). Inclusion of placement of physiotherapist students in EDP could assist in the workload and gaining exposure in ED (Dunford, Reeve & Larmer, 2011). There is a need of full-time placement of physiotherapist in ED (Fischer (2020). The placement of physiotherapist in ED may increase the referral of patients to the EDP and this was seen in the study done in Oxford at John Radcliffe Hospital (Greensitt , Bowen , Singh ,Vaziri , Bambarvajane , Price & Rajwani, 2019). This study shows that less than half of the patients(47%) were referred to EDP (figure 4.36).

Half of the physiotherapists (50%) indicated the role of Physiotherapy in ED being different from the physiotherapist department (general), whereas 5% could not differentiate their role in these two settings (figure 4.37). In Emergency, Physiotherapy attends to emergency cases and cases that needs urgent stabilization and intervention (Farrell, 2014). Physiotherapists practice their skills in trauma, acute respiratory, orthopaedics, paediatrics and some mental cases. Physiotherapy in the Emergency Department is aimed at saving lives where our concern is maintaining a clear airway, good saturation among other things patient must be stabilized (Lebec et al., 2010). Physiotherapy offers basic and advanced life support skills, advance paediatric life support, advance cardiac life support and Cardiopulmonary skills. Physiotherapy in the ED is very vital because it is alleviating the symptoms patient is presenting with, which helps to avoid hospitalization and a quick recovery (Lefmann &Crane, 2016). Reduction in admission rate was

proven in the study conducted by Greensit (2019) and others, whereby over a short period of time beds were saves saving costs (Greensitt , Bowen , Singh ,Vaziri , Bambarvajane , Price & Rajwani, 2019).

As the EDP is growing, physiotherapists must have required skills for safe and effective strategies for a good service in the ED (Dunford, 2011). The skills that were identified in the study for EDP, requires a physiotherapist to be very prompt in decision making when it comes to the treatment plan of the patient because in ED every minute counts for the condition of the patient. It was further reported that there is a need of advanced trauma life support skills and chest physiotherapy skills where they perform urgent clearance of secretion to improve vitals & save lives (Scott, 2014). They are trained in first aid and are required to have proper assessment skills, the ability to screen acute patients, give acute care and response time is of essence. They are required to have basic knowledge of regular medicines used at the ED and their side effects.

There are common roles that physiotherapist have with that of Emergency Department Physiotherapy (EDP). Majority of the physiotherapist (31%) reported their role of curative care, giving holistic patients' treatment such as exercises, strapping and about 26% of them reported on respiratory and chest physiotherapy role (table 4.21). However, some were unsure, and others perceived the same role played in EDP and Physiotherapy Department (general). The other roles that were mentioned included support service (request of x-rays), primary screening and assessment of patients offering their cardiovascular, ICU, management skills and resuscitation skills. The effectiveness of the role was also reflected in several studies (Scott, 2014; Ferreira, Traeger & Maher, 2019; Fleming-McDonnell) and this concurs with the findings of the study when the healthcare workers believed the EDP may have efficiency and effective influence on ED (table 4.15). Their services reduce the length of stay, improve patient quality of life and offer health education, promotion and preventive role and the discharge of the patient. They are part of multidisciplinary (MDT) and work among the referral system and issuing of assistive devices. Physiotherapists in the study recommended an advocacy of EDP to be of 24 hours service a day.

In Australia and United state, the EDP services were initiated wanting to practice being independent first contact clinicians aiming at reducing patients' waiting time and help with patient's workload directed to the doctors (Farrell, 2014). Their reason behind the initiatives goes together with the findings of this study. Physiotherapists believe the start of putting EDP in practice is after the awareness on scope of practice at ED as they play pivotal role on reduction of patient hospital stay, acute early intervention and also to the benefit of the patients, decrease patient waiting time and save costs and reduce porters' movements from ED to Physiotherapy Department. Their profession makes a difference and has the potential of preventing further complications and reduce motility. The other reasons they thought it could be because of learning from the other

countries like Canada where the impact of physiotherapy was noticed globally. The practice holistic MDT approach and contribute to reduction of litigation.

Different thoughts were expressed by physiotherapists on how the EDP may influence the efficiency of effectiveness of EDP in their hospitals. Prevention of recurrence / complication, cases might be attended early, early identification through needs analysis, screening & triaging of patients, Decrease length of hospital stay at ED; It will decrease waiting times and provide a holistic approach & improve PEC, Early and safe mobilization (exercises) of chest, lower limb fractures that were managed conservatively, Bed availability and utilization, With soft tissue injury can play a big role and reduce delays in treatment and queue waiting for the doctor, fewer admissions as patients will be discharged at ED, through early intervention we contribute to unnecessary admissions, correct diagnosis and early ambulatory of patients. Through screening or triaging to reduce unnecessary delays of patients' treatment waiting for the doctor (table 4.23). Contribute to better treatment outcomes, Improve turn over & patient outcomes. Patient health outcomes might be improved because management will have started promptly, there will be an improved hospital stay, reduce no. of patient admissions at the hospital, improve quality of life, provision of home advises before patients get discharged in line with Physiotherapy standards, easy interaction with the family members.

This study reflects physiotherapists believing that the availability of ED will improve the screening process, offers early intervention to patients with chest problems and it could strengthen the referral system, and this was also proven in the study by Barrett &Terry (2018) whereby the presence of ED resulted in increased referrals. They further considered the service in improving staff workforce, patients' management time and waiting time at the ED (Gill. 2013, Scott, 2014). They as well-expressed better outcome and quality patients' services because of EDP implementation. ED was considered as a service that could save hospital and patients resources and unnecessary transport of patients to Physiotherapy department. They perceived positive outcome of EDP such as the review of structure, staff establishment and physiotherapist allocation to ED as it is believed enough designed staff with the inclusion of physiotherapist can meet the demand of the services (Schofield, 2009).

The availability of EDP is recommended for full day service and seven days service including weekends and holidays (Ferreirar, et al. 2019). The variability of the service can improve the awareness and health education on the role of physiotherapist, and this goes with the recommendations by Fleming-McDonnell, Czuppon, Deusinger (2010) of physiotherapists to educate other healthcare workers on their role in ED addressing the awareness. When physiotherapists plays their role in the ED as the primary contact clinician, it helps in reducing the patient workload to the doctors and the nurses(Scott, 2014) and enhance the collaboration

and consultations among themselves producing multidisciplinary holistic acute care to the patient (Ferreira et al., 2018; Greensitt, Bowen, Singh, Vaziri, Bambarvajane, Price & Rajwani, 2019; Jibuike, Paul-Taylor, Maulvi, Richmond, Fairclough,2003). EDP improves provision of assistive devices service in and patient experience of care (Lebec et al., 2010). Physiotherapist that participated in the study believe EDP helps in preventing unnecessary admissions of patients to the hospital, improve on bed availability and the treatment space (Lefmann, Crane, 2016) and prevent re-admission of patients to the ED (Barrett &Terry, 2018). The use of extended scope of physiotherapy has not been widely considered internationally however there is evidence for clinical effectiveness and cost efficiencies in ED (McClellan,Cramp, Powell & Benger, 2010).

Recommendations forwarded by the participants in the study included the benchmark in other countries on implementation of Emergency Department Physiotherapy, use of policies and regulations. They further mentioned that few referrals are received because most of the healthcare workers do not know about and education/awareness must be provided. Managers in different hospitals may not be allocating physiotherapists in ED because they believe it is not a priority area as there is shortage of staff. It was recommended that Universities review their curriculum and consider training of physiotherapy students in Emergency Department as a separate clinical block. Physiotherapists at the Physiotherapy Department should not be overburdened by work from the ED, there should be designated physiotherapist at the emergency facility. Heads and seniors need to advocate for Physiotherapy structure in casualty looking at NHI.

5.6 **CONCLUSION**

This chapter provided a discussion of the findings in relation to the objectives of the study. The discussion focused on determining the current staffing composition in Gauteng ED; determining the need for physiotherapist placement in ED; exploring the knowledge and perceptions of ED healthcare workers regarding the role of EDP; and determining the knowledge and perceptions of physiotherapists on their role in ED.

The following chapter outlines the study's limitations, provides recommendations and contributions, and concludes the research.

CHAPTER 6

6.1 LIMITATION OF THE STUDY

Several limitations were encountered during the study:

Staff attitudes posed a challenge, as some participants preferred printed questionnaires and chose not to participate, which contributed to a low response rate.

The transition of hospital systems from manual to electronic record-keeping affected the ability to retrieve many records needed for review.

Despite the use of multiple platforms and strategies to disseminate the REDCap questionnaire link—including weekly reminders and two extensions of the data collection period—participant response remained poor.

A significant number of open-ended questions for Objectives 1, 3, and 4 may have contributed to incomplete responses, which were excluded from the final analysis.

Unavailability of the similar study in South Africa for provision of concrete ideas on the area of this research study.

6.2 RECOMMENDATION

Recommendations based on the study's findings and limitations include:

Further research should be conducted across other provinces to assess healthcare workers' (HCWs) awareness of the broader roles of physiotherapy in Emergency Department Physiotherapy (EDP). This will help increase acceptance and understanding of EDP's scope.

Physiotherapy department managers should advocate for the inclusion of EDP within hospital structures, especially in preparation for the National Health Insurance (NHI) rollout and begin incorporating ED coverage in staff allocation rosters.

The Health Professions Council of South Africa (HPCSA) is encouraged to review the minimum standards for physiotherapy training to include EDP, in response to the growing demand for physiotherapy services in emergency settings.

Universities should revise their undergraduate physiotherapy training curriculum to include a dedicated EDP clinical block. This would provide students with practical exposure to the ED environment during their studies.

Physiotherapists have a responsibility to educate other healthcare workers about the scope and value of EDP. In this study, 95% of ED managers and HCWs indicated a need for staff education and increased awareness about the physiotherapy role in the ED.

The establishment of EDP units is recommended to provide HCWs with a clear understanding of physiotherapy's contribution within emergency care settings.

Benchmarking against international best practices should be pursued to guide the implementation of EDP in South Africa, supported by appropriate policies and regulatory frameworks.

Further investigation is needed into the provision of after-hours and weekend physiotherapy services, as well as the preparedness of physiotherapists to deliver EDP effectively.

Ensure the availability of electronic devices to facilitate the completion of online questionnaires in future studies, as access issues may have limited participation.

6.3 CONTRIBUTIONS OF THE STUDY (STUDY SIGNIFICANCE).

This study is the first of its kind in South Africa to explore the knowledge and perceptions of ED HCWs regarding EDP. It provides valuable baseline data on the staffing composition of EDs in Gauteng, including the limited presence of physiotherapists, which highlights gaps in workforce planning and allocation. The findings contribute to a better understanding of the perceived need, readiness, and role of physiotherapists within emergency settings, from both physiotherapists and other ED professionals.

The study identifies key areas for policy development, training reform, and inter-professional collaboration, informing strategies for more integrated physiotherapy services in ED.

Based on the key challenges identified (post absence, job description gaps, training needs, and poor interprofessional awareness) it may motivate Gauteng Department of Health (GDoH) to include physiotherapist posts in the organogram with the intention of creating posts for EDP in all hospitals category or levels care.

Outlined results of incompetence physiotherapist in ED skills may be an eye opener for the department of high educations to consider under / postgraduates training in enhancing EDP skills.

The study's findings have direct implications for improving patient service delivery in EDs. By demonstrating the broad clinical utility of physiotherapists beyond musculoskeletal care, and identifying system-level barriers to their integration, the study supports reforms that would enable earlier intervention, improve patient flow, reduce complications, and promote equitable access to essential rehabilitative services. Strengthening EDP can thus enhance both the quality and efficiency of emergency care delivery in South Africa.

It supports the case for advocacy and awareness efforts to improve the visibility and understanding of physiotherapy's role in emergency care among HCW and hospital administrators.

The study also lays the groundwork for future research and benchmarking, both locally and internationally, in the development and implementation of EDP.

6.4 CONCLUSION OF THE STUDY.

This study explored the knowledge and perceptions of HCWs towards EDP. Through the participation of ED managers, doctors, nurses, and physiotherapists from the GDoH, the study achieved its objectives: To determine the current staffing composition in four hospitals (one per level of care) in Gauteng ED; to determine the knowledge and perceptions of ED healthcare workers (doctors and nurses) regarding the role of EDP; to determine the knowledge and perceptions of physiotherapists regarding their role in ED; and to conduct a record review to determine the need for physiotherapist placement in ED.

The findings revealed that the ED in Gauteng province is comprised of the doctors, nurses, clinical support and therapeutic healthcare workers and the support staff however there are few placements of physiotherapists in the ED, hence in some of the hospitals there are no placement at all. The record review further demonstrated that many cases seen in the ED could benefit from Physiotherapy intervention, yet referrals are either delayed or not made at all.

The study recommends the establishment of formal EDP services, including review of structure and the creation of permanent Physiotherapy posts within ED. This would significantly enhance patient care outcomes, particularly in the acute phase of treatment. It is therefore imperative that Physiotherapy Department heads begin to allocate staff to EDs and advocate for their integration into the multidisciplinary team (MDT), particularly considering the National Health Insurance (NHI) implementation.

Although physiotherapists possess the necessary skills to operate in emergency settings, the study found that many HCWs—along with some physiotherapists—are unaware of the scope and value of EDP. Thus, awareness and education initiatives are critical to promoting a stronger MDT approach, improving case management, streamlining referrals and discharges, and enhancing overall patient care.

The study further recommends that universities revise their undergraduate Physiotherapy curriculum to include EDP as a dedicated clinical block, or alternatively, introduce postgraduate courses to develop EDP competencies for those interested.

As this is the first known study in South Africa—and possibly internationally—to examine ED healthcare workers' knowledge and perceptions of EDP, its findings provide valuable baseline insights. While the results cannot be compared with prior studies, the data highlight important trends and point to critical gaps in practice and policy.

Finally, further research across all provinces is recommended to assess the awareness and understanding of EDP among all healthcare workers—not just doctors and nurses. This will help expand the acceptance and integration of physiotherapy within EDs across South Africa.

In conclusion, there is a clear need for physiotherapist placement in EDs, and both HCWs & physiotherapists recognize the value & importance of EDP in improving emergency care services.

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APPENDIX A: PLAGIARISM DECLARATION

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

FACULTY OF HEALTH SCIENCES

PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Mosiamo Munzhedzi Edward (Student number: 2515277) am a student registered for the degree of Masters of Science in Physiotherapy in the academic year 2024.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.
- I have included as an appendix a report from "Turnitin" (or other approved plagiarism detection) software indicating the level of plagiarism in my research document.

Signature:  Date: 22/07/2025

APPENDIX B : TURNITIN DIGITAL RECEIPT RESEARCH REPORT

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APPENDIX C : HEALTHCARE WORKERS AND RECORD REVIEW QUESTIONAIRE



HEALTHCARE WORKERS QUESTIONNAIRE (ED MANAGERS)

Please answer the following questions by crossing (x) the relevant block or writing down your answer in the space provided

Profession : _____

Age : _____

Gender Female Male

Name of the hospital: _____

Hospital category:

Central	Tertiary	Regional	District

How long have you been working in your profession? _____

Are you working/ have you worked in the emergency? Yes /no

If yes, for how long? _____

Do you have any professional interactions with the Emergency Department (regular or occasionally)?

Yes / No. if yes please describe or comment on this

_____

_____

Have you ever heard of emergency department physiotherapy before? Yes/no

Is there any physiotherapist placed/allocated/dedicated at the Emergency Department? Yes/No

If no, do you think there is a need of physiotherapist placement at emergency department?

_____

_____

In your experience have you been in a situation where the patient needed Physiotherapy intervention at the emergency department? Yes/no

If yes, was the patient seen at the emergency department or referred to the Physiotherapy Department?

_____

_____

What do you think the roles of physiotherapist are in the Emergency Department?

_____

_____

How do you think physiotherapy in the Emergency Department is different from the Physiotherapy in general? What skills or attributes are needed in the Emergency Department?

_____

_____

What does your role have in common with that of Emergency Department Physiotherapy?

_____

_____

Do you think there is a need of staff to be educated about the role of physiotherapist in emergency department?

_____

_____

Why do you think physiotherapy is starting to be used by the hospital emergency department?

_____

_____

How do you think emergency department physiotherapy may influence the efficiency or effectiveness of the emergency department in your hospital?

_____

_____

How could emergency department physiotherapy improve the emergency department system?

_____

_____

Do you have any comments regarding Emergency Department physiotherapy?

_____

_____

Additional questions for an emergency department manager only

Please indicate the current staffing composition in the Emergency Department under the following heading

Total number of doctors: _____

Total number of nurses: _____

If there is any other healthcare worker not included, please indicate:

_____

_____

_____

FACULTY OF HEALTH SCIENCES

RECORD REVIEW DATA CAPTURING FOR AN EMERGENCY DEPARMENT

Please answer the following questions by crossing (x) the relevant block or writing down your answer in the space provided

Name of the hospital: _____

Hospital category:

Central	Tertiary	Regional	District

Type of condition / diagnosis

_____

_____

_____

Indicate if the assistive technology was needed for the condition / diagnosis indicated above.	Yes	No

If yes above; kindly indicate which one was recorded in the patient record file

_____

Was the patient referred for physiotherapy service?	Yes	No

If your answer is yes above, was the patient attended at emergency department or physiotherapy department. Kindly specify: _____

Indicate the age and gender of patient attended by physiotherapist as recorded in patient record file:

Age: _____, Gender: _____

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HEALTHCARE WORKERS QUESTIONNAIRE (NURSES AND DOCTORS)

Please answer the following questions by crossing (x) the relevant block or writing down your answer in the space provided

Profession : _____

Age : _____

Gender Female Male

Name of the hospital: _____

Hospital category:

Central	Tertiary	Regional	District

How long have you been working in your profession? _____

Are you working/ have you worked in the emergency? Yes /no

If yes, for how long? _____

Do you have any professional interactions with the emergency department (regular or occasionally)?

Yes / No. if yes please describe or comment on this

_____

_____

Have you ever heard of emergency department physiotherapy before? Yes/no

Is there any physiotherapist placed/allocated/dedicated at the emergency department? Yes/ No

If no, do you think there is a need of physiotherapist placement at emergency department?

_____

_____

In your experience have you been in a situation where the patient needed physiotherapy intervention at the Emergency Department? Yes/no

If yes, was the patient seen at the emergency department or referred to the Physiotherapy department?

_____

_____

What do you think the roles of physiotherapist are in the Emergency Department?

_____

_____

How do you think physiotherapy in the Emergency Department is different from the Physiotherapy in general? What skills or attributes are needed in the Emergency Department?

_____

_____

What does your role have in common with that of Emergency Department Physiotherapy?

_____

_____

Do you think there is a need of staff to be educated about the role of physiotherapist in Emergency Department?

_____

_____

Why do you think physiotherapy is starting to be used by the hospital Emergency Department?

_____

_____

How do you think Emergency Department Physiotherapy may influence the efficiency or effectiveness of the emergency department in your hospital?

_____

_____

How could Emergency Department Physiotherapy improve the Emergency Department system?

_____

_____

Do you have any comments regarding Emergency Department Physiotherapy?

_____

_____

FACULTY OF HEALTH SCIENCES

HEALTHCARE WORKER QUESTIONNAIRE (PHYSIOTHERAPISTS)

Please answer the following questions by crossing (x) the relevant block or writing down your answer in the space provided

Profession : _____

Age : _____

Gender Female Male

Name of the hospital: _____

Hospital category:

Central	Tertiary	Regional	District

How long have you been working in your profession? _____

Are you working /have you worked in the emergency? Yes / No

If yes, for how long? _____

Do you have any professional interactions with the emergency department (regular or occasionally)? Yes/ No. if yes please describe or comment on this

_____

_____

Have you ever heard of emergency department physiotherapy before? Yes/no

Is there any physiotherapist placed/ allocated/dedicated at the emergency department? Yes/No

If not, do you think there is a need of physiotherapist placement at Emergency Department?

_____

_____

In your experience have you been in a situation where the patient needed Physiotherapy intervention at the emergency department? Yes/ No

If yes, was the patient seen at the emergency department or referred to the Physiotherapy Department?

_____

_____

What do you think the roles of physiotherapist are in the Emergency Department?

_____

_____

_____

How do you think physiotherapy in the emergency department is different from the Physiotherapy in general? What skills or attributes are needed in the Emergency Department?

_____

_____
_____

What does your role have in common with that of Emergency Department Physiotherapy?

_____
_____

Do you think there is a need of staff to be educated about the role of physiotherapist in Emergency Department?

_____
_____

Why do you think physiotherapy is starting to be used by the hospital Emergency Department?

_____
_____

How do you think Emergency Department Physiotherapy may influence the efficiency or effectiveness of the Emergency Department in your hospital?

_____
_____

How could emergency department physiotherapy improve the Emergency Department system?

_____
_____

Do you have any comments regarding Emergency Department Physiotherapy?

_____
_____

During your study, were you trained/got exposure working in the Emergency Department? Yes/no

Since your employment, have you been exposed to emergency Department Physiotherapy? Yes/No

Do you feel fully equipped /competent in working in the Emergency Department physiotherapy? Yes/ No

If no, may you please

elaborate_____

_____

Would you like to be trained in ED? Yes/no

Have you ever been placed/allocated/dedicated to the Emergency Department? Yes/ No

Have you ever received a referral from the Emergency Department? Yes/ No

If yes, did you attend to the patient at the Emergency Department / Physiotherapy?

APPENDIX D :HUMAN RESEARCH ETHICS COMMITTEE (HREC) (MEDICAL M2211112)

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG	HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

Office of the Deputy Vice-Chancellor (Research and Innovation)

TO: Mr E Mosiamo
School of Therapeutic Sciences
Department of Physiotherapy
Medical School
University

E-mail: 2515277@students.wits.ac.za

CC: Supervisor: Professor V Ntsiea
<Veronica.Ntsiea@wits.ac.za>
and <HREC-Medical Research Office@wits.ac.za>

FROM: Mr Iain Burns
Human Research Ethics Committee (Medical)
Tel: 011 717 1252

E-mail: Iain.Burns@wits.ac.za

DATE: 2023/04/14

REF: R14/49

PROTOCOL NO: **M2211112** (This is your ethics application reference number. Please quote it in all enquiries, oral or written, relating to this study.)

PROJECT TITLE: *Perception and knowledge of healthcare workers towards "emergency department physiotherapy"*

Please find attached the Clearance Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to Government funding of the University.

MSWorks2000/Iain0007/Clearscan.wps

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R49 Mr E Mosiamo

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M2211112

NAME: (Principal Investigator)	Mr E Mosiamo
DEPARTMENT:	School of Therapeutic Sciences Department of Physiotherapy Medical School University
PROJECT TITLE:	*Perception and knowledge of healthcare workers towards "emergency department physiotherapy"*
DATE CONSIDERED:	2022/11/25
DECISION:	Approved unconditionally
CONDITIONS:	This approval applies only to the study sites listed in Annex 1 attached Further sites may be added on presentation of evidence of management approval to the HREC (Med)
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Professor V Ntsiea
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2023/04/14

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. **I agree to submit a yearly progress report**. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in **November** and therefore reports and re-certification will be due in the month of **November** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator

14/05/2023
Date

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG	HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

18 April 2024

Mr E Mosiamo
School of Therapeutic Sciences
Department of Physiotherapy
Medical School
University

Sent by e-mail to: 2515277@students.wits.ac.za

Dear Mr Mosiamo

Protocol Ref No: M2211112
Protocol Title: *Perception and knowledge of healthcare workers towards emergency department physiotherapy*
Principal Investigator: Mr E Mosiamo

Thank you for your e-mail of 10 April 2024.

I confirm that we have noted and approve of your proposal to change the dates of the records you propose to review to those in the period 1 January-31 December 2023.

Thank you for keeping us informed.

Yours Sincerely

J. Burns

.....
Mr I Burns, for the Human Research Ethics Committee (Medical)

Annex 1

Protocol No. M22/11/112 **Mr E Mosiamo**
Study sites approved under this Clearance Certificate

Hospital sites	Date of HREC (Med) Approval
Bertha Gxowa Hospital	2023/08/10
Charlotte Maxeke Johannesburg Academic Hospital	2023/04/14
Helen Joseph Hospital	2023/08/02
Tambo Memorial Hospital	2023/08/10

Professor P Ruff
Chairperson: HREC (Medical)
University of the Witwatersrand, Johannesburg

Date: 10 August 2023

APPENDIX E :STUDY INFORMATION SHEET

WITS UNIVERSITY

STUDY INFORMATION SHEET

Study title: Perception and knowledge of healthcare workers towards "emergency department physiotherapy"

Thank you for taking an interest in my research:

I, Edward Mosiamo (MSc in Physiotherapy, Wits) currently working at Charlotte Maxeke Johannesburg Academic Hospital, Physiotherapy Department and my Supervisor, Prof Veronica Ntsiea, from Wits Faculty of Health sciences – Physiotherapy Department, are doing research on Perception and knowledge of healthcare workers towards "emergency department physiotherapy". In this study we want / **aim to explore the knowledge and perception of healthcare workers towards emergency department physiotherapy (Emergency Department Physiotherapy).**

I am inviting you to take part in a research study. Please take time to read and understand the following information carefully. Ask questions if anything you read is not clear or would like to more information. **Please note that by participating in the study it will be taken as consent given. To complete the questionnaire will take you no longer than 10 minutes of your time.**

What is involved in the study.
Objective

- To determine current staffing composition in Gauteng Emergency Departments.
- To determine the need of physiotherapists' placement in Emergency Department.
- To determine the knowledge and perception of Emergency Department healthcare workers on the role of Emergency Department Physiotherapy.
- To determine the knowledge and perception of Physiotherapists on their role in Emergency Department.

The study is a quantitative with open ended questions, the study will involve emergency department healthcare workers (nurses and doctors) and physiotherapist in Gauteng public hospital with emergency department.
We are anticipating to start with data collection on or before March 2023 to June 2023 and complete study on or before December 2023.
A link to an electronic questionnaire generated within RedCap will be shared to emergency department managers, Nurses, doctors, physiotherapist and through medical and social media.

where link generated within RedCap can reach them in public sector. Such as WhatsApp group platforms targeting public service. Please note, this is not a clinical trial

Risks of being involved in the study.

The researcher will also give the fullest possible scope to protect participant/s own interest.

What are benefits of being in the study:

There is no direct benefit to the Participant. However, at a longer-term objective there is possibility or ability of the questionnaire to address the aims, questions and objectives shall provide the information on the status of placement of physiotherapists, knowing the expectations, impact and knowledge on healthcare workers in Emergency Department. The results may help in placing physiotherapists at ED. The placement may improve the ED service at hospitals in Gauteng province.

Participation in the study,

Participation in the study is completely voluntarily and free of will, and you can quit anytime they you wish. Refusal to participate will involve no penalty or loss of benefits to which the Participant is otherwise entitled. that there is no requirement to provide a reason for withdrawing and any data collected on such a person will in default be destroyed, unless the Participant specifically consents to its retention. You will be given pertinent information on the study while involved in the project and after the results are available.

Reimbursements for "out of pocket" expenses There is no payment or cost associated with participation in the study.

Confidentiality:

Anonymity and confidentiality. Normally personal information will be treated in the strictest confidence not publicly divulged and data collected will be kept safe, confidential and will be used strictly for the purpose of the study only. The data will only be available to me (Principal Investigator - PI) and my Supervisor, as I am a postgraduate student.

The only exceptions - and all of them are rare - would normally be:

1. personal information may be disclosed if required by law
2. the Human Research Ethics Committees of the University may exceptionally require personal data to respond to a formal complaint, or for a compliance audit.

All data collected in the course of the study will be securely retained for two (2) years, if a scientific publication arises from the study and six (6) years, if there is no publication. Thereafter it will be destroyed accordingly.

Expected outcome

The ability of the questionnaire to address the aims, questions and objectives shall provide the information on the status of placement of physiotherapists, knowing the expectations, impact and knowledge on healthcare workers in Emergency Department. The results may help in placing physiotherapists at ED. The placement may improve the emergency department service at hospitals in Gauteng province.

Who has reviewed the study

This study has been looked at by Wits faculty of Health Sciences postgraduate assessor group.

Who is sponsoring the study

The study is sponsored by the principal investigator (researcher).

Who can I contact with questions or if I want to be involved in the study?

Principal Investigators: Mr. Edward Mosiamo, 2515277@students.wits.ac.za, +27827261019 / +27114884206. **Supervisor:** Prof Veronica Ntsiea, Veronica.Ntsiea@wits.ac.za, +27832972146 / +27117173702

Contact details of HREC administrator and chair – for reporting of complaints / problems. The following text is recommended:

This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee"). A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Thank you for reading this Study Information Sheet.

Date: November 2022

A**APPENDIX F :HOSPITAL CEO APPROVAL LETTERS.**

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CHARLOTTE MAXEKE JOHANNESBURG
ACADEMIC HOSPITAL

Enquiries: *Ms N. Mzila*
Email: Nolwazi.Mzila@gauteng.gov.za
Tel: *011 488 3365*
Ref: *1/7/2*
Date: 27 June 2023

GP_202211_017

Dear Edward Mosiamo

RE: FINAL APPROVAL OF STUDY

TITLE: PERCEPTION AND KNOWLEDGE OF HEALTHCARE WORKERS TOWARDS EMERGENCYDEPARTMENT PHYSIOTHERAPY

Permission is granted for you to conduct the above-mentioned study as described in your request provided:

1. Charlotte Maxeke Johannesburg Academic Hospital will not in any way incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall always be observed.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the HOD and Unit Manager or Sister in charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

Supported / ~~Not Supported~~

_____
Dr J. Punwasi
Clinical Director

Approved / ~~Not Approved~~

_____
Ms G. Bogoshi
Chief Executive Officer: CMJAH

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

Gauteng Department of Health
Helen Joseph Hospital
Enquiries: Dr. R. Ncha
Chief Executive Officer
Tel :(011) 489-0306/1087
Fax :(011) 726-5425
E mail: Relebohile Ncha@gauteng.gov.za
Date: 4 May 2023

Dear Edward Mosiamo

STUDY: : Perception and knowledge of healthcare workers towards "emergency department physiotherapy.

RESEARCHERS: Edward Mosiamo

GP_202211_017

The above the study was discussed at the Research Committee meeting. We recommend that permission be granted for Helen Joseph Hospital to be used as a site for the above research,
The researcher is expected to the following:

- Upon completion of the study, copy thereof should be submitted to Helen Joseph Hospital.
- It is the researcher's duty to collect the data from the relevant department after the Research Committee approved the study.

Please liaise with the HOD and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the feedback of your study on completion of the research.

Thank you:

Dr. M.D Mukansi
Helen Joseph Hospital
Research Chairperson

Approved

Dr. R. Ncha
Helen Joseph Hospital
CHIEF EXECUTIVE OFFICER
DATE: 11/05/23

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE CEO
Mr Z K O Ndabula

Tambo Memorial Hospital
: (011) 898-8317
: (011) 892-0358
: Zenzo.Ndabula2@gauteng.gov.za

MEMO

To	:	Mr Edward Mosiamo
From	:	Mr ZKO Ndabula Chief Executive Officer
Date	:	27 July 2023
Subject	:	**Request to Carry Out Research at Tambo Memorial Hospital: GP_202211_017**

This serves to grant permission to Mr Edward Mosiamo to carry out a research study: *Perception and knowledge of healthcare workers towards "Emergency Department Physiotherapy"* at Tambo Memorial Hospital. This permission is granted in light of improving the skill capacity of the Gauteng Department of Health.

The permission is granted in line with the code of ethics or research.

The information of the Gauteng Health Department will be used for the purpose of research and it will be utilized discreetly and confidentiality will be maintained at all times.

The permission is granted in good faith with the notion and understanding that the abovementioned clause is upheld.

Furthermore, there should be no financial implication to the hospital.

The collection of data will be the responsibility of the researcher.

Yours Sincerely,

Mr Z K O Ndabula
Chief Executive Officer

Tambo Memorial Hospital
Private Bag X2, Boksburg 1460
Tel No: 011 898-8000

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

EKURHULENI HEALTH DISTRIC
BERTHA GXOWA HOSPITA
OFFICE OF THE ACTING CLINICA
MANAGER
Enquiries: Dr. RM. Thoka
Tel no: 011 278 - 7600
Email: Rufus.Thoka@gauteng.gov.za

To: Edward Mosiamo

PERCEPTION AND KNOWLEDGE OF HEALTHCARE WORKERS TOWARDS EMERGENCYDEPARTMENT PHYSIOTHAPY

Permission is hereby granted for you to conduct the above-mentioned study as described in your request provided:

1. Bertha Gxowa Hospital will not in any way incur or inherit costs as a result of the said study.
2. Your study shall not disrupt services at the study sites.
3. Strict confidentiality shall always be observed.
4. Informed consent shall be solicited from patients participating in your study.

Please liaise with the HOD and Unit Manager or Sister in Charge to agree on the dates and time that would suit all parties.

Kindly forward this office with the results of your study on completion of the research.

Supported / Not supported / Supported with amendments

Dr. MR Thoka
Clinical Manager
Date: 25/07/2023

Approved / Not approved / Approved with amendments

Ms. LP Khumalo
Chief Executive Officer
Date: 01/08/2023

APPENDIX G: WITS PHYSIOTHERAPY HOD SUPPORT LETTER

Department of Physiotherapy

Faculty of Health Sciences, Department of Physiotherapy · Private Bag 3, Wits, 2050, South Africa
Tel: +27 11 717 3716 · E-mail: Benita.Olivier@wits.ac.za · http://www.wits.ac.za/staff/academic-a-z-listing/benitaolivier/about/

WITS UNIVERSITY

2021-01-07

To whom it may concern

RE: LETTER OF SUPPORT - MOSIAMO EDWARD

The Physiotherapy Department supports the application of Mosiamo Edward for the degree of MSc Physiotherapy by Dissertation. Prof Veronica Ntsiea has been allocated as supervisor of this student.

Feel free to contact me should more information be required.

Keep well,



Benita Olivier (PhD)
Postgraduate Coordinator
Department of Physiotherapy
University of Witwatersrand

APPENDIX H :WITS POSTGRADUATE ASSESSOR GROUP LETTER

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3 Wits, 2050
Fax: 027117172119
Tel: 02711 7172076

Reference: Mrs Sandra Benn
E-mail: sandra.benn@wits.ac.za

19 October 2022
Person No: 2515277
PAG

Mr E Mosiamo
Unit 1, 4423 Majaneng Parktown Section, Unit 1
Temba
Majaneng
0402
South Africa

Dear Mr Edward Mosiamo

Master of Science in Physiotherapy: Approval of Title

We have pleasure in advising that your proposal entitled *Perception and knowledge of healthcare workers towards "emergency department physiotherapy"* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences