

HEALTH PROMOTION FOR NON-COMMUNICABLE DISEASES:
PERCEPTIONS OF PHYSIOTHERAPY AND GENERAL PRACTITIONERS
IN THE SOUTHERN PROVINCE OF ZAMBIA

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STUDENT NUMBER



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health promotion

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cost effective

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ABSTRACT

The increasing spread of non-communicable diseases (NCDs), especially in the low- and middle-income countries calls for a more holistic and cost-effective measure to reduce its impact on society. One of the methods advocated for achieving this is health promotion. The Zambian government has called for a shift from curative to preventive management of diseases, including NCDs. Therefore, health professionals are being called upon to redirect their health care management approaches towards preventative care, incorporating health promotion. The study aimed at examining the knowledge, attitudes, practices and perceptions of physiotherapy practitioners and general medical practitioners in Zambia regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia. A sequential explanatory mixed method approach was employed. The quantitative results revealed 98% knowledge of general medical practitioners compared to the 90.6% of the physiotherapists. For attitude, physiotherapists possessed a more positive attitude with 86% while general medical practitioners possessed 80%. Lastly, the study revealed that physiotherapists practise health promotion more than the general medical practitioners, with a 96.2% and 67.7% respectively. The logistic regression showed no significance between the knowledge and attitude scores of the two groups of health practitioners. However, the practice scores revealed that physiotherapists are four times more like to incorporate health promotion compared to the general medical doctors. Both types of health practitioners were of the view that health promotion is the way forward towards the fight against NCDs. However, a number of challenges were echoed that prevent the implementation of a holistic approach management in their practice. Most of the challenges prevalent in these hospitals are policy-based, hence the need for policy makers to intervene for the fight against NCDs.

DECLARATION

I hereby declare that “Health promotion for non-communicable diseases: perceptions of physiotherapy and general practitioners in the Southern Province of Zambia” is my own work and has not been submitted for examination of any degree at any university. All the sources I have used and quoted have thus been indicated and acknowledged through a reference list. Finally, this work has been prepared in accordance with the guidelines of the University of the Western Cape.

Musambo. M. Kapapa

Signature

May 2018

Witness

Signature



.....

Dr Tania Steyl (supervisor)

DEDICATION

To my parents Mr and Mrs Kapapa, your trust, care and support during this journey has been remarkable. You raised me to be able to aim higher and remain focused in whatever I do. Challenges came but you were there to give me the support I needed. To my family thank you for your support, it has really been remarkable.



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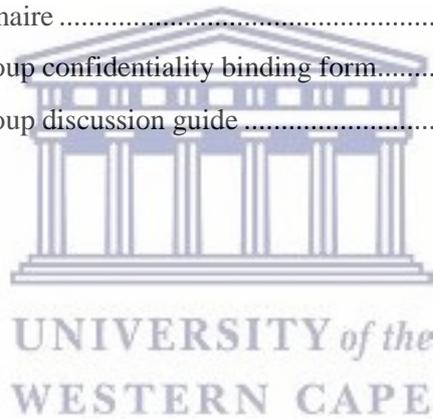
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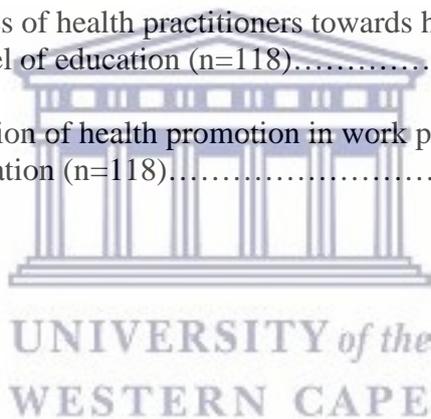
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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The tremendous global rise in non-communicable diseases (NCDs), predominantly heart disease, stroke, diabetes, cancers and chronic respiratory disease, have not spared the developing as well as the low- and middle-income countries (LMIC) (Terzic & Waldman, 2011). However, there is a fallacy which claims that NCDs are concentrated in developed countries. The fallacy that NCDs are predominant in the high-income countries is misleading as there is disproportionality with regards to LMICs. According to the World Health Organization (WHO, 2010), NCDs impose an equal or even greater burden in LMICs. About 44 percent of deaths in low-income countries are due to NCDs compared to 26 percent in the high-income countries (WHO, 2011). Furthermore, WHO (2011) indicates that at least 30 percent of the deaths in LMICs due to NCDs are said to occur amongst the population under 60 years who are at the peak of their economic productivity, compared to the 13 percent in high-income countries. It is estimated that by 2030 the rate of NCD-related deaths in low-income countries will increase eight times more than in high-income countries (Nikolic, 2011). Therefore, with respect to this, NCDs have become a public health challenge that needs immediate attention from LMICs and developing countries (Lloyd-Jones et al., 2010).

The rise in NCDs is not only a public challenge but it also puts a strain on the health system. Horton (2013) agrees that the increase in NCDs is beginning to pose austere challenges for the most productive age group as well as the health care systems in LMICs. Nevertheless, under-resourcefulness plays a critical role in LMICs, making it

difficult to adequately handle the long-life diseases later on. NCDs has devastating consequences on both social and economic aspects of the countries (Bloom et al., 2011). The Republic of Zambia is no exception to this challenge. Despite its endeavours to make progress in the health sector, Zambia is currently facing challenges of both communicable and non-communicable diseases, (WHO, 2012).

The increased number of lifestyle-oriented health problems affects people of all ages and classes (Hellings, 2013). Furthermore, these health problems have become the leading cause of morbidity and mortality globally. However, with regard to the increase in NCDs, it is worth noting that these conditions are principally due to preventable and modifiable risk factors. These include high blood cholesterol, high blood pressure, obesity, lack of physical exercises, unhealthy diet, tobacco use and inappropriate use of alcohol. Nonetheless Steyn, Fourie and Temple (2006) suggest that modifiable risk factors result in long-term disease progressions. These in turn lead to high mortality rates attributable to stroke, tobacco and nutrition-induced cancer as well as obstructive lung disease and heart attack. The WHO (2011) states that NCDs can either be prevented or if identified early, treated and managed in a way that reduces disability, financial and societal costs and increases healthy years of life. Subsequently, employing a healthy life style provides a cost-effective measure for the management of NCDs, thereby saving the most productive age group of the developing countries.

Despite the understanding that NCDs as well as their main causatives are preventable, this epidemic continues to be the main cause of death of most people in developing countries, including Zambia (WHO, 2014). The perpetual effect of NCDs, particularly on premature deaths and their high rate of morbidity, has earned them a place in the

sustainable development goals (United Nation General Assembly Resolution, 2015). Mendis (2010) argues that in order to attain the goal of reducing NCDs, studies conducted in different parts of the world have shown that preventative measures have positive results with the possibility of reducing up to 30% of cancer and 75% of cardiovascular diseases. Similarly, WHO (2011) concedes that health promotion and prevention measures such as the deterrence of smoking, reducing alcohol and controlling obesity are fundamental in the fight and reduction of the consequences of the personal and societal effects of NCDs. There is a need for public education and health promotion programmes to control the increase of NCDs.

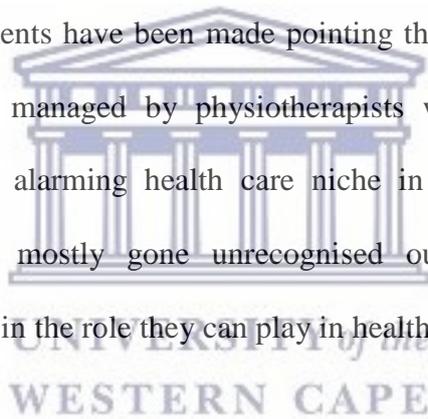
The Zambian government has made efforts to handle and manage NCDs as well as their risk factors (Ministry of Health [MOH], Non-communicable diseases strategic plan [NCDSP], (2013). However, as indicated in NCDSP (2013-2016), Zambia lacks a comprehensive and unified strategy to guide the fight against NCDs. Conversely, there is fragmentation in the approach adopted. This in turn leads to weak coordination and synchronisation among the different health sectors and departments that are supposed to be involved in the prevention, management and control of NCDs and their determinants.

The management of NCDs needs a crosscutting and multidisciplinary approach. All health sectors should work together for the benefit of the patient. Dean (2011) therefore calls upon all health care providers to take action in order to address concerns of NCDs among their patients and clients. According to Lall and Parbhakaran (2014) NCDs' management entails prolonged and regular contact of the patients with the health care centres and various medical professionals due to the chronic and lifelong need for

medication to manage them. Among the key players needed to achieve this goal are the general physicians (GPs) and the physiotherapy practitioners. This is because GPs attend to most of these patients during consultation. Field (2010) is of the opinion that consultation time provides an environment for early detection of the warning signs of various conditions. This in turn is expected to enhance the level of knowledge, thus making people aware of the potential risks. Physiotherapists on the other hand are the end receivers of these patients. They provide rehabilitative services so as to slow down the progression of the effects of NCDs which in turn reduces disability.

GPs are the primary medical practitioners and have a role to play in health promotion. According to the Australian Medical Association (AMA, 2010), a great level of respect and trustworthiness is commanded in the eyes of the public giving general practitioners (GPs) a greater opportunity of promoting good health and preventing NCDs. GPs also take a central role in coordinating the preventive care that patients may require from other health care professionals such as physiotherapists. In performing their roles in health promotion, GPs often employ the biomedical model of treatment. However, numerous researches conducted in the area of health promotion, including Kumar and Preetha (2012), contend that the single use of biomedical interventions is no longer sufficient to combat NCDs. Hence the emphasis is placed on adopting a more holistic health promotion approach. It is for this reason that experts, including physiotherapists and GPs, are called upon to redirect their attention from management of primary conditions to the prevention of lifestyle conditions through health promotion (World Confederation for Physiotherapists (WCPT), 2012).

Physiotherapy is regarded as a non-invasive intervention because of its focus on health education and exercises, which could go a long way in the management of NCDs (Dean, 2009). Physiotherapists also have the potential to effectively counsel patients with regard to lifestyle behaviour changes, independently or in collaboration with other team members (Geensel, van de Glind, Visscher & Achterberg, 2013). With this knowledge that they possess, physiotherapists are part of the public health initiatives who seek to prevent physical dysfunction and disability and promote wellness through various health promotion programs (Ohtake, 2010). These programmes reinforce public awareness on the importance of healthy lifestyle behaviours that promote mobility throughout individuals' lives; thereby decreasing the number of NCDs. It is from this perspective that arguments have been made pointing that NCDs could be effectively prevented as well as managed by physiotherapists who are predominantly well positioned to fill this alarming health care niche in the 21st century. However, physiotherapists have mostly gone unrecognised outside of the physiotherapy community, especially in the role they can play in health promotion.

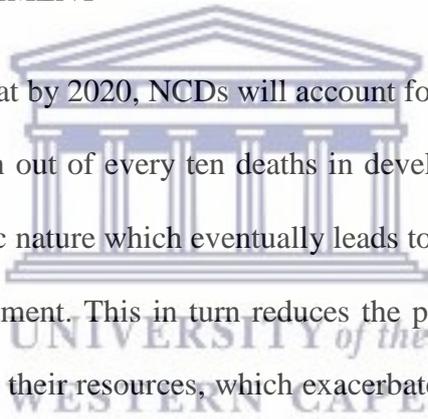


The devastating effect of NCDs, especially among the most productive stage in people's lives, affects not only the individual but the economic and social aspect of the country. This in turn slows down and hinders the development of the country. It was therefore important to examine the knowledge, attitudes, practices as well as the perceptions of the physiotherapists and GPs with regard to the use of HP as a preventive and cost-effective measure for the management of NCDs. Also, despite numerous literature on the benefits of health promotion in many conditions, including NCDs, less devotion has been given to the perception of GPs and PTs on their role in health promotion for NCDs.

1.2 SIGNIFICANCE OF THE STUDY

Exploring the perceptions of physiotherapists and GPs regarding their role in health promotion for NCDs could provide valuable information that can be used to change their work culture into a more preventative one. In turn it will reduce the high cost of managing NCDs. Furthermore, this study will provide policy makers and health care administrators with evidence-based information on physiotherapists and GPs with regard to NCDs' management. Ultimately, the findings of this study may be used to design feasible interventions for the prevention and management of NCDs.

1.3 PROBLEM STATEMENT



The WHO estimates that by 2020, NCDs will account for 80% of the global burden of diseases, causing seven out of every ten deaths in developing countries. Due to their progressive and chronic nature which eventually leads to debilitation, these conditions require prolonged treatment. This in turn reduces the productivity of the individuals affected while draining their resources, which exacerbates poverty at household level. This effect progresses to the general economic and social wellbeing at community and eventually at country level which hinders and slows down the development of the country as a whole. Responding to the growing threat of NCDs, the government of Zambia designed a strategic plan on NCDs and their risk factors that was to be implemented between 2013 and 2016 (Ministry of Health, 2013). In the plan, curative care still took priority over preventive care. Although its major goal was to reduce deaths occasioned by NCDs in Zambia by 25 per cent by 2025, there was an increase of 33% from the 23% of deaths in 2014 due to NCDs (WHO Report, 2016). The current national health strategic plan stipulates that health care services should move from the

curative to the preventive management of NCDs. However, this call is yet to be put into practice by various medical practitioners. It therefore shows that despite the Zambian government employing various methods of reducing and finally eradicating NCDs, these diseases have continued to rise.

Also, in terms of implementation of health promotion programmes in Zambia, general practitioners and nursing staff are still the leading health promoters, excluding the expertise of physiotherapists. A study by Rea, Hopp, Marshak, Neish and Davis (2004) indicated that physiotherapy services are mostly applied as a tertiary prevention and management although equipped with ideal skills and potential to handle the primary prevention role effectively. This can also be seen among the physiotherapists in Zambia who are concentrating on the curative management as opposed to primary prevention which is more cost effective. GPs have also turned their attention to the secondary prevention which they consider as more effective than primary prevention (Meal, Wynn, Pringle, Cater & Hippisley, 2004). Undoubtedly, concentration on curative and tertiary management of clients is costly. Ziglio, Simpson and Touros (2011) state that health systems that principally capitalise on tertiary and curative management are spending more, thus make it unaffordable in many developing countries.

1.4 RESEARCH QUESTIONS

1.4.1 What are the knowledge, attitude and practice of physiotherapy and general practitioners regarding health promotion for NCDs in the hospitals of the Southern Province, Zambia?

1.4.2 What are the perceptions of physiotherapy practitioners regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia?

1.4.3 What are the perceptions of general medical practitioners regarding their role in health promotion for NCDs in the hospitals of the Southern province of Zambia?

1.5 AIM OF THE STUDY

This study aimed at examining the knowledge, attitudes, practices and perceptions of physiotherapy practitioners and general medical practitioners in Zambia regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia.

1.6 SPECIFIC OBJECTIVES OF THE STUDY

1.6.1 To examine the knowledge, attitudes and practices of physiotherapy and general medical practitioners regarding health promotion in the hospitals of the Southern Province, Zambia.

1.6.2 To explore the perceptions of physiotherapy practitioners regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia.

1.6.3 To explore and describe the perceptions of general medical practitioners regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia.

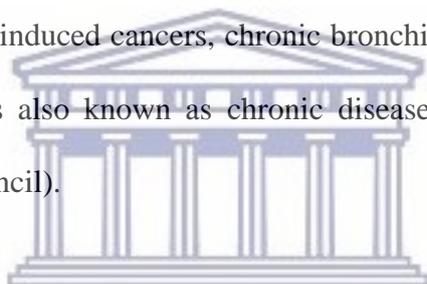
1.7 DEFINITION OF KEY TERMS

The most significant terms used in this study are defined below:

Health promotion: a process of enabling people to increase control over and improve their health to reach a state of complete physical, mental, and social well-being (WHO, 1986).

Lifestyle: recognisable patterns of living determined by the interaction amid an individual's personal characteristics, social relations as well as the socioeconomic and environmental conditions of living (WHO, 2005)

Non-communicable diseases: a group of diseases that share similar risk factors because of exposure, over many decades, to unhealthy diets, smoking, lack of exercise, and possibly stress. The major risk factors are high blood pressure, tobacco addiction, high blood cholesterol, diabetes and obesity. These result in various long-term disease processes, culminating in high mortality rates attributable to stroke, heart attack, tobacco- and nutrition-induced cancers, chronic bronchitis, emphysema, renal failure, and many others. It is also known as chronic diseases of lifestyle (South African Medical Research Council).



1.8 ABBREVIATIONS

HP	Health promotion
GPs	General medical practitioners or general physicians
LMICs	Low- and middle-income countries
MOH	Ministry of Health
NCDs	Non-communicable diseases
NCDSP	Non-communicable diseases strategic plan
NHSP	National Health Strategic Plan
PTs	Physiotherapy practitioners or physiotherapists
SSA	Sub-Saharan Africa
WCPT	World Confederation for Physical Therapy
WHO	World Health Organisation

1.9 SUMMARY OF CHAPTERS

Chapter One provides a rationale for the study and highlights the disproportionality of NCDs and their impact on the human population. It also looks at the preventive measures that can be used to slow down, reduce and possibly eradicate NCDs. In order to understand the use of health promotion for NCDs, two groups of health practitioners have been selected for this study, namely general medical practitioners and physiotherapists. The problem statement is stated here, and the aim, specific objectives and significance of the study are also outlined. The chapter ends with the definition of terms and abbreviations used in this study.

Chapter Two presents a review of relevant literature by looking at the prevalence, economic and social effects of NCDs, health promotion for NCDs, the roles played by the GPs and PTs in health promotion and the barriers encountered in implementing health promotion. Finally, a theoretical framework suitable for this study is discussed.

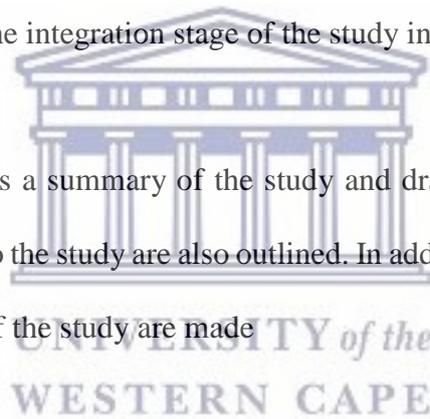
Chapter Three considers the methodological issues relevant to the study. It explains the research setting in which the study was based, as well as the study design used in this study. It further includes details regarding the study population and sampling methods for both quantitative and qualitative data. A description of the data collection methods is presented. This includes the instrument used in data collection, data collection procedures and issues of reliability, validity, credibility and trustworthiness. The chapter ends by giving the method of data analysis and showing how ethical issues were addressed.

Chapter Four outlines the results of the quantitative data analysis. Results are summarised and presented in tables and graphs. Further analysis using the logistic regression model was done to determine the relationship between the knowledge, attitude and practice scores of the GPs and PTs.

Chapter Five gives the results of the content analysis of the focus group discussions and interviews that attempted to explore the perceptions of the GPs and PTs regarding health promotion for NCDs. The emerging themes are illustrated, and direct verbatim quotes are used to provide the voice of the participants.

Chapter Six presents the integration stage of the study in the form of the discussion.

Chapter seven provides a summary of the study and draws conclusions based on the findings. Limitations to the study are also outlined. In addition, recommendations based on the main findings of the study are made



CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter provides information based on what other scholars have done with regard to the fight against NCDs. To begin with, the prevalence of NCDs followed by the economic and social impact of NCDs are discussed. Secondly, focus is drawn to health promotion as well as the roles GPs and PTs play in health promotion. Furthermore, attention is placed on the barriers encountered by GPs and PTs in their provision of health promotion. Lastly the theoretical framework used in this study is discussed and the chapter concludes with a short summary of the literature reviewed.

2.2 THE PREVALENCE OF NON-COMMUNICABLE DISEASES

The global increase of NCDs is a topic that will continue to be under debate until these diseases are eradicated. Without major focus on how to combat these diseases, NCDs will continue to increase and negatively affect people of all age groups. The WHO (2011) noted that the prevalence of NCDs is anticipated to escalate significantly with a possibility of surpassing the communicable diseases as the most common causes of death worldwide by the year 2030. Similarly, WHO (2012) further stipulates that based on the global reports, each year there is a devastating increase of deaths caused by the modifiable risk factors of obesity, hypertension and other health-related hazards. Although once regarded as the diseases of the prosperous, NCDs are now patronising the entire world with the greatest effect being felt in the developing countries (Alwan, 2011). The Republic of Zambia has also been affected by these distressing diseases.

Reporting on the consequences of paying little attention to NCDs, the WHO (2014) indicated that by 2012 NCDs caused 68% of the world's 56 million deaths with a 28% prevalence in LMICs. Furthermore, the WHO estimated a 17% global increase in NCD-caused deaths in the next 10 years with 27% being from the African region. The Global Burden of Disease study 2010 also projected that NCDs are responsible for 54% healthy life years lost (Disability Adjusted Life Years-DALYS) worldwide (Murray et al., 2012).

Although the Republic of Zambia does not possess reliable and consistent country-level data on certain NCDs, ample evidence exists that NCDs are a major public health problem within the country (MOH, 2013). A study by WHO (2010) stated that the figures of mortality rates due to NCDs were high in Zambia with 1075 male deaths and 808 female deaths per 100,000 inhabitants in 2008. Similarly, MOH (2014), via the Annual Health Statistical Bulletin report, indicated that by 2012, there was a 22% increase in the total number of NCD cases between 2010 and 2012 in all age groups. Similarly, the WHO (2016) state that 33% of all deaths in Zambia are attributed to the four principal NCDs (CVDs, diabetes, cancer and chronic respiratory diseases) with approximately 1 in 5 people dying prematurely.

2.3 ECONOMIC AND SOCIAL EFFECTS OF NON-COMMUNICABLE DISEASES

The economic and social aspects of the affected population are some of the challenges causing a strain on both the family and the country at large. The challenges are mostly due to the increased economic burden that these NCDs pose. According to Boom et al. (2011), the global economic burden is estimated to increase due to NCDs from 2010 to

2030 by 75% of the gross domestic products (GDP). The increase in the economic aspect is due to the fact that management of the NCDs is lengthy and an expensive process. Affirmation is given by the WHO (2013) indicating that the extortionate cost of NCDs is attributed to the lengthy and expensive treatment and loss of breadwinners. This is now forcing millions of people annually into poverty, which leads to a reduction in development especially for LMICs that are already struggling with finances. Kengne, Mchiza, Amoah and Mbanya (2014) further divide the economic expenditure into two aspects, the tangible and intangible costs.

Tangible costs, the direct costs of managing diseases, are usually suffered by individuals, households and the government. The consequences of the illness including reduced productivity and absenteeism from work all fall under the indirect tangible costs. Time lost by the care givers and other family members in the bid to help the patients cope with these NCDs are also categorised here. The decline in the quality of life together with the pains and sufferings of the patients, relatives and their friends respectively have been categorised as the intangible costs. A summary of these costs has been given by Nikolic, Stanciole and Zaydman (2011) in a diagram below (Figure 2.1) from the World Bank work on identification of key drivers and impact areas of NCDs costs.

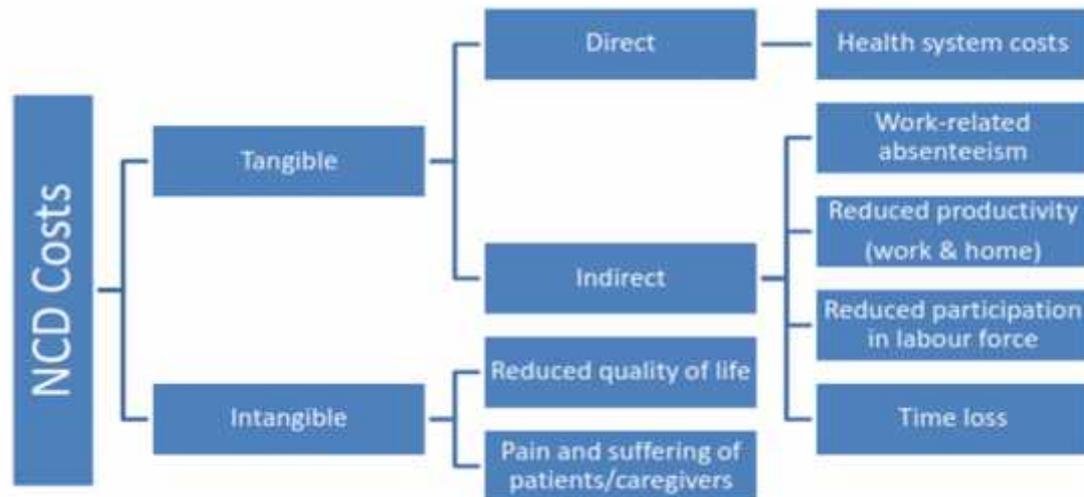
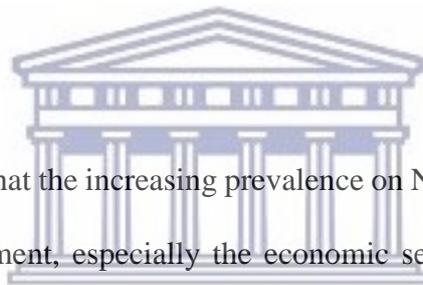


Figure 2.1 Key drivers and the economic impact of NCDs on various aspects of the affected population

Secondly, the social economic development is also affected by a loss of productivity in the affected people and prolonged disability, leading to an upsurge in the health and social care expenditure. This will in turn result in yet another increase in the economic sector as there will be a need to not only spend on health care services but indirect costs such as transportation to and from the health centres as well (Texas Comptroller of public Accounts, 2011). The increase in NCDs thus has a negative effect on the country's development as more funds need to be channelled into the health sector to manage the NCDs. According to Stuckler, Basu and McKee (2010) the yearly economic growth is anticipated to decline by 0.5 percent for every ten percent mortality rise from NCDs.

Among the numerous authors who have investigated cost-effective measures to counteract this financial crisis, are Dans, Varghese, Tai, Firestone and Bonita (2011) and Demaio, Nielsen, Tersbol, Kallestrup and Meyrowitsch (2014) who stipulate that primary health care and continued integrated care in the community is one of the most

cost-effective strategies for lowering the projected financial burden, including the increased workload on the health systems. The researchers are of the view that this mode of management will make it easier and affordable for the patients with NCDs while also continuing their care within their respective communities. However, Bhojani, Devedasan, Mishra, De Henauw and Kolsteren (2014) are of the view that LMICs have weak health systems, particularly with the primary health care facilities, showing that they are not yet ready to address NCDs cost effectively. WHO (2010) and WHO (2011) adequately state that the focus on primary health care is crucial in the fight against NCDs. This entails that for the fight against NCDs to be won, there is a need to focus more on the implementation and application of more effective primary health care services.



It is therefore evident that the increasing prevalence on NCDs has a negative impact on all sectors of development, especially the economic sector which has to redirect its resources to the health sector while also depleting the most active population through morbidity, disability and mortality. Increased efforts and strategies to enhance health promotion within the hospital settings and in the communities could help create a healthier population, unlike the curative approach that most of the medical practitioners such as general practitioners, physiotherapist, and nutritionists have held on to for many years

2.4 HEALTH PROMOTION FOR NON-COMMUNICABLE DISEASES

Worldwide, the health care approach on NCDs is shifting from a curative to an approach more promotional and preventative in nature. The shift is sustained by the findings from the Global Burden of Disease study of 2010 which discovered that there has been a

reduction in the number of deaths as a result of maternal and child illness compared to the last twenty years while more young adults are struggling with NCDs (Horton, 2013). Taukobong et al. (2014) stipulates that the increasing prevalence of NCDs necessitates a more systematic and expanded scope intervention such as health promotion.

Health promotion has been defined by many authors, but its birth can be traced as far back as 1945. Sigerist (1945), a medical historian, first defined health promotion by dividing it into four major tasks related to medicine such as promotion of health, prevention of illness, restoration of the sick and rehabilitation. According to this historian, the promotion of health obviously tends to prevent illness, yet effective prevention calls for special protective measures. Pender, Murdaugh and Parsons, (2002, p.34) on the other hand defined health promotion as “increasing the level of well-being and self-actualization of a given individual or group”. Similarly, Saylor (2004), defined health promotion as lifestyle training designed to encourage optimal health and quality of life. However, the widely used definition is the one given by WHO (1986), the process of enabling people to increase control over and to improve their health.

Spanning across all these definitions is the preventive aspect which seems to be the aim of HP. Inference can thus be made that the aim of health promotion is to improve the general health of a given population through direct interventions of various health promotion programmes, well-being, preventing diseases, identifying ill individuals and maintaining the health of those living with NCDs (Laliberte, Perreault, Damestoy & Lalonde, 2012). Correspondingly, Coe (2014) elaborates that health promotion comprises interventions intended to keep people well, as opposed to interventions designed to improve health once people are sick, essentially curative care, making it

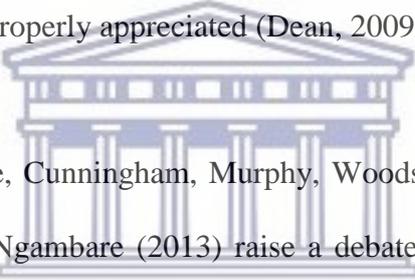
not only cost effective but efficient as well. Similarly, Chow (2016) states that the success of any NCD prevention borders on the control efforts with particular emphasis on effective application of promoting healthy lifestyles, including the reduction of their risk factors.

Being one of the countries affected by these NCDs, the Zambian government has made health promotion and education part of its National Health priorities (National Health Strategic Plan (NHSP), 2011). The NHSP emphasised developing policies, strategies and guidelines for health promotion in Zambia. In agreement with the NHSP (2011), the Zambian strategic plan on NCDs (2013) stipulates that the key strategies for prevention of NCDs are promotion of healthy lifestyles and scaling up of screening in the population. However, a study by Mukanu et al. (2017) indicates that the main goal of the NCD strategic plan which is to reduce NCDs mortality by 25% by 2025 is still in its generic form. This means that the implementation of health promotion has not yet materialised. This however does not mean that the Republic of Zambia has no health promotion strategies. It does have health promotion programmes which are inadequate and mostly focus on communicable diseases.

2.5 THE ROLE OF PHYSIOTHERAPY IN HEALTH PROMOTION

Physiotherapy is well established and a leading health care profession that primarily explores non-drug interventions, including counselling as part of treatment (Dean, 2009). The American Physical Association (2011) states that physiotherapists are involved in promoting health, wellness and fitness through risk factor identification and the implementation of services to reduce risk. They also slow down the progression of the presenting disease or condition, which in turn prevents functional decline and

disability. Frerichs, Kaltenbacher, van de Leur and Dean (2012) in their systematic review concluded that physiotherapists are competent enough and have the potential to effectively counsel patients with respect to lifestyle behaviour changes single-handed or with assistance instigated by other health care professionals. Physiotherapists can decrease the risk factors, prevent as well as treat NCDs through the provision of patient and client education. Dean (2009) and Dean et al. (2014) state that, physiotherapists have the ability to prescribe physical activity and exercise as well as their outstanding ability to perform non-invasive hands-on interventions which are in line with the biopsychosocial model. As such, the risk factors for NCDs and their related consequences can be reduced and subsequently prevented if the role of physiotherapists in health promotion is properly appreciated (Dean, 2009).



However, O'Donoghue, Cunningham, Murphy, Woods and Aagaard-Hansen (2014) as well as Frantz and Ngambare (2013) raise a debate that despite physiotherapists being confident in counselling, particularly in the promotion of physical activity, they are less confident in counselling patients on smoking cessation. Similarly, O'Donoghue et al. (2014) contends that this deficiency spreads over to the diet aspect. Hence the need for physiotherapists to uphold and adequately apply this skill predominantly in the fight against and management of NCDs.

The 21st century thus exhorts physiotherapists and other health professionals to address (either directly or by referring to another professional) lifestyle-related risk factors and manifestations in every patient regardless of the current presenting diagnosis (Dean, 2009). This demonstrates that the profession of physiotherapy has a significant role in addressing and managing the current global priorities as indicated by Moffat (2010).

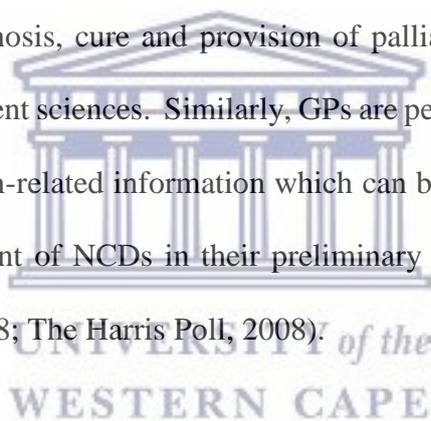
Therefore, Bury and Moffat (2014) and O'Donoghue et al. (2014) call upon the need for physiotherapists to readjust their goals, strategies and patterns of interaction with health care recipients and to include lifestyle counselling beyond physical activity counselling. This is because physiotherapy services go beyond physical activity counselling and prescription of exercise.

Consequently, the WCPT (2014) supports member organisations to push traditional boundaries towards more inter-professional collaborative practice and person-centred integrated service delivery, which are necessary for the successful prevention and management of NCDs and their risk factors. To this effect, a call is being made upon the physiotherapists to provide concerted efforts and play a more active role in fighting NCDs. Bury & Moffat (2014) underpins the contribution that physiotherapists can make by stating that capitalisation on the provision of assessment and advice on all four risk factors in every patient encounter would enable the profession to make a significant impact in battling the encumbrance of NCDs. Likewise, Abaraogu, Ogaga, Odidika and Frantz (2016) argue positively by stating that physiotherapists should embrace more “health-focused practices” relative to the provision of “treatment of disability and illness” which is in line with the global approach to NCDs.

The reinforcement of the promotion of a healthy lifestyle could assist with a well-informed population to make better choices regarding healthy living. The need to determine the perceptions of physiotherapists with regard to their role in health promotion is thus vital as it creates the first step in as far as probing their level of involvement in health promotion is concerned.

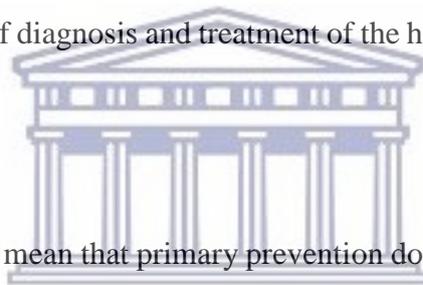
2.6 THE ROLE OF GENERAL MEDICAL PRACTITIONERS IN HEALTH PROMOTION

The influence general medical practitioners (GPs) pose is felt by all health care professionals, including physiotherapists due to the top position they occupy on the health care professional pyramid (Silva, 2005). This top position enables GPs to manage health care programmes such as health promotion of both communicable and non-communicable diseases. Olesen, Dickson and Hjortdahl (2000) accentuate the significant role of general practitioners in health promotion and prevention: by stating that GPs are known for their involvement with individuals at various levels, ranging from prevention, diagnosis, cure and provision of palliative care by using their vast knowledge from different sciences. Similarly, GPs are perceived to be the most reliable formal source of health-related information which can be used in the identification as well as the management of NCDs in their preliminary stages (Economic and Social Research Council, 2008; The Harris Poll, 2008).



According to van der Wilk, Melse, Broeder and den Achterber, (2007) and the Ministerie van Volksgezondheid (2011) the increasing prevalence of NCDs and the upsurge in understanding that lifestyle behaviour, plays a vital role in improving overall health and calls for increased attention of lifestyle choices in the consulting room. Among the numerous forms of preventive measures used by GPs, a substantial amount is in the form of patient advice and counselling. This is because patients tend to pay more attention to what the doctors say with regard to their health problems and try to follow the advice given to them. Litt (2006) states that there is noteworthy evidence to suggest that brief counselling interventions and referral are effective towards the

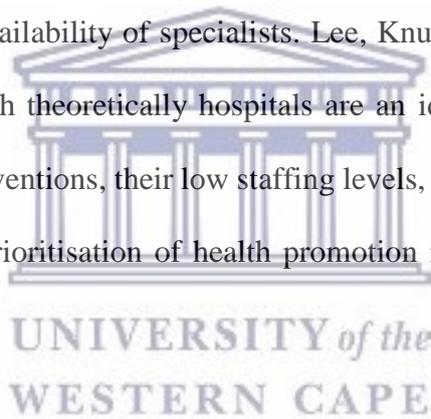
reduction of NCDs. However, supplementary studies have recognised discordance between the positive attitudes of GPs regarding primary prevention and the actual implementation of preventive care (Lichtenstein et al., 2006). In instances where GPs apply preventive services it is almost always inadequate (Bocquier et al., 2005). This is because GPs consider secondary services as a more effective approach than the application of primary prevention (Meal, Wynn, Pringle, Carter, & Hippisley-Cox, 2004). In keeping, a study conducted by Holmberg et al. (2014) on primary prevention in general practice concluded that the provision of primary prevention as universal counselling for all patients, regardless of their risk status, was not established in practice and is not desired by the interviewed GPs. This entails the application of secondary prevention consisting of diagnosis and treatment of the health problems, thus excluding primary prevention.



However, this does not mean that primary prevention does not take place but when it is applied, it is applied in minimal quantities as it is not a major priority. Mostly it is tailored to patients at risk; hence dependant on the problem the patient is presenting with during consultations (Douglas, Torrance, van Teijlingen, Meloni, & Kerr, 2006). It is thus evident from literature that GPs need to increase their advocacy for preventive measures during their consultation time to aid in the fight against the development of NCD and its complications.

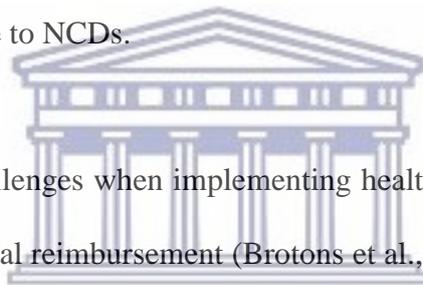
2.7 BARRIERS ENCOUNTERED BY GENERAL MEDICAL AND PHYSIOTHERAPY PRACTITIONERS IN HEALTH PROMOTION

Despite the vast knowledge of PTs and GPs, their application of health promotion strategies does not come without challenges. These challenges actually stem from the country at large and affect both the GPs and PTs respectively. According to MOH NHSP for NCDs, (2013) Zambia has continued to experience major shortages of workers, especially in the health sector. Among the many challenges the country is facing are the absolute shortages of health workers, the unequal distribution of health workers and skills mix which are all in favour of the urban as compared to the rural areas. This situation becomes even more complex with regard to NCDs as these diseases require the availability of specialists. Lee, Knuckey and Cook (2014) affirm by stating that although theoretically hospitals are an ideal place for the delivery of health promotion interventions, their low staffing levels, lack of time as well as lack of training reduces the prioritisation of health promotion interventions by many health care providers.



With regard to physiotherapists, the top five barriers to health promotion are lack of time, lack of commitment, community contacts, reimbursement and liability matters (Johnson, 2006). Similar sentiments of time as a hindrance in the practice of health promotion were echoed in a study conducted by Walkeden and Walker (2015), which focused on health promotion in the acute setup. Inadequate counselling skills as well as the focus on secondary and tertiary prevention and management by physiotherapists are additional barriers to the effective application of health promotion strategies (Shirley, van der Ploeg, & Bauman, 2010).

Dean et al. (2014) included lack of involvement in research policy and actions related to health promotion and wellness; illness-based payment systems as opposed to wellness; lack of recognition as primary care practitioners and lack of emphasis of health promotion during entry level education as additional obstacles. Furthermore Igwesi-Chidobe (2012) identifies improper referral practices, other health care professionals' limited awareness of the scope of physiotherapy, poor team work and interference of traditional healers as barriers to health promotion among physiotherapists. However, PTs are rarely called upon to adjust patients' lifestyle or provide supervised exercises for the prevention of secondary complications of various NCDs. Physiotherapists mainly provide rehabilitation services for patients that present with complications due to NCDs.

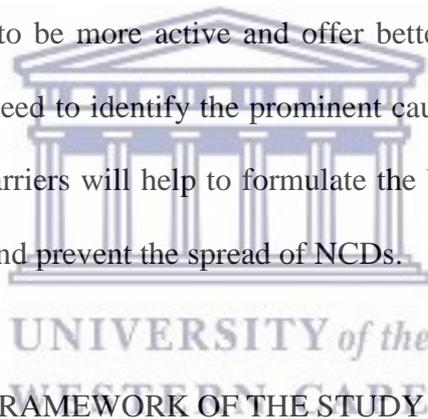


The GPs also face challenges when implementing health promotion, e.g. lack of time and insufficient financial reimbursement (Brotons et al., 2005). In agreement, Sim and Khong (2006) and Starfield, Hyde, Gerva and Heath (2008) state that other factors hindering GPs from implementing HP are lack of time, competing priorities, workforce shortage, lack of support systems as well as remuneration issues. Health promotion entails active participation of the participants as well, and so in instances where the patients do not comply with the advice given and seem unmotivated, this too becomes a barrier to apply health promotion strategies effectively. Although advocated as one of the most applicable forms of health promotion, counselling by GPs on lifestyle changes has proved to be another barrier as GPs are often sceptical about their patients' receptivity to such advice. This has lead physicians to regard counselling on lifestyle changes as not being worthwhile (Forman-Hoffman, Little & Wahls, 2006). It

contradicts findings in literature which show that physicians' advice is effective in encouraging patients to change behaviours (Jepson, Harris, Platt & Tannahill, 2010).

Another barrier to living a healthy lifestyle is in relation to weight management, thought to be due to lack of confidence and knowledge (Walter, Flick, Neuber, Fischer, Hussein et al., 2010). Numerous authors have indicated that lack of confidence in the provision of advice and effectiveness of the interventions are also barriers encountered during the practice (Douglas, Torrance, van Teijlingen, Meloni, & Kerr, 2006; Jallinoja et al., 2007; Jacobsen, Rasmussen, Christensen, Engberg, & Lauriten, 2005).

For the PTs and GPs to be more active and offer better services in terms of health promotion, there is a need to identify the prominent causes of the preceding barriers. Identification of the barriers will help to formulate the best possible strategies which would help to reduce and prevent the spread of NCDs.



2.8 THEORETICAL FRAMEWORK OF THE STUDY

The management of NCDs calls for a shift from a single target intervention to concerns that encompass environmental, lifestyle and behaviour of people (Bhatia & Rifkin, 2010). The Health Promotion Model (HPM) seeks to enhance positive health (physical, mental and social) as well as prevent ill-health. This is possible when individuals such as health professionals, the public and government stand together towards achieving this goal (Downie, Tannahill, & Tannahill, 1996).

This study employed the Tannahill Health Promotion model that provides a framework (Naidoo & Will, 2005). It identifies three major components of activities that

encourages better health of individuals: a) prevention; such as primary, secondary and tertiary so as to decrease the risk of occurrence of the disease, disability or death b) health education i.e. using communication to create awareness in order to influence beliefs, attitudes and behaviour of individuals, policy makers and the society, and c) health protection through regulations and policies that could lead to disease prevention (see Figure 2.2 below).



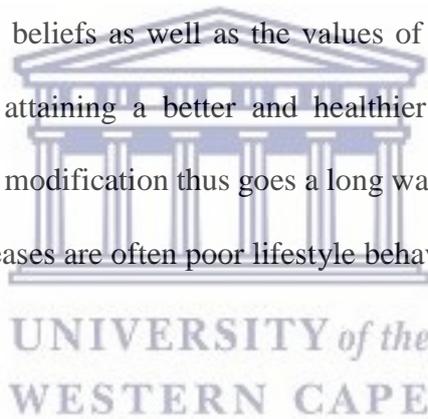
Figure 2.2 Health promotion model (Downie, Tannahill & Tannahill, 1996 p.42)

2.8.1 HEALTH EDUCATION

The provision of information (which can be general or particular to a prevailing disease) whose success in the promotion of health is dependent on the clients/patients following the given advice (Naidoo & Wills, 2000; Whitehead, 2003). In a similar way Kumar (2012) describes health education as the delivery of health information and skills first to the individuals and the communities which enable them to adopt health behaviours voluntarily. Kumar further states that it is a combination of learning experiences

intended to help the individuals and community at large to improve their health by increasing and improving their knowledge, which in turn influences their attitudes.

Health education thus intends to equip the population with enough knowledge which increases their awareness of health benefits and detriments for themselves. Once people are knowledgeable this will enable them not only to prevent the diseases but also lead to lifestyle modification. In cases where patients are at risk or affected with these NCDs, this will entail early detection of the signs and symptoms as people know what to look out for. Assertion is given by Whitehead (2010) stating that health education is a structured and well-designed method of providing health-related information intended to influence the attitudes, beliefs as well as the values of the target population. This is done with a view of attaining a better and healthier population through lifestyle modification. Lifestyle modification thus goes a long way in the fight against NCDs as the causes of these diseases are often poor lifestyle behaviours.

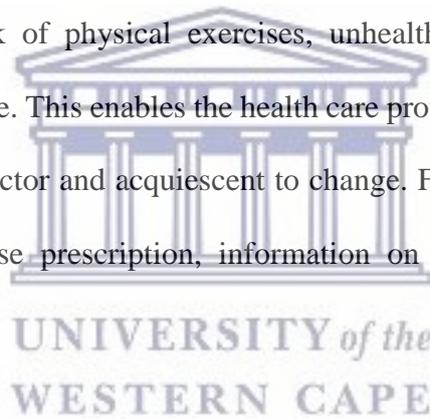


2.8 2 PREVENTION

Prevention of any medical condition is said to yield better health-related outcomes for an individual, especially in the case of NCDs that may require long-term management. According to Kane, Kane and Arnold (1985) disease prevention has been linked to interventions that decrease and, in some cases, eliminate exposure to risk factors which escalate the chances of an individual or community of suffering a disease, disability or premature death. Although not all risk factors are preventable due to some being genetic, others contributing specifically to NCDs, e.g. physical inactivity and smoking, are modifiable. Last (2001) is of the opinion that the concept of prevention is best

explained in three phases, namely primary, secondary and tertiary prevention, as illustrated below.

Primary prevention is the effort executed to eradicate or minimise health or functional problems at their source, resulting in a reduction in the incidence of disease. This leads to a healthy population. According to Tones and Green (2004), this phase of prevention aims to reduce the exposure to the causes and their risk factors, thus preventing the onset of the disease. Fricke (2005) emphasised the importance of early identification of the potential risk factors for the disease in both the healthy and unhealthy population. The specific risk factors for the present study are high blood cholesterol, high blood pressure, obesity, lack of physical exercises, unhealthy diet, inappropriate use of alcohol and tobacco use. This enables the health care providers to target factors that are specific to each risk factor and acquiescent to change. For instance, health promotion should include exercise prescription, information on a healthy diet and smoking cessation.



Secondary prevention seeks to employ efforts aimed at early detection of health conditions leading to prompt interventions which can curb the spread of diseases. Naidoo and Wills (2000) infer that this phase anticipates shortening of the illness; thus, preventing further progression of the disease by providing early diagnosis and treatment where applicable. In the conditions under discussion in this paper early detection would be very beneficial as this would lead to the reduction of disability, morbidity and mortality.

Tertiary prevention is meant to halt progression of the established diseases and its negative consequences. These consequences include reduction of the disability rate, handicap and also teach the patient how to cope with their current condition (uOttawa, 2010). The aim of tertiary prevention is halting of the disease progression while decreasing the complications through effective treatment and rehabilitation (Tones & Green, 2004). Arguing positively, Fricke says that restoration and maintaining of maximal function is of utmost importance to prevent further disability. It is at this stage that most physiotherapists are called upon to provide their services. This is despite their ability to provide preventive services adequately.

Preventive strategies can be very effective, especially when handled from their grassroots. Implementation of primary prevention can go a long way as it empowers the population (both at risk and healthy) with adequate knowledge on lifestyle modification which potentially reduces the probability of acquiring the life-threatening NCDs. In a similar context, secondary prevention through the use of appropriate screening tools could enable early detection of NCDs. Medical personal can therefore apply targeted treatment measures for a particular NCD. Finally, the use of tertiary prevention could help in the enhancement of quality of life by preventing further decline in health due to NCD complications. Throughout the whole process of prevention, of utmost importance is the knowledge of the health care professional regarding referral of patients for specific management of their disease.

2.8.3 HEALTH PROTECTION

Health protection focuses on fiscal or legal controls, policies and voluntary codes of practice aimed at preventing ill health and enhancing well-being. Tannahill (2009) asserts that health protection includes public policies that address fair access to housing, employment, education, and health care.

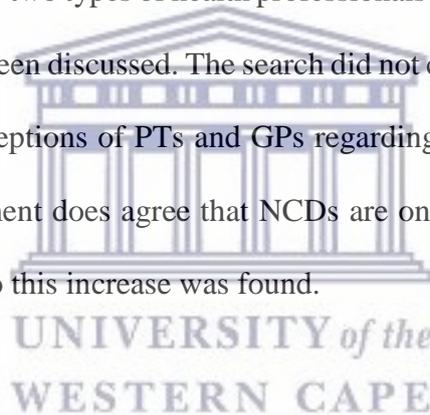
Although this model was selected and helped to answer the study objectives, it has its own disadvantages. Downie et al. (1996) criticised this model for being linguistically straightforward; hence failing to offer adequate theories for indelible factors in health promotion practice. This health promotion model was also criticised for not considering the community-based aspect. This led to the revision of the Tannahill model so as to take into consideration the consequences of health for individuals, groups and populations (Tannahill, 2008). Community-based activities were also prioritised in the modified definition which placed emphasis on equality and diversity which promotes “sustainable enhancement of positive health and reduction in ill-health in populations through policies, strategies and activities in the overlapping action areas of: social, economic, physical environment and cultural factors” (Tannahill, p.1390).

The selection of this model was due to its ability to answer the study objectives in which the researcher sought to explore the use of health promotion to prevent and manage NCDs in the daily practice of physiotherapy and general medical practitioners. In answering the research objectives, the model was used to determine how GPs and PTs use health education with regards to NCD management. Secondly, the model was used to determine at what level GPs and PTs implement their preventive measures with respect to their respective hospitals. Lastly, the results of the study could provide policy

makers and health care administrators with evidence-based information of PTs and GPs with regard to health promotion for NCDs in Zambia. This could in turn influence the designing of feasible interventions for the prevention and management of NCDs.

2.9 SUMMARY OF THE CHAPTER

This chapter has provided an overview of the prevalence of NCDs from the global to the Zambian context. It also looked at the economic and social effects of NCDs. In addition, the chapter also provided empirical evidence on health promotion, as well as the roles that both the GPs and PT play in health promotion. Finally, the barriers stumbled upon by these two types of health professionals and the conceptual framework used in this study has been discussed. The search did not come across studies conducted in Zambia on the perceptions of PTs and GPs regarding health promotion for NCDs. The Zambian government does agree that NCDs are on the rise, however, no precise statistics with regard to this increase was found.



This literature was conducted in a bid to provide a context and justification for conducting this study. The literature reviewed thus indicates a gap in the perceptions of PTs and GPs with regard to their application of health promotion and also if health promotion strategies are used in totality with regard to NCDs. Secondly as preventive services have adequately been indicated as a cost-effective measure, not much has been documented on how active GPs and PTs apply these services. Therefore, without full and active participation as well as effective commitment by the GPs and PTs in employing health promotion strategies, the fight against NCDs stands to be unproductive with the cost of curative measures increasing by the day. This then entails that the documentation of the perception of PTs and GPs with regard to NCDs could

act as a stepping stone and aid in identification of the existing obstacles as well as come up with feasible ways of addressing NCDs where the application of health promotion is concerned.

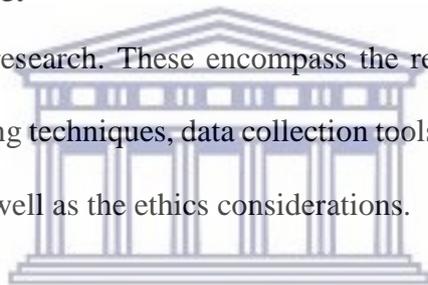


CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

Under discussion in this chapter is the overview of the methodological approach and protocols executed in this study while adhering to the research ethics. Braun and Clarke (2013) define methodology as the theory of how research should produce valid knowledge about the social world or a given phenomenon under consideration. Additionally, Kazdin (1992), as cited in Marczyk, DeeMatteo and Festinger (2005) stated that methodology takes into consideration the principles, procedures and practices that govern research. These encompass the research approach, methods of data collection, sampling techniques, data collection tools, validity and reliability of the tools, data analysis as well as the ethics considerations.



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3.2 RESEARCH SETTING

This study was conducted in the Southern Province, one of the ten provinces of Zambia. The Southern Province has fifteen government and missionary hospitals that offer physiotherapy services; one with the status of a central hospital and the rest are general and district hospitals. Eight hospitals are in the urban area and seven are situated in the rural area of Southern Province. The province has a comprehensive health service delivery system comprising public, private and missionary hospitals. This study however, focused only on the public and missionary hospitals as most of their employees are paid by the government. The public hospitals were also selected because the service delivery system in Zambia is mainly public service and therefore provides services to a huge number of patients (Zambia development agency, 2013). Although

Southern Province has primary health care settings, physiotherapy services are non-existent in these centres; hence the exclusion from the study population.

3.3 RESEARCH APPROACH

For the attainment of the research objectives, this study employed a mixed method approach. This method is considered as the third major methodological approach which acts as a substitute for purely quantitative and qualitative methodologies used at the same time (Andrew & Halcob, 2009). Greene (2007) also notes that mixed methods take a dialectal position in order to conduit the postpositivist and social constructive worldviews, practical perspective and transformative perspectives thus bringing the two worlds together. In a positive argument, Halcomb and Hickman (2015) and Ozawa and Pongpirul (2014) state that the use of mixed methods provides the researchers with an opportunity to acquire a grander, more meaningful understanding of a given problem as opposed to either approach singularly. This approach has thus become a common feature, especially in the health sciences including physiotherapy because of its ability to handle the complexity of health topics. Similarly, Rauscher and Greenfield (2009) show that in physiotherapy, a mixed method approach is valuable due to its high-quality inferences it is able to attain. Based on the research title and the objectives, mixed method is an appropriate approach as it enhances the generation of adequate results to answer the objectives of this study. This study specifically employed the sequential explanatory mixed methods design (see Figure 3.1).

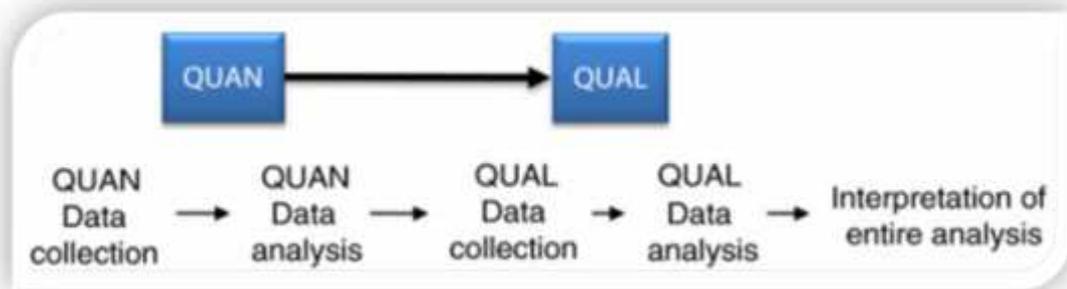


Figure 3.1 Sequential explanatory mixed methods design (Creswell & Plano, 2007)

According to Plano (2011), the sequential explanatory mixed methods design entails the collection of quantitative data followed by the collection of qualitative data. It helps to clarify the results through refinement by lengthening and exploration of the general picture given in the quantitative phase. The researcher selected this method as it gives an in depth understanding of the research problem. As echoed by Song, Sandelowski and Happ (2010) and O’Cathain, Murphy and Nicholl (2007) the finding of the qualitative (second) phase equipped the researcher with a chance to assess the quantitative results in a wider context using more contextual rich data which was unattainable in the quantitative (first) phase. This method has an advantage of being straightforward with its distinctive sequential phases of data collection enabling a single researcher to conduct such a study (Creswell & Plano Clark, 2011). With regard to the research topic and the objectives, this approach enabled the researcher to generate information needed for this study. The two methods were thus integrated during the interpretation / discussion phase of the study.

3.4 QUANTITATIVE PHASE OF THE STUDY

Horn (2009) defines quantitative research as a type of research that predominantly collects numerical data and often relies on deductive reasoning. This is because deductive reasoning creates a view of the likely nature of a subject matter and eventually tests whether or not the view is correct. This study's approach has the ultimate aim of objectivity within its parameters. Curry, Krumholz, O'Cathain, Clark, Cherlin and Bradley (2013) is of the view that objectivity entails measuring of objective measures with the view of eliminating extraneous variables through assessments and use of standard tests and parametrics. Furthermore, the analysed and quantifiable results should be generalisable of the total population. The generalisation of the results is an attempt to identify some objective truth which is applicable to all similar situations.

3.4.1 STUDY DESIGN

This study employed a descriptive cross-sectional design. According to Abahuma (2017), a descriptive cross-sectional design is used to obtain information regarding the present status of the phenomena and to designate "what exists" with reverence to variables or conditions in a situation. Accurate representation of individual characteristics, situations and groups taking into consideration the frequency with which certain phenomena occur while engaging statistics for the description and summary of the data is the aim of this design (Polit & Hungler, 2013). In this study, knowledge, attitudes and practices of the GPs and PTs were assessed and appropriate statistical tests were used to accurately answer the first objective of this study.

3.4.2 POPULATION AND SAMPLING

The study population was 74 physiotherapists and 81 general medical practitioners respectively; thus a total of 155 health practitioners from both rural and urban hospitals of the Southern Province, Zambia. Total population sampling was employed in this study as all the eligible health practitioners were invited to participate in the study. However, for the results to be generalisable to the population, a minimum of 111

participants was required according to the Yamane formula $n = \frac{N}{1 + N(e)^2}$ (where n stands for sample, N for study population, and e is a constant equal to 0.05), have to complete the questionnaire (Israel, 1992).

3.4.3 INCLUSION AND EXCLUSION CRITERIA

Inclusion

All physiotherapy practitioners within the selected hospitals, regardless of their qualifications (diploma, degree, Master's or PhD holders), and all the general medical practitioners, regardless of their years of work experience.

Exclusion

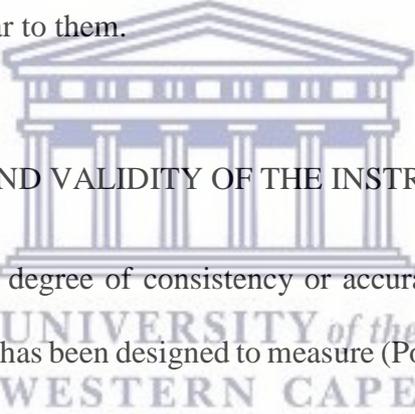
All physiotherapy and medical students on clinical attachments in the selected hospitals due to lack of practical experience in the hospitals.

3.4.4 DATA COLLECTION INSTRUMENT

Data was collected using a self-administered questionnaire (Appendix A). The questionnaire was reliable and valid as it was used in a study by Taukobong, Myezwa, Pengpid and van Geertruyden, (2014). Section A consisted of socio-demographic

information, i.e. age, gender, highest level of education and work experience. Section B consisted of 29 questions, namely ten (10) questions related to knowledge about health promotion, nine (9) questions related to attitude towards health promotion and ten (10) questions about integration of health promotion in practice. Each question had three options, namely “yes”, “no” or “unknown”.

As stipulated above, the questionnaire was used in a study and produced effective results. The questionnaire was also selected for this study as it was well suited to answer the first objective of the study. The participants completed the questionnaires in the presence of the researcher, providing the opportunity for the participants to seek clarity if questions were unclear to them.



3.4.5 RELIABILITY AND VALIDITY OF THE INSTRUMENT

Reliability refers to the degree of consistency or accuracy with which an instrument measures the attribute it has been designed to measure (Polit & Hungler, 2013). Validity is the degree to which the instrument measures the phenomena in the first place or reflects the abstract constructs being measured (Burns & Grove, 2009). The instrument employed in this study was reliable and valid as it has been used before and produced effective results (Taukobong et al., 2014). This questionnaire has a Cronbach’s alpha ranged from 0.73-0.85, indicating good reliability scores.

3.4.6 DATA COLLECTION PROCEDURE

After seeking Ethics approval from all relevant authorities (see Ethics statement, Appendix?), the researcher provided the participants with the information sheet

(Appendix 4) which had adequate information about the study. Thereafter, a place and time convenient for the participants to complete the questionnaire was arranged. Written informed consent (Appendix5) was obtained from each participant before completion of the questionnaire. The questionnaires were completed in the presence of the researcher.

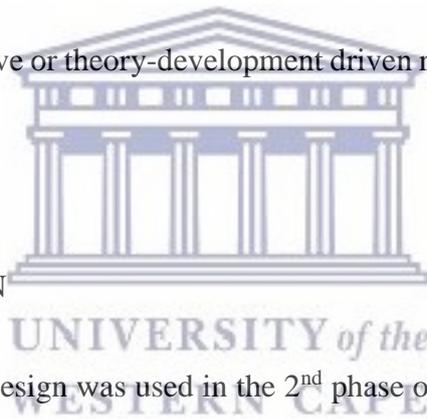
3.4.7 DATA ANALYSIS

The researcher checked the questionnaires for completeness and thereafter, they were coded. Data was captured on a 2010 Word Excel spreadsheet and imported into the Statistical Package for the Social Sciences (SPSS) version 24.0 to analyse the data. Descriptive statistics were employed to summarise the social-demographic information of the participants. Continuous variables such as age were expressed as means (SD). Categorical variables such as gender were expressed as frequencies and percentages. The results were presented using frequency tables, charts and graphs. Inferential statistics (chi-square tests) was employed to determine any association between variables. Lastly logistic regression model used to determine the functional relationships associated with the GPs and PT's knowledge, attitudes and practices scores. Statistical significance was set at $p = 0.05$.

After the first phase of the study was completed and data analysed, the qualitative phase of the study commenced where the perceptions of physiotherapy and general medical practitioners were regarded. Their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia was explored.

3.5 QUALITATIVE PHASE

A qualitative research method is mostly used when there is a need to explore a phenomenon, understand individuals' experiences or to develop a theory (Creswell, 2013). This method helps the researcher to formulate subjective data based on the participants' views, experiences and feelings. According to Creswell (2009), this kind of enquiry allows the researcher to focus on individual meaning. The qualitative approach possesses a salient strength of working with knowledgeable and specific participants within their context and emphasises that their voices are heard through direct quotation in the results section as well as in the discussion. Baran and Mette (2016) are of the view that the focus on the contexts and meaning of human lives and experiences for inductive or theory-development driven research is yet another strength of this method.

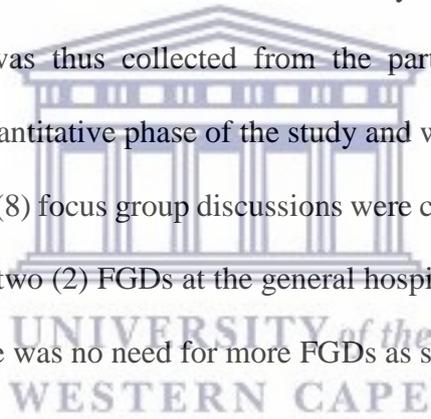


3.5.1 STUDY DESIGN

An exploratory study design was used in the 2nd phase of this study to gain insights as well as familiarity for future investigations or alternatively undertaken when problems are in the preliminary stage of investigation (Lynn & Lynn, 2017). Focus groups, a commonly employed qualitative data collection method, allow the participants, in interaction with each other, to speak for themselves in the context of their own experience (Bergin, Tally & Hamer, 2003). In this study, this design was selected in order to provide insight as well as familiarity of the perception of physiotherapy practitioners and GPs with regards to their role in health promotion for NCDs.

3.5.2 POPULATION AND SAMPLING

Purposive sampling was employed to answer the second and third objectives of this study. Creswell (2011) states that purposive sampling involves clear identification and selection of individuals or groups of individuals who are adept and knowledgeable about a phenomenon of interest. According to Laerd (2012) in purposive sampling the participants have a particular set of characteristics (for example, specific attributes/traits, experience, knowledge, skills, or exposure to an event). Purposive sampling equally takes into consideration the availability, knowledge and willingness of the participants as well as their ability to communicate their experiences and opinions in an articulate and reflective manner, as indicated by Ilker, Subuman and Rukayyal (2012). The sample was thus collected from the participants who completed the questionnaire in the quantitative phase of the study and were willing to take part in the FGDs. A total of eight (8) focus group discussions were conducted with three (3) FGDs at the central hospital, two (2) FGDs at the general hospitals and three (3) FGDs at the district hospitals. There was no need for more FGDs as saturation was reached.



3.5.3 INCLUSION AND EXCLUSION CRITERIA

Inclusion

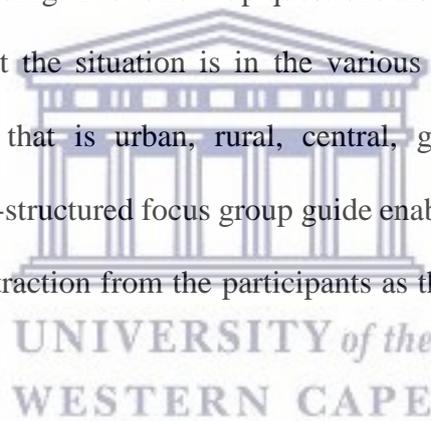
All the physiotherapy and general medical practitioners who took part in the quantitative phase of data collection.

Exclusion

Physiotherapy and general medical practitioners who did not take part in the quantitative phase of the study.

3.5.4 DATA COLLECTION TOOL

A semi-structured focus group guide (Appendix 8) was used during the FGDs which were conducted in English, a language all health care professionals in Zambia are acquainted with. The interview guide consisted of open-ended questions to enable the respondents to freely express themselves as they described their perceptions on their role in health promotion. Charmaz (2006) postulates that the style of interview during FGDs should be conversational so as to allow the researcher to engage with the participants and to be able to make follow-up questions for clarity. The researcher was also able to make follow-up questions just to get clarity on the information that the participants were providing. The follow-up questions also enabled the researcher to get deeper insight of what the situation is in the various hospitals located in different localities and levels, that is urban, rural, central, general and district hospitals respectively. The semi-structured focus group guide enabled the researcher to maintain consistency in data extraction from the participants as the same questions were asked to all participants.



3.5.5 DATA COLLECTION PROCEDURE

A place and time convenient for the participants was arranged prior to data collection. Each FGD was facilitated by two facilitators, namely the researcher acting as discussion leader/observer and a scribe/recorder. The participants were informed about the aim of the discussions and that everyone must feel free to participate as there is no right or wrong answer. The procedure was explained to the participants and each consented participant completed a focus group discussion binding form (Appendix 7). Each group consisted of a minimum of four to six participants. Krueger (2009) asserts that a focus

group can consist of as few as four to six participants. The interviews lasted for approximately 30 to 45 minutes and a probing technique was used to ensure that no information was missed (Britten, 1995). The responses were audio-taped and recorded on paper. The FGDs continued until a point of saturation was reached; when information is repeated and when no new information can be obtained if the interview continues (Polit & Beck, 2003). According to Francis et al. (2010) the concept of data saturation is vital as it reports whether a study is based on an adequate sample to demonstrate content validity. In total eight (8) FGDs were conducted in this study, as indicated in Table 3.1 below:

Table 3.1 The different hospitals, location and the number of FGDs conducted

Level of the hospital	Location	Number of FGDs
Central hospital	Urban	2
General hospital	Urban and rural	2
District hospital	Urban and rural	4

At both the central and district hospital, one group consisted of PTs while the other consisted of GPs. However, at district level, two groups consisted of PTs while the other consisted of GPs respectively. The district hospitals were given more FGDs as they are the hospitals mandated to provide primary health care according to the MOH (2017).

3.6 TRUSTWORTHINESS

Trustworthiness is the degree to which the researcher is able to draw their conclusions from the outcomes of the findings yielded by the data collected (Leedy & Ormrod, 2010). In qualitative research this is achieved through credibility, transferability, dependability and confirmability. Affirmation is given by Veal (2011), Bryman (2012) and Loh (2013) as credibility being the validity of the findings and transferability as the applicability of the findings in a different context. Additionally, dependability has been said to be the reliability of the findings at another time and finally confirmability which is the objectivity of the researcher while carry out the research.

Credibility (internal validity): in order to fulfil this aspect of trustworthiness, the field notes were compared and discussed (member checking) for their accuracy. Furthermore, the transcribed verbatim draft was given to a colleague, who was not involved in the study for her view. Any matters raised by her were incorporated into the written notes. The reason for allowing peers to review the data was to put in place the words echoed by Bitsch (2005) and Krefting (1991) that involvement of peers enhances the honesty of the study as they positively contribute to deeper reflexive analysis. This process helps in the identification of gaps or any omission of vital information the researcher could have left regarding the research question.

Transferability, as observed by Trochim (2006), the goal of qualitative research is not in the production of generalisable results but in the production of results enabling interpretation by other researchers in similar settings even to the point of using the research design for their own purposes. In order to achieve this, as indicated by Bitsch (2005), thick description and purposive sampling were done in this study. Firstly, thick description of the study population and the research setting was done to fulfil this aspect of trustworthiness. Secondly, purposive sampling (which has also been explained and

justified) has been described fully in order to keep the researcher focused only on the qualified participants for this study. This is in line with Schutt (2006) who explains that the use of purposive sampling gives the researcher focus on key informants who possess particular knowledge on the topic under exploration. As such, Cohen, Manion and Morrison (2011) encourages the use of purposive sampling due its ability to provide grander in-depth findings than other probability sampling methods. This method was indeed able to provide enough knowledge to answer the research questions.

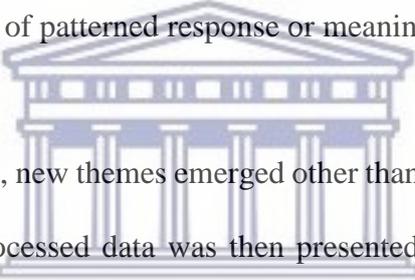
Dependability covers the aspect of consistency of the results generated over time. Therefore, an audit trail consisting of the methodology, original transcripts, data analysis documents, field notes and comments from the member checking were transparent so that any researcher who wants to adapt the process in his/her own setting could do so.

Conformability, a measure of how well the findings are supported by the data collected (Lincoln & Guba, 1985). This was achieved through provision of an audit trail by checking the raw data as well as through correction and refining the themes identified. A colleague who was not involved in the study was provided with the verbatim transcripts, analysis and process notes and summaries of the results for her opinion. Direct quotations were also added in the discussion section to demonstrate that the findings were a true reflection of the data collected and not the researcher's own words.

3.7 DATA ANALYSIS

Data from the audiotape recordings were transcribed verbatim by an independent person with experience in transcription to produce a manuscript. A comparison was made between notes taken during the FGD and interviews to verify accuracy. Thematic analysis was then employed. According to Tjandra, Osei, Ensor and Omar (2013),

thematic analysis is an approach used to extract meanings and concepts from data and includes pinpointing, examining and recording patterns or themes. Verbatim transcription of the data collected was done by an independent qualitative data analyst. Thereafter the steps as given by Braun and Clark (2006) were followed. The steps include familiarisation with the data set which the researcher did through reading the transcriptions thoroughly. Secondly, generation of initial codes was done followed by searching for themes. Once the themes were captured, these themes were reviewed and analysed in line with the predetermined themes. This was then followed by defining and naming of the themes. According to Braun and Clarke (2006), themes capture the important aspects of the data collected in relation to the research questions while representing some level of patterned response or meaning from the data set.



During the data analysis, new themes emerged other than the predetermined themes the researcher had. The processed data was then presented to the researcher's peers for critique and verification of the coding, categorisation and arrangement of the themes. The final themes selected were sent to the supervisor for further verification. Finally, the discussion was done with the inclusion of some of these themes from the original data collected in accordance with the study aims and objectives. Application of direct parts of the transcription under each theme was done in order to represent the voice of the participants and to show that the information given was by the participants and not opinions of the researcher.

3.8 ETHICS CONSIDERATIONS

Ethics is an integral part of research: it is only by getting the ethics right that research excellence can be achieved (De Vries & DeBrium, 2004). In order to fulfil this

significant aspect of research, various offices and boards were approached so as to obtain permission to conduct this study. Firstly, approval was sought from the University of the Western Cape's Biomedical Research Ethics Committee (BMREC). Thereafter permission was sought from Excellence in Research Ethics and Science (ERES) Converge, and the Provincial Medical Officer of the Southern Province, Zambia. As the researcher went to the respective study sites, further permission was sought from the executive directors of the selected hospitals and various heads of departments. The aim and objectives of the study were explained and made available to all participants (Appendix 4). This is in line with the thoughts of Cohen, Manion and Morrison (2013) who indicated that respondents should be well informed about the purpose as well as the process to be involved in the study. Furthermore, informed written consent (Appendix 5) was obtained from each participant before commencement of data collection. Participation in this study was voluntary and participants were given the opportunity to withdraw from the study at any time with no consequences. Anonymity was assured through the use of a code and not the participant's name on the questionnaire. Information obtained from the participants through questionnaires and FGDs was only for this study and was handled with confidentiality. Participants in the FGDs were asked to sign a focus group confidentiality binding form (Appendix 7). Tapes used were destroyed after they had been transcribed and the information documented according to themes. The data collected was stored in a locker only accessible to the researcher and the transcribed verbatim data were stored on a password-protected computer of which only the researcher had access to and will only be discarded after five years. Pseudonyms were used to protect participants' identities when the results are published. Minimal risks were expected in the study. Sensitive issues and questions which arose in the study

which could have affected the participants were observed and carefully handled accordingly. The results of the study were made available to all participants, and the directors of the institutions.

3.9 SUMMARY OF THE CHAPTER

The study employed a sequential exploratory mixed method approach, specifically a descriptive cross-sectional and exploratory design for the quantitative and qualitative phases respectively. The total population sample was used in the first phase of the study followed by purposive sampling recruitment of the participants for the second phase of the study. In order to conduct this study, permission was obtained from all relevant authorities. Thereafter, data was collected using questionnaires for phase one and SPSS version 24 was used in the analysis of the data collected. Focus group discussions were used for data collection in phase two and thematic analysis was used for analysis. Validity and reliability were observed, and trustworthiness was also taken into consideration. Participants were also fully aware of their right to withdraw from the study without any implications. The results of the quantitative and qualitative analysis are presented in Chapters 4 and 5.

CHAPTER FOUR

QUANTITATIVE RESULTS

4.1 INTRODUCTION

As indicated in Chapter 3, the present study employed a sequential mixed method approach. Therefore, the results are presented in two phases, the quantitative phase (Chapter 4) followed by the qualitative phase (Chapter 5).

Chapter four presents the statistical analysis which sought to answer the first objective of the present study, namely to examine the level of knowledge, attitudes and practices of physiotherapy and general medical practitioners regarding health promotion in the hospitals of the Southern Province of Zambia. The study employed total population sampling. However, for the results to be generalised, a sample of at least 111 of the total population of 155 participants was required. A response rate of 76.1% (118/155) was obtained, as not all the participants were present at their workstations during data collection. Various reasons for their absenteeism were provided, namely study leave, vacation leave, maternity leave, sick leave, attending workshops and other commitments. However, all the respondents (n=118) who were present in the respective hospitals at the time of data collection took part in the study.

4.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS (n=118)

The total study sample comprised 66 general medical practitioners (55.9%) and 52 physiotherapists (44.1%). Table 4.1 below presents a summary of the demographic profile of the participants. More than half of the participants were male (55.1%)

compared to the 44.9% female participants. The age of the study sample ranged between 20 and 50 years and above. More than half of the participants (n=71; 60.2%) were aged 26-36 years. In terms of the level of education, the undergraduate degree holders were the majority, with a total percentage of 73.7% (n=87), as indicated in Table 4.1 below.



Table 4.1 Socio-demographic profile of the participants (n=118)

Characteristic	n	%	GPs n(%)	PTs n(%)
Gender				
Male	65	55.1	41(63.1)	24(45.3)
Female	53	44.9	24(36.9)	29(54.7)
Age GPs (Mean=39.02years, SD=8.94) PTs (Mean=30.30years, SD=5.09)				
20-25	12	10.2	1(1.5)	11(20.8)
26-30	30	25.4	11(16.9)	19(35.8)
31-36	31	26.3	18(27.7)	13(24.5)
36-40	22	18.6	12(18.5)	10(18.9)
41-50	17	14.5	17(26.2)	0(0.0)
50 and above	6	5.1	6(9.2)	0(0.0)
Level of education				
Diploma	28	23.7	0(0.0)	28(52.8)
Undergraduate degree	87	73.7	62(95.4)	25(47.2)
Masters	3	2.5	3(4.6)	0(0.0)
Work experience				
< 6 months	4	3.4	1(1.5)	3(5.7)
> 6 months to 5yrs	56	47.5	26(40)	30(56.6)
6-10yrs	30	25.4	14(21.5)	16(30.2)
11-15yrs	7	5.9	4(6.2)	3(5.7)
16-20yrs	11	9.3	11(16.9)	0(0.0)
20yrs and above	10	8.5	9(13.8)	1(1.9)
Location				
Rural	33	28	13(20)	20(37.7)
Urban	85	72	52(80)	33(62.3)

*GPs = General practitioners

**PTs = Physiotherapists

4.3 HEALTH PRACTITIONERS' KNOWLEDGE OF HEALTH PROMOTION (n = 118)

Participants responded to a series of statements assessing their level of knowledge of health promotion. The multiple-choice statements were obtained from the reliable and valid questionnaire used in a study by Taukobong et al. (2014). The questions were answered based on the current level of knowledge of the participants. The participants rated each statement using a 3-point Likert scale ranging from yes to unknown across the 10 statements (2 = yes; 1 = no; 0 = unknown). Table 4.2 below shows the responses given by the health practitioners.



Table 4.2 Health practitioners' knowledge of health promotion (n=118)

Statements about knowledge towards health promotion services	GPs Yes n(%)	GPs No n(%)	GPs Unknown n(%)	PTs Yes n (%)	PTs No n(%)	PTs Unknown n(%)
K1 Health promotion activity involves building health policy to promote health of the population	64(98.5)	1(1.5)	0(0.0)	48(90.6)	5(9.4)	0(0.0)
K2 HP intervention calls for professionals to be involved in improving and maintaining health status for all	65(100)	0(0.0)	0(0.0)	50(94.3)	3(5.7)	0(0.0)
K3 Health promotion intervention involves early detection and prevention of diseases	56(86.2)	9(13.8)	0(0.0)	53(100)	0(0.0)	0(0.0)
K4 Health promotion intervention involves strengthening community action to prevent diseases	54(83.1)	11(16.9)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
K5 Health promotion intervention involves developing personal skills to stay healthy	55(84.6)	10(15.4)	0(0.0)	51(96.2)	2(3.8)	0(0.0)
K6 Health education is a process of implementing health promotion	58(89.2)	7(10.8)	0(0.0)	50(94.3)	3(5.7)	0(0.0)
K7 Health promotion can be achieved through environmental modification	61(93.8)	4(6.2)	0(0.0)	42(79.2)	8(15.)	3(5.7)
K8 Disease prevention program such as vaccination is a method of health promotion	52(80.0)	13(20.0)	0(0.0)	52(98.1)	0(0.0)	1(1.9)
K9 Health promotion includes the implementation of lifestyle and behaviour change programs	53(81.5)	12(18.5)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
K10 Health promotion calls for reorientation of health care services beyond clinical and curative services	52(80.0)	12(18.5)	1(1.5)	46(86.8)	3(5.7)	4(7.5)

Pearson's chi-square test was used to establish whether a statistical significance exist between the statements for knowledge of health promotion for the two health practitioner domains. GPs were significantly more knowledgeable than PTs with regards to health promotion on five (5) of the 10 statements ($p < 0.05$). See Table 4.3 below.

Table 4.3 Health practitioner domain differences in knowledge of health promotion services (n=118)

Statements about knowledge towards health promotion services	GPs (n)	PTs (n)	chi-square value (χ^2)	p-value
K1 Health promotion activity involves building health policy to promote health of the population	65	53	3.771	0.052
K2 HP intervention calls for professionals to be involved in improving and maintaining health status for all	65	53	3.775	0.052
K3 Health promotion intervention involves early detection and prevention of diseases	65	53	7.944	0.005
K4 Health promotion intervention involves strengthening community action to prevent diseases	65	53	7.225	0.007
K5 Health promotion intervention involves developing personal skills to stay healthy	65	53	4.308	0.038 *
K6 Health education is a process of implementing health promotion	65	53	0.982	0.322
K7 Health promotion can be achieved through environmental modification	65	53	6.687	0.035 *
K8 Disease prevention program such as vaccination is a method of health promotion	65	53	12.913	0.002 *
K9 Health promotion includes the implementation of lifestyle and behaviour change programs	65	53	8.181	0.004 *
K10 Health promotion calls for reorientation of health care services beyond clinical and curative services	65	53	6.413	0.004 *

Health practitioner domain differences related to knowledge of health promotion categories as presented in Table 4.4 below. The following criteria for knowledge

categories were used to classify the participants: marginal for 49% correct answers, adequate for >50 79% correct answers and high for >80% correct answers (Taufkobong et al., 2014).

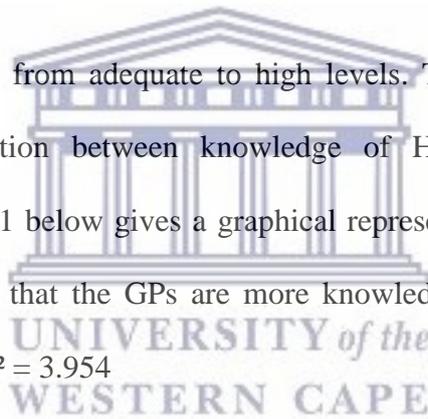
Table 4.4 Health practitioner domain differences in knowledge of health promotion categories (n=118)

Knowledge categories	Total n (%)	*GP n (%)s	**PTs n (%)	chi-square (χ^2)	p-value
MARGINAL	-	-	-		
ADEQUATE	6(5.1)	1(1.5)	5(9.4)	3.771	0.052
HIGH	112(94.9)	64(98.5)	48(90.6)	3.771	0.052

*GPs = General practitioners

**PTs = Physiotherapists

The knowledge levels ranged from adequate to high levels. The results revealed a statistical significant association between knowledge of HP levels and health practitioner domain. Figure 4.1 below gives a graphical representation of the results. The results therefore indicate that the GPs are more knowledgeable than PTs with regards to health promotion ($\chi^2 = 3.954$ p = 0.047).



4.3.1 LEVEL OF KNOWLEDGE OF HEALTH PROMOTION AND THE LEVEL OF EDUCATION OF THE PARTICIPANTS (N=118)

When examining the level of knowledge of the respondents based on their qualifications, the results revealed a statistical significant association of ($\chi^2 = 12.417$) and p=0.002 Thus, participants with a higher level of education (a degree), were more knowledgeable regarding health promotion than those with only a diploma. Graphical representation is given in Figure 4.1 below.

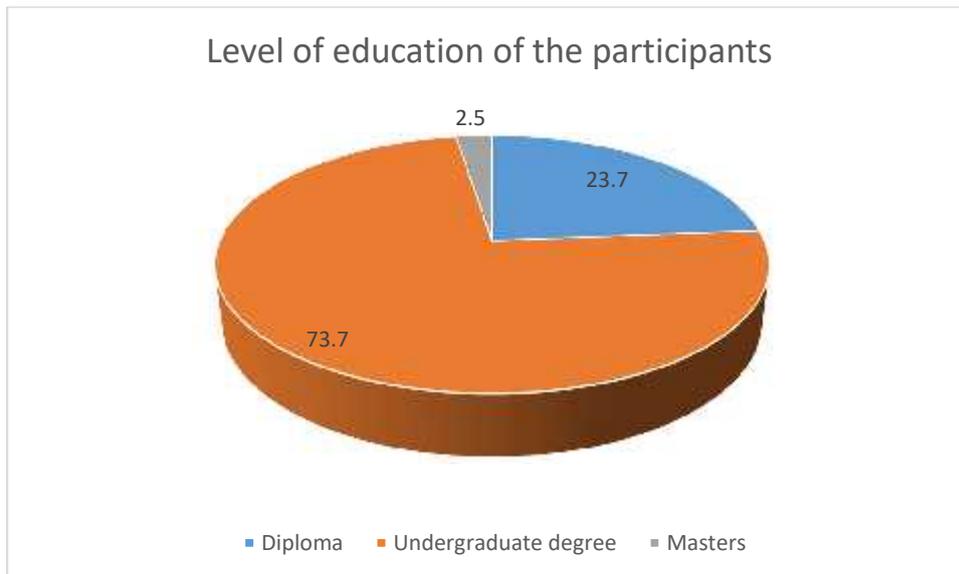


Figure 4.1 Level of education of the participants (n=118)

4.3.2 LEVEL OF KNOWLEDGE OF HEALTH PROMOTION AND WORK EXPERIENCE OF THE PARTICIPANTS (N=118)

The knowledge level of health promotion in relation to work experience was statistically significant with a p value of 0.002 ($\chi^2 = 18.420$). Participants with work experience of 11 years, were more knowledgeable about health promotion than those with less work experience. The results therefore indicate that the more work experience a health practitioner has (years of employment), the more knowledge he/she has about health promotion.

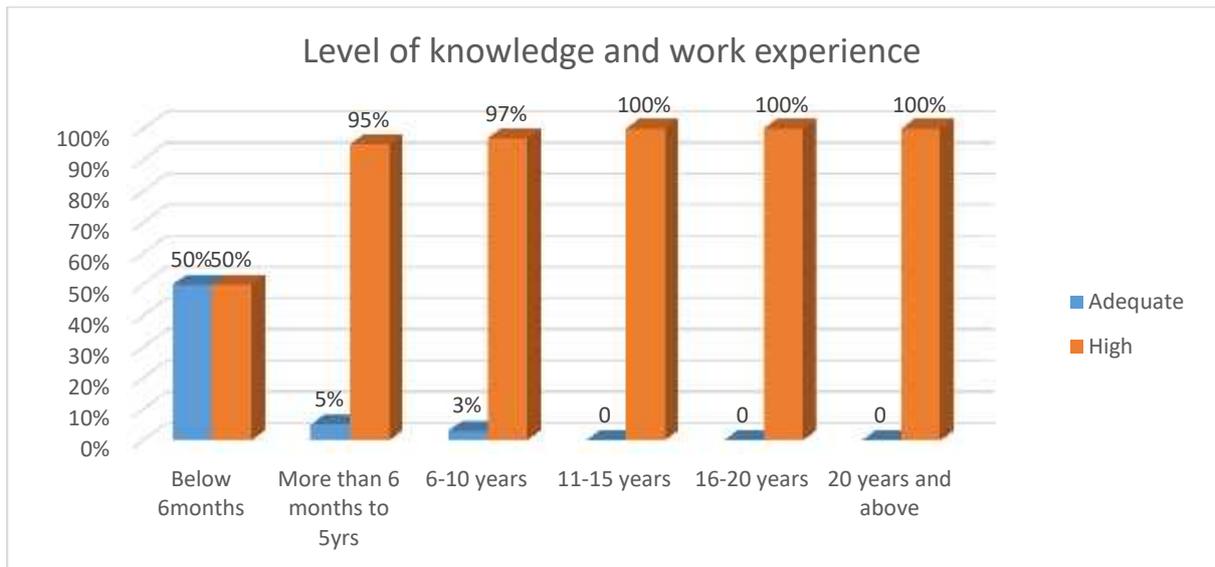


Figure 4.2 Level of knowledge of health promotion and work experience of the participants (n=118)

4.3.4 LEVEL OF KNOWLEDGE OF HEALTH PROMOTION AND AGE OF THE PARTICIPANTS (N=118)

Examination of the level of knowledge of the participants and their age equally revealed a statistical significant association of $p=0.000$. ($\chi^2 = 22.916$). All the participants 36 years of age (n = 45) had a high level of knowledge of health promotion. This is explicable as years of work experience are directly linked to age. See Figure 4.3 below.

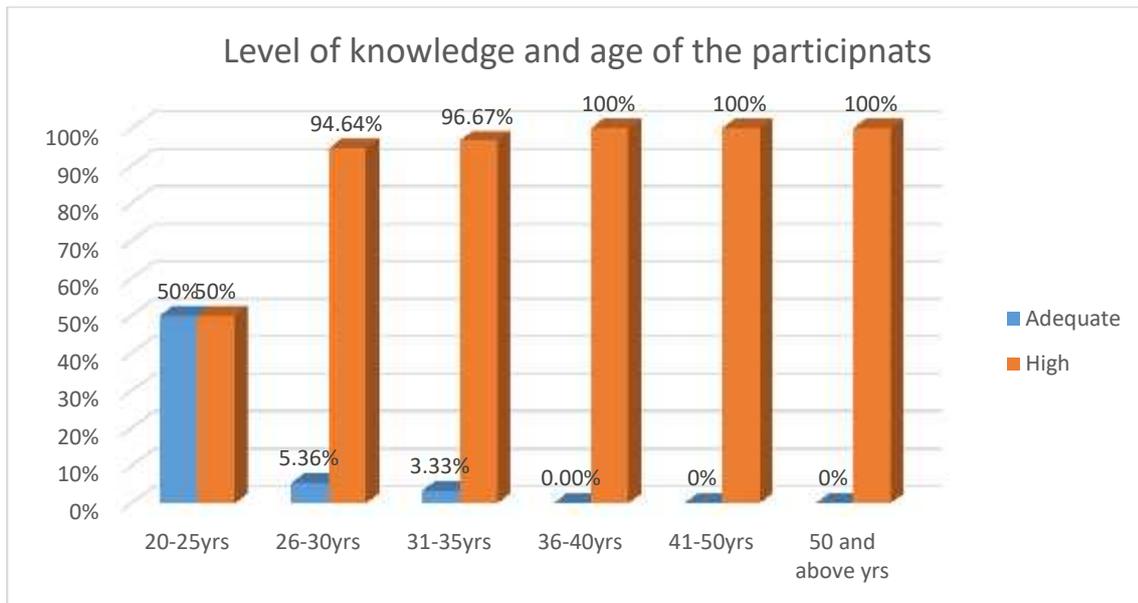


Figure 4.3 Level of knowledge health promotion and age (n=118)

4.3.5 LEVEL OF KNOWLEDGE OF HEALTH PROMOTION AND GENDER OF THE PARTICIPANTS (N=118)

This study had more male participants compared to the females. The males with adequate levels of knowledge of HP were a mere 9.0% (n=6) compared to those with high levels of knowledge levels (n=59, 91%). All the females (n=53; 100%) had high levels of knowledge of HP, as shown in Figure 4.4 below. No significant association were found for level of knowledge of HP and gender ($\chi^2 = 5.154$) and $p=0.023$.

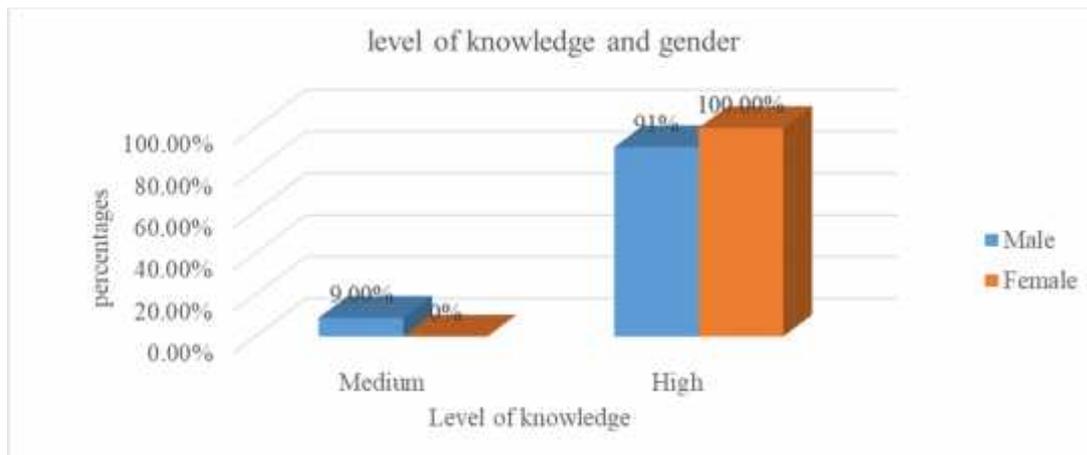


Figure 4.4 Level of knowledge of health promotion and gender (n=118)

4.4 ATTITUDES OF THE HEALTH PRACTITIONERS WITH REGARDS TO HEALTH PROMOTION (n=118)

In order to assess the attitude of the participants regarding health promotion, a series of nine (9) statements was answered. These statements were obtained from a reliable and valid questionnaire used in a study by Taukobong et al., (2014). The participants rated each statement using a 3-point Likert scale ranging from agree to neutral across the statements (2=agree, 1=disagree, 0=neutral). See the responses tabulated for both health practitioner domains in Table 4.5 below.

Table 4.5 Health practitioners' attitude towards health promotion (n=118)

Statements about attitude towards health promotion services	GPs Agree n(%)	GPs Disagree n(%)	GPs Neutral n(%)	PTs Agree n(%)	PTs Disagree n(%)	PTs Neutral n(%)
A1 Physiotherapy and general practitioners (GPs) are well positioned to integrate health promotion in practice	60(92.3)	5(7.7)	0(0.0)	36(67.9)	17(32.1)	0(0.0)
A2 physiotherapists should be involved in the efforts to promote physical activity	60(92.3)	5(7.7)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
A3 Health education on healthy diet should be part of the physiotherapy and GPs treatment plan	50(76.9)	15(23.1)	0(0.0)	50(94.3)	2(3.8)	1(1.9)
A4 Physiotherapists should be involved in educating people within their workplaces and in the communities about ergonomics (not for GPs)	53(81.5)	12(18.5)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
A5 Physiotherapists and GPs should participate in developing health and safety regulations for a healthy population	47(72.3)	18(27.7)	0(0.0)	50(94.3)	3(5.7)	0(0.0)
A6 The health educator role is appropriate for physiotherapists and GPs	52(80.0)	9(13.8)	4(6.2)	51(96.2)	1(1.9)	1(1.9)
A7 Physiotherapists and GPs should align their practice of health promotion efforts to the ministry of health	65(100)	0(0.0)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
A8 Health promotion should form an integral part of physiotherapy and GPs at all levels of health care	53(81.5)	12(18.5)	0(0.0)	50(94.3)	2(3.8)	1(1.9)
A9 Provision of time allocated for treatment should be made for integrating health promotion	51(78.5)	14(21.5)	0(0.0)	49(92.5)	4(7.5)	0(0.0)

Pearson's chi-square test was used to establish whether a statistical significance existed between the statements for attitude towards health promotion for the two health practitioner domains. The attitude of GPs towards HP services was significantly better than the attitude of the PTs on seven (7) of the nine (9) statements ($p < 0.05$). See Table 4.6 below.

Table 4.6 Health practitioner domain differences in attitude towards health promotion services (n=118)

Statements about attitude towards health promotion services	GPs (n)	PTs (n)	chi-square (χ^2)	p-value
A1 Physiotherapy and general practitioners (GPs) are well positioned to integrate health promotion in practice	65	53	11.443	0.001 *
A2 Physiotherapists should be involved in the efforts to promote physical activity	65	53	2.039	0.153
A3 Health education on healthy diet should be part of the physiotherapy and GPs treatment plan	65	53	9.822	0.007 *
A4 Physiotherapists should be involved in educating people within their workplaces and in the communities about ergonomics (not for GPs)	65	53	8.181	0.004 *
A5 Physiotherapists and GPs should participate in developing health and safety regulations for a healthy population	65	53	9.687	0.002 *
A6 The health educator role is appropriate for physiotherapists and GPs	65	53	7.062	0.029 *
A7 Physiotherapists and GPs should align their practice of health promotion efforts to the ministry of health	65	53	1.237	0.266
A8 Health promotion should form an integral part of physiotherapy and GPs at all levels of health care	65	53	7.083	0.029 *
A9 Provision of time allocated for treatment should be made for integrating health promotion	65	53	4.421	0.036 *

The total scores for attitude toward HP were tallied and labelled as follows: Negative (< 49% correct responses), Neutral (>50-79% correct responses) and Positive (>80% correct responses). The results are presented in the Table 4.7 below.

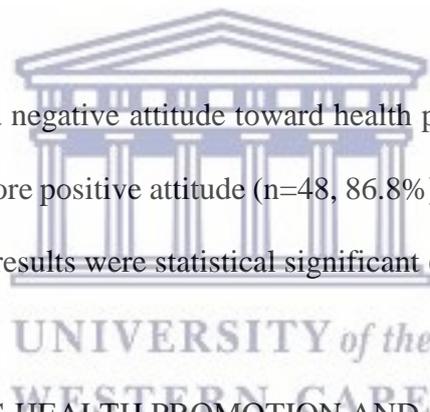
Table 4.7 Health practitioner domain differences in attitude towards health promotion categories (n=118)

Attitude categories	Total n (%)	*GP n (%)s	**PTs n (%)	chi-square (χ^2)	p-value
NEGATIVE	-	-	-		
NEUTRAL	20(16.9)	13(20.0)	7(13.2)	0.957	0.328
POSITIVE	98(83.1)	52(80.0)	48(90.6)	0.957	0.328

*GPs = General practitioners

**PTs = Physiotherapists

None of the participants had a negative attitude toward health promotion. A marginal percentage of the PTs had a more positive attitude (n=48, 86.8%), compared to the GPs (n=52, 80.0%). However, the results were not statistically significant ($\chi^2 = 5.255$, $p = 0.022$).



4.4.1 ATTITUDE TOWARDS HEALTH PROMOTION AND AGE, GENDER AND WORK EXPERIENCE OF PARTICIPANTS (N=118)

No statistically significant association was found for attitude towards health promotion and age ($\chi^2 = 8.041$, $p = 0.154$), gender ($\chi^2 = 0.664$, $p = 0.415$) and work experience ($\chi^2 = 6.692$, $p = 0.245$).

4.4.2 ATTITUDE TOWARDS HEALTH PROMOTION AND LEVEL OF EDUCATION OF PARTICIPANTS (N=118)

A statistically significant association was found for the attitude towards health promotion and level of education ($\chi^2 = 13.308$, $p = 0.001$). Health practitioners with a higher

qualification, e.g. an undergraduate degree and Masters, had a more positive attitude towards health promotion for NCDs than participants who had obtained a diploma only.

Figure 4.5 illustrates the results in graph form.



Figure 4.5 Attitudes of health practitioners towards health promotion and level of education (n=118)

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4.5 HEALTH PRACTITIONERS' INTEGRATION OF HEALTH PROMOTION IN WORK PRACTICE (n=118)

This section sought to examine both health practitioners' domains' integration of health promotion in their current work practice. Participants completed 10 statements from the reliable and valid questionnaire used in a study by Taukobong et al., (2014). The study sought to determine how frequent the health practitioners practice health promotion. Each statement had a possible three (3) response, namely Always = 2, Often = 1 and Never = 0. The results are presented in the Table 4.8 below.

Table 4.8 Health practitioners' integration of health promotion in work practice (n=118)

Statement about integration of health promotion in physiotherapy and GPs practice	GPs Always n(%)	GPs Often n(%)	GPs Never n(%)	PTs Always n(%)	PTs Often n(%)	PTs Never n(%)
P1 Health promotion is part of my responsibility	51(78.5)	14(21.5)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
P2 Health promotion is integrated in the treatment when the patient is aware of the problem	44(67.7)	21(32.3)	0(0.0)	49(92.5)	4(7.5)	0(0.0)
P3 All patients are educated about health-related risks	25(38.5)	40(61.5)	0(0.0)	36(67.9)	17(32.1)	0(0.0)
P4 Emotional support is provided to patients when no any other support is available	38(58.5)	27(41.5)	0(0.0)	45(84.9)	8(15.1)	0(0.0)
P5 Patients are encouraged to talk about their health problems	37(56.9)	28(43.1)	0(0.0)	46(86.8)	7(13.2)	0(0.0)
P6 Patients are educated about available health resources in their communities	38(59.4)	26(40.6)	0(0.0)	47(88.7)	6(11.3)	0(0.0)
P7 Patients are assisted to make healthier choices about their health	44(67.7)	21(32.3)	0(0.0)	48(90.6)	5(9.4)	0(0.0)
P8 Health education and physical activity are included in the treatment	52(80.0)	13(20.0)	0(0.0)	52(98.1)	1(1.9)	0(0.0)
P9 Health education is integrated in treatment of all patients	25(38.5)	40(61.5)	0(0.0)	37(69.8)	16(30.2)	0(0.0)
P10 Health education is included during consultation time	38(58.5)	27(41.5)	0(0.0)	45(84.9)	8(15.1)	0(0.0)

Notable from the above Table 4.8 are results of both health practitioner domains regarding their practice of health promotion in their work. It is however evident from the average percentage of the “always” category that GPs possess an average of 60% while the PTs possess 85%. This clearly shows that the PTs are more often likely to incorporate HP in their daily practice.

The total scores for integration of HP in work practice were tallied and labelled as follows: Marginal (49% correct responses), Adequate (>50 79% correct responses) and High (>80% correct responses). The results are presented in the Table 4.9 below:

Table 4.9 Health practitioner domain differences in integration of health promotion in work practice categories (n=118)

Integration of HP in work practice categories	Total n (%)	*GP n (%)s	**PTs n (%)	chi-square (2)	p-value
MARGINAL	-	-	-		
ADEQUATE	23(19.5)	21(32.3)	2(3.8)	15.148	0.000
HIGH	95(80.5)	44(67.7)	51(96.2)	15.148	0.000

*GPs = General practitioners

**PTs = Physiotherapists

Pearson’s chi-square test was used to establish whether a statistical significance exist between the statements for integration of health promotion in work practice for both health practitioner domains. The integration of HP in work practice of PTs were significantly better than that of the GPs on all 10 statements (p 0.05). See Table 4.10:

Table 4.10 Health practitioner domain differences in integration of health promotion in work practice (n=118)

Statement about integration of health promotion in work practice	GPs (n)	PTs (n)	Chi-square (²)	P-value
P1 Health promotion is part of my responsibility	65	53	10.161	0.001 *
P2 Health promotion is integrated in the treatment when the patient is aware of the problem	65	53	10.719	0.001 *
P3 All patients are educated about health-related risks	65	53	10.149	0.001 *
P4 Emotional support is provided to patients when no any other support is available	65	53	9.786	0.002 *
P5 Patients are encouraged to talk about their health problems	65	53	12.485	0.000 *
P6 Patients are educated about available health resources in their communities	65	53	12.53	0.000 *
P7 Patients are assisted to make healthier choices about their health	65	53	8.892	0.003 *
P8 Health education and physical activity are included in the treatment	65	53	9.16	0.002 *
P9 Health education is integrated in treatment of all patients	65	53	11.507	0.001 *
P10 Health education is included during consultation time	65	53	9.786	0.002 *

4.5.1 INTEGRATION OF HEALTH PROMOTION IN WORK PRACTICE AND AGE, GENDER AND WORK EXPERIENCE

No statistical significant association was found for integration of HP in work practice and age (² 7.683, p = 0.175), gender (² 1.898, p = 0.168) and work experience (² 6.516, p = 0.259).

4.5.2 WORK PRACTICE AND LEVEL OF EDUCATION

A significant association was however found for integration of HP in work practice and level of education (² 6.510, p = 0.039). This implies that participants with a degree

(undergraduate and Masters) are more prone to integrate HP in their work practice than participants with a diploma qualification only. See Figure 4.6 below.

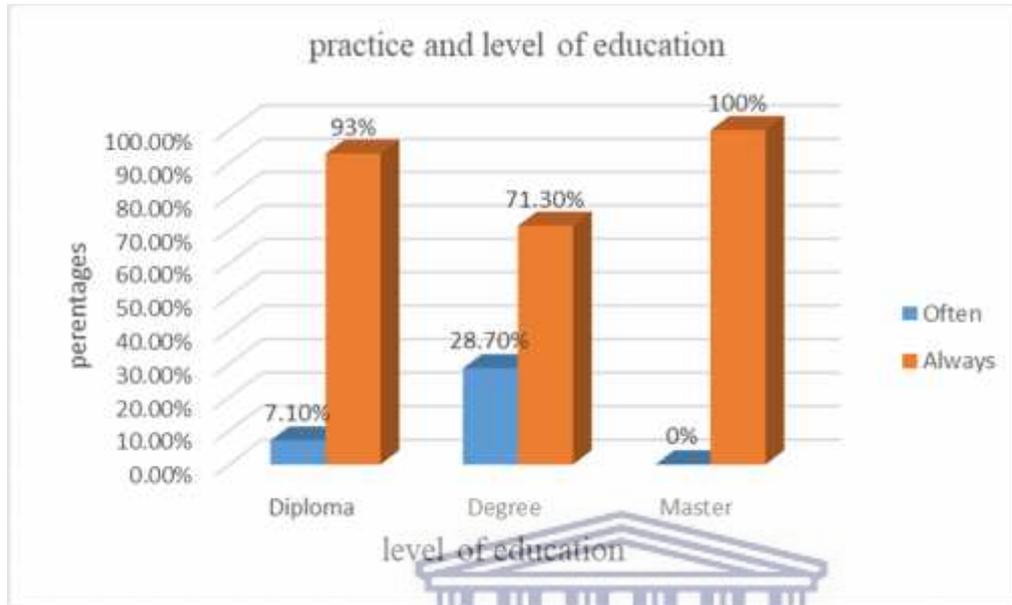
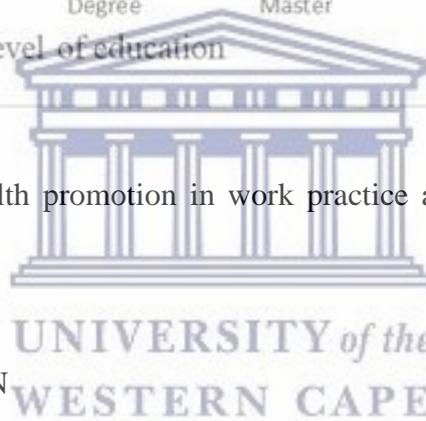


Figure 4.6 Integration of health promotion in work practice and level of education (n=118)



4.6 LOGISTIC REGRESSION

This model was used to investigate functional relationships associated with the GPs and PTs knowledge, attitude and practice scores. Statistical significance was set at $p = 0.005$.

Table 4.11 below shows the odds ratio (OR) for the likelihood of the GPs and PTs knowledge, attitude and practice with regard to health promotion.

Table 4.11 Odds ratio (OR) for likelihood of the GPs and PTs knowledge, attitude and practice with regard to health promotion.

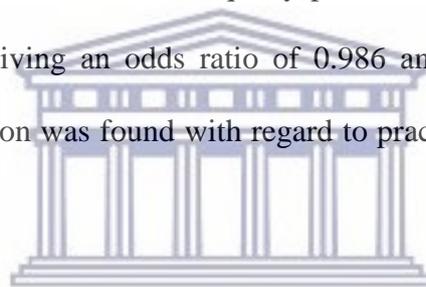
Variables	Odds values	p-value
Knowledge score	0.704	0.157
Attitude	0.986	0.956
practice score	4.631	0.000
constant	0.000	0.000

*Dependent variable = health practitioner

**With reference=PT

*** PT= physiotherapists

The results of Table 4.11 therefore show that with regard to knowledge, there is 0.704 less likely association with the PTs as the results are not significant with a p-value of 0.157. Secondly, the attitude of the PTs has equally proved to be insignificant with regard to health promotion giving an odds ratio of 0.986 and a p-value of 0.956. However, significant association was found with regard to practice with odds ratio of 4.631 and p-value of 0.000.



It therefore suffices to say that with regard to this study and the regression model, knowledge and attitude scores did not show any association with regard to health promotion and the PTs compared to the GPs. While the results conclusively indicate that PTs are 4 times more like to practice health promotion compared to the GPs.

4.7 SUMMARY OF THE CHAPTER

The following fundamental results were obtained from the analysis of the quantitative data of the health practitioners:

- GPs possess more knowledge with regard to HP compared to the PTs.

- Knowledge levels are highly associated with age, the qualification, work experience and gender of the health practitioner, i.e. the higher the age, qualification, and work experience, the better knowledge they will have with regard to health promotion. Females possessed more knowledge compared to males.
- Attitudes of the health practitioners in this study was found to be associated with the level of education. The higher the level of education the better the attitude one possesses towards health promotion.
- All other variables including, age, gender, work experience did not show any effect on the attitude of the health practitioners' attitudes towards HP
- Practice was equally found to be affected by the qualification of the health practitioners. This indicates that the higher the qualification the more likely one is to practice health promotion.
- Another association was found between the two domains with the PTs possessing 86% of always practising HP compared to the 60% of the GPs
- Finally, the logistic regression showed no statistical significance of the effect of knowledge and attitude with regard to the PTs and HP. While practice was statistically significant, PTs were 4 times more likely to practice HP compared to the GPs.

The next chapter will outline the perceptions of both physiotherapy and general medical practitioners regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia.

CHAPTER FIVE

QUALITATIVE RESULTS

5.1 INTRODUCTION

This chapter contains the results of the content analysis of the focus group discussions which attempted to answer the last two objectives of the study, namely to explore the perceptions of physiotherapy practitioners and general medical practitioners respectively regarding their role in health promotion for NCDs in the hospitals of the Southern Province, Zambia. Purposive sampling was employed, thus participants who completed the questionnaire in the quantitative phase of the study and were willing to take part in the focus group discussions (FGDs) were invited.

5.2 FOCUS GROUP DISCUSSIONS WITH HEALTH PROFESSIONALS

A total of eight (8) FGDs were conducted with three (3) FGDs at the central hospital, two (2) FGDs at the general hospitals and three (3) FGDs at the district hospitals. There was no need for more FGDs as saturation was reached. A total of 46 health professionals, 26 females and 20 males agreed to participate. Out of the 46 participants, 24 were GPs and 22 were PTs. The focus groups took place in a relaxed and convenient setting for all the group members. Each participant was encouraged to wholeheartedly participate in the discussions. The two tables below table 5.1 and table 5.2 show the social demographic profiles of the two domains of health practitioners who took part in the focus group discussions

5.2.1 SOCIAL DEMOGRAPHIC PROFILE FOR GENERAL MEDICAL PRACTITIONERS WHO TOOK PART IN THE FOCUS GROUP DISCUSSION

Table 5.1

PARTICIPANT	GENDER	AGE	LEVEL OF EDUCATION	WORK EXPERIENCE	LEVEL OF HOSPITAL
GP1a	Male	31-35 years	Undergraduate Degree	>6months-5 years	Central
GP1b	Female	26-30 years	Undergraduate Degree	>6months-5 years	General
GP1c	Male	31-35 years	Undergraduate Degree	>6months-5 years	District
GP2a	Female	41-50 years	Undergraduate Degree	16-20 years	Central
GP2b	Male	31-35 years	Undergraduate Degree	6-10 years	General
GP2c	Female	20-25 Years	Undergraduate Degree	<6 months	District
GP3a	Male	26-30 Years	Undergraduate Degree	>6months-5 years	Central
GP3b	Female	26-30 Years	Undergraduate Degree	>6months-5 years	General
GP3c	Female	31-35 years	Undergraduate Degree	6- 10 years	District
GP4a	Male	31-35 years	Undergraduate Degree	6-10 years	Central
GP4b	Male	36-40 years	Undergraduate Degree	16-20 years	General
GP4c	Female	31-35 years	Undergraduate Degree	>6months-5 years	District
GP5a	Female	26-30 years	Undergraduate Degree	>6months-5 years	Central
GP5b	Female	31-35 years	Undergraduate Degree	6-10 years	General
GP5c	Male	36-40 years	Undergraduate Degree	11-5 years	District
GP6a	Female	31-35 years	Undergraduate Degree	>6months-5 years	Central
GP6b	Male	31-35 years	Undergraduate Degree	6-10 years	General
GP6c	Female	36-40 years	Undergraduate Degree	11-15 years	District
GP7	Female	26-30 years	Undergraduate Degree	>6months-5 years	Central
GP8	Male	36-40 years	Undergraduate Degree	6-10 years	General
GP9	Female	41-50 years	Undergraduate Degree	16-20 years	General
GP10	Male	31-35 years	Undergraduate Degree	>6months-5 years	Central
GP11	Female	31-35 years	Undergraduate Degree	>6months-5 years	Central
GP12	Male	20-25 years	Undergraduate Degree	<6 months	General

5.2.2 SOCIAL DEMOGRAPHIC PROFILE FOR PHYSIOTHERAPY PRACTITIONERS WHO TOOK PART IN THE FOCUS GROUP DISCUSSION

Table 5.2

PARTICIPANT	GENDER	AGE RANGE	LEVEL OF EDUCATION	WORK EXPERIENCE	LEVEL OF HOSPITAL
PT1a	Female	36-40 years	Undergraduate Degree	16-20 years	Central
PT1b	Male	36-40 years	Undergraduate Degree	16-20 years	General
PT1c	Female	26-30 years	Diploma	>6months-5 years	District
PT2a	Male	31-35 years	Undergraduate Degree	11-15 years	Central
PT2b	Female	31-35	Diploma	11-15 years	General
PT2c	Female	26-30	Undergraduate Degree	>6months-5 years	District
PT3a	Female	31-35 years	Diploma	6-10 years	Central
PT3b	Male	31-35 years	Undergraduate Degree	>6months-5 years	General
PT3c	Female	26-30 years	Diploma	6-10 years	District
PT4a	Male	31-35 years	Undergraduate Degree	>6months- 5 years	Central
PT4b	Female	26-30 years	Diploma	>6months- 5 years	General
PT4c	Male	26-30 years	Diploma	>6months- 5 years	District
PT5a	Female	31-35 years	Diploma	6-10years	Central
PT5b	Female	36-40 years	Undergraduate Degree	16-20 years	General
PT5c	Male	31-35 years	Undergraduate Degree	>6months-5 years	District
PT6a	Female	20-25 years	Diploma	>6months- 5 years	Central
PT6b	Male	26-30 years	Undergraduate Degree	>6months- 5 years	District
PT7	Female	31-35 years	Undergraduate Degree	6-10 years	District
PT8	Male	20-25 years	Diploma	<6months	Central
PT9	Male	31-35 years	Undergraduate Degree	>6months- 5 years	District
PT10	Female	31-35 years	Undergraduate Degree	>6months- 5 years	District
PT11	Female	31-35 years	Diploma	11-15 years	Central

5.3 EMERGING THEMES AND SUBTHEMES

The emerging themes generated from the thematic analysis of the FGDs are outlined in Table 5.3 below.

Table 5.1 Emerging themes and subthemes of the FGDs

	THEMES	SUBTHEMES
1.	Understanding what Health Promotion is	-
2.	State of NCDs in the Southern Province of Zambia	-
3.	Health practitioners' perceptions regarding their role in health promotion for NCDs	i) Vital role ii) Health promotion: the way forward iii) Placement of physiotherapy practitioners
4.	The current concentration of curative management with regard to NCDs	-
5.	Challenges experienced by the health practitioners with regard to health promotion	i) Language barrier ii) Low levels of funding iii) Poor referral systems iv) Lack of capacity building programmes v) Cultural beliefs, myths and religion vi) Poor attitude and understanding of the patients vii) Staff shortage viii) Placement in secondary and tertiary Hospitals ix) Lack of a plan

Verbatim quotes will be used to further exemplify the above-mentioned themes.

5.3.1 UNDERSTANDING WHAT HEALTH PROMOTION IS

The researcher noted that health practitioners from both domains had a challenge in defining health promotion as a broad term. Most of the GPs expressed their understanding of health promotion as a model of providing information to individuals and the community at large usually on prevailing diseases. The disease can be either communicable or non-communicable. They further stated that the provision of this information is at every point of contact with the patients, being at primary, secondary or tertiary level.



“Health promotion is the provision of quality information to individuals and the community before patients come to the hospital. Giving this information to the communities helps to deal with the problem right within their respective communities especially for conditions like NCDs. This enables us to deal with the problem right at the grassroots.” (GP8)

“Health promotion entails addressing health-related issues of both individuals and communities at all levels... that is primary, secondary and tertiary.” (GP2a)

Another participant specified that health promotion can be provided in the wards, mother and child health care units and other departments like the physiotherapy department. The following quote illustrate the participant’s sentiment.

“Health promotion entails providing information to the patients or the general population of various preventive measures at every point of contact... which can be in the wards or even the physiotherapy departments.” (GP1c)

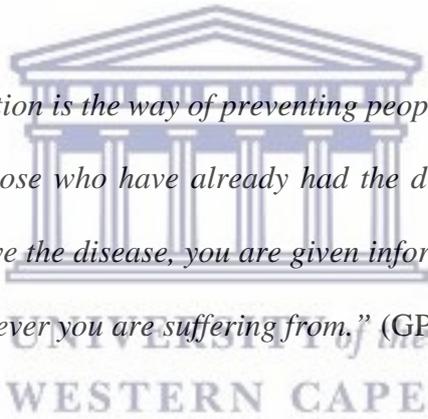
In addition, the GPs highlighted that information regarding health promotion can either be preventive or curative in nature, depending on the condition being managed and the time the patients seeks health care services. See the statement below.

“Health promotion is a way of providing both preventive and curative information to the patients and general population at every point of contact. They can have that preventive information to prevent the disease and for those who are already affected, it can be cured and slowed down, depending on what stage the disease is at when they get to the hospital.” (GP6b)

“Health promotion is the way of providing preventive or curative information through various activates like media, billboards and treatment that people can get from the hospitals. This information gives people an idea that every condition can be handled irrespective of the stage except in extreme cases, even then palliative care can be given.” (GP4a)

Other GPs defined health promotion in line with lifestyle changes, indicating that it enhances the quality of life and well-being of individuals and the general population. Thus, people are taught how these diseases are acquired, the signs and symptoms to look out for, how to prevent the disease(s) and what they should do when they acquire the disease(s).

“Efforts by health professionals to enhance the health of the people we see... be it the patients, clients and our efforts in educating them about healthy lifestyles which help to maintain and improve their quality of life.” (GP5a)



“Health promotion is the way of preventing people from getting diseases and those who have already had the disease, to stay safe. If you already have the disease, you are given information on how to stay healthy in whatever you are suffering from.” (GP1b)

Referral to specific health care facilities for appropriate management of the disease is equally part of health promotion, as the excerpts below illustrate:

“We also provide information on which hospitals provide quality care, for example, hospitals that can handle secondary complication like stroke, cardiac problems or renal failures.” (GP4c)

“Referrals to other professionals like the nutritionists for nutritional management as these are lifestyle conditions and physiotherapists for rehabilitation are also provided for patients we see.” (GP3c)

The physiotherapy practitioners (PTs) echoed similar sentiments as the GPs, namely that HP is a process of transmitting knowledge from medical practitioners to the general public. It entails educating people, especially the public on how to maintain their health and well-being. It also includes the prevention of ailments which might lead to disability. The overall aim of HP is to improve and/or maintain a healthy population.

“Health promotion to me entails giving of health-related information to the general public, through one on one contact and various forms such as social media and hard copies that can be disseminated to the general public to improve their well-being.” (PT7)

“Health promotion means promoting good well-being that is mentally, physically and socially for improved quality of life.” (PT5c)

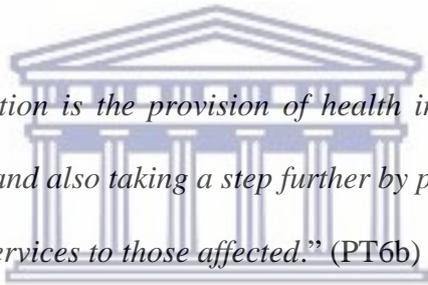
“They (health promotion) are activities that are done in terms of education of the public and making them aware of the things that can help them prevent disease and disability.” (PT4a)

A physiotherapy practitioner further indicated that HP also encompasses educating the community members to give them a chance to manage a particular condition right from the grassroots. The community is thus educated on different health related risks, what

to look out for and how to manage the diseases. It is illustrated in the following excerpt below:

“Health promotion also looks at the risk factors within a community of the given conditions and the activities which can be undertaken to help combat these conditions.” (PT1b)

However, one physiotherapy practitioner aligned HP to the provision of information on illness prevention and provision of rehabilitative services to various individuals and the community.



“Health promotion is the provision of health information on how to prevent illness and also taking a step further by providing rehabilitative services to those affected.” (PT6b)

The fore-mentioned revelations show that both GPs and PTs understand what health promotion is all about.

5.3.2 STATE OF NON-COMMUNICABLE DISEASES (NCDs) IN THE SOUTHERN PROVINCE OF ZAMBIA

As a province that is plagued with traumatic injuries/cases, the researcher was interested in the current state of NCDs. Both health practitioner domains stated that NCDs are on the rise. Although the statistics are not always accurate, according to the GPs the rise in NCDs can be attributed to the poor lifestyle that people embrace. Poor lifestyle has

contributed to NCDs being one of the major causes of morbidity and mortality in the Southern Province of Zambia.

“NCDs are on the rise... We have seen an increase in the number of patients with NCDs in the hospitals.” (GP8)

“The actual percentage (of NCDs)... I wouldn’t be in the position to say... but what I know right now is non-communicable conditions are on the increase. Previously, we didn’t have this non-communicable diseases appearing in the top ten causes of morbidity and mortality, but as I am speaking now, we have found out that they (NCDs) are now part of the top ten causes of mortality and morbidity.” (GP5c)

Physiotherapy practitioners also indicated that over the past few years they have seen an alarming increase in the number of patients with NCDs that needed rehabilitation services, especially patients affected with cerebral vascular accidents and diabetic neuropathies. Their sentiments are shared below:

“I would say that the prevalence (of NCDs) is quite high... We can’t even come to a point where we can say that this age group is more affected than the other... it’s across the board.” (PT7)

“Looking at the number of for example CVAs (cerebro-vascular accidents) we have, I can say NCDs are on the increase.” (PT2c)

“The prevalence is very high actually... because according to the statistics we had during the physiotherapy awareness week (2017), it’s actually more than 50% of the people we randomly screened... they are either obese or hypertensive and have not sought any help for these conditions.” (PT4b)

It is evident from the statements that the increase in NCDs cannot be disputed. However, the participants, especially the PTs were quick to point out that capturing the actual number of patients affected with NCDs like stroke is poor. Once discharged, most patients do not adhere with attendance of their physiotherapy rehabilitation sessions.

5.3.3 HEALTH PRACTITIONERS’ PERCEPTIONS REGARDING THEIR ROLE IN HEALTH PROMOTION FOR NCDS



i) Vital role

The participants indicated that they have a vital role to play in the fight against NCDs. Health promotion is of utmost importance to curb the rise in NCDs. This sentiment is due to the challenges this country is facing and mostly because the health practitioners saw the positive results that HP has produced when employed in the fight against communicable diseases. Most of the participants are thus of the view that HP is one of their major responsibilities, especially in the fight against NCDs.

“As a GP, for health promotion...I am actually supposed to be in the forefront, because I am the first one the patient sees. I should be able to preach about it.” (GP6a)

“I actually take time to educate my patients on the various aspects of their health which is also a form of health promotion. In short, if someone understands their condition, they adherence to medication is better and ultimately improves the outcome.” (GP9)

“We as GPs have a significant role to play in the fight against NCDs as most of the patients pass through our hands. We do try, but maybe more can still be done considering that NCDs affect not only a few people but the whole country at large.” (GP2c)

ii) Health promotion: the way forward

Both the GPs and the PTs are of the view that HP is the way forward in the fight against NCDs. Educating the public on the signs and symptoms of these conditions will enhance early detection of the NCDs.

“Education is power. We need to start educating the people from the grassroots to be able to identify the NCDS early. When patients identify them (NCDs), they could present themselves to the appropriate facility early so that something can be done about it.” (GP3b)

“Health promotion is very vital as we can prevent those people that have not yet acquired these conditions from getting them. For those that already have these NCDs, we can give them information on how to prevent the condition from worsening.” (PT9)

In addition, education can also help to reduce the myths and beliefs that people have with regard to NCDs. This could assist with the person seeking help early from appropriate medical personnel.

“We also need to educate people in the community about the myths and beliefs they have about NCDs.” (GP6c)

“Most people attribute NCDs to various myths and beliefs within their communities if these people are educated on what, when, and how these NCDs come into play and how to not only handle them but also how to prevent them, then we can we can have better out comes.”

(GP1a)

A physiotherapist perceived her role in HP as one of her key responsibilities which would go a long way if well implemented. The rationale behind this is because NCDs are lifestyle-related and PTs are well vested in this area.

“Actually, for me... I think that it (health promotion) is even the core of our business as physiotherapists. In the sense... if you look at most

non-communicable diseases...they are due to lifestyle and the major part of lifestyle has to do with activity... which is exercise.” (PT4c)

However, another participant concurred that this area (health promotion) of their profession has remained unexplored due to various challenges. She feels that most of her HP activities are limited to the physiotherapy department.

“As a profession involved in health promotion in the health sector, I believe that the involvement could increase and most of the involvement of the physiotherapists I have noticed is more on the ground (in the physiotherapy department). It would be a very good endeavour to take health promotion, as a multidisciplinary approach, across the board.” (PT5b)

iii) Placement of physiotherapy practitioners

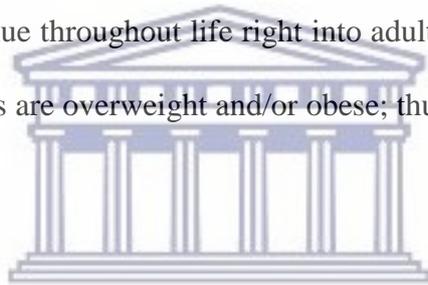
Physiotherapy practitioners can manage patients at primary health care centres. This could aid in the early detection and treatment of NCD-related symptoms and even reduce the management cost of such diseases.

“We are supposed to be in the first level... that is primary health care... to prevent all kinds of ailments of conditions that could lead to disability. We need physiotherapists to be there (in the primary health care setting). That is why we are advocating for positions and for more physiotherapists to be trained, so that we can even be in the most

remote parts of the country... enabling us to detect the condition before it gets worse.” (PT1c)

“The employment system here in our country is basically inclined to placement of physiotherapists in hospital setups and this limits our application of health services to clients that are admitted in the wards or those who come as out patients.” (PT5a)

In a similar context, PTs felt that they should also be placed at schools to instil a knowledge of HP in the children. Research cautions that the lifestyle children adopt is the lifestyle they would continue throughout life right into adulthood. Currently, most the children in primary schools are overweight and/or obese; thus, putting them at risk of acquiring NCDs.



“I strongly feel there is a need for physiotherapists in Education, because they can educate the children how to prevent NCDs. No... that thing (exercise is good for health) should be put in their (the schoolchildren’s) minds while they are young. So... placement of physiotherapists in schools can help the children to stay healthy into adulthood.” (PT3a)

“Physiotherapists are not just supposed to be stationed within the hospitals but should be involved and work hand in hand with other ministries too... for instance the Ministry of Education. They

(physiotherapists) should equally be involved in providing health talks to enhance preventive knowledge with regard to NCDs.” (PT6a)

Although the government through the Ministry of Education has introduced physical education for all primary and secondary schools, the experts in exercise prescription, physiotherapy practitioners, are not employed at schools. PTs could help in the prescription of the correct exercises for the children and assist with the identification of children who need more attention, for instance children who are obese or already affected with NCDs such as diabetes.

“With the introduction of a sports day in most ministries, physiotherapists should be more involved. I think they can emphasise the importance of the prevention of NCDs through participation in sport and also identify the people at risk and who may need more attention... thus referring them to the appropriate specialists.” (PT2b)

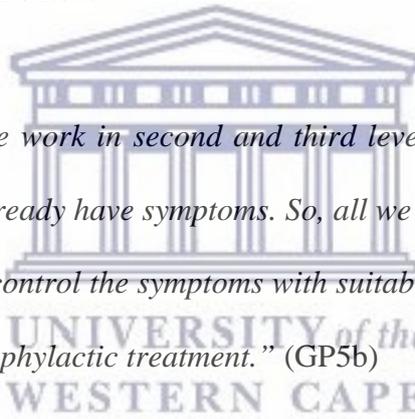
“Very few, if any schools currently have physiotherapists to work in the physical education. This makes it difficult to identify children in need of early treatment, like those who are obese... thus hindering early intervention.” (PT1a)

The feeling of both health professional domains is mutual concerning the role physiotherapy practitioners can play in the combat against NCDs from early childhood. The provision of positions for PTs, especially in primary health care centres and schools could be very beneficial as it will enhance early identification of risk factors for the

development of NCDs as well as appropriate management of NCDs; thus, preventing possible complications and disability.

5.3.4 CURATIVE MANAGEMENT OF NCDS

As indicated in the introduction, NCDs are lifestyle-related conditions. The participants acknowledged that preventive services are the most appropriate way to address the rise in the NCD epidemic. Most of the GPs in the present study acknowledged that they spend most of their consultation time prescribing various drugs to reduce and manage the symptoms of NCDs. The GPs were also quick to mention that they do include health promotion, but to a much lesser extent.



“As doctors, we work in second and third level hospitals. So, we see patients who already have symptoms. So, all we do is control the symptoms. We control the symptoms with suitable line of treatment and put them on prophylactic treatment.” (GP5b)

“Most patients come to the hospital when they have complications. Now at this point we want to prevent further damage so we provide curative care and later refer them to other professionals like the physiotherapists for further management. However, we still talk to our patients so as to prevent reoccurrence of the disease... but to a lesser extent due to increased workload.” (GP1a)

“I do a bit of preventive, but mostly curative management, because the patients would come to the hospital. I am hospital-based... so most people come to the hospital when they are not well.” (PT4c)

“Patients are referred late, mostly at the time they already have complications of these NCDs.” (PT11)

Asked on why they base majority of their treatment on curative management, the participants mentioned limited time due to staff shortage as a culprit.

“As much as we are willing to use health promotion, we are overwhelmed with the number of patients we see every day. So, provision of curative comes in handy as compared to providing health promotion which is good but needs adequate time.” (GP7)

“As a GP, here (rural hospital), I cover more than two health centres, so I tend to provide more curative services as opposed to preventive. Maybe if we were a lot, then we can divide these services amongst ourselves.” (GP9)

“Providing health promotion requires time. So, if I dedicate much of my time to this (health promotion), I will not have enough time to see patients in other wards. We basically need more staff.” (GP3a)

Although both health practitioner domains are not part of the NHSP team mandated to provide health promotion programmes, it does not prevent them from applying health promotion principles when an opportunity presents itself, especially in the early stages of the disease.

5.3.5 CHALLENGES EXPERIENCED BY THE HEALTH PRACTITIONERS WITH REGARD TO HEALTH PROMOTION

This theme captured the challenges the participants encounter in their endeavour to implement health promotion at their institutions. Among the challenging factors brought to light by the participants, the following were common in both disciplines: language barrier, low levels of funding, poor referral systems and lack of capacity building programmes.

i) Language barrier

Both disciplines indicated that language is a challenge as most of them cannot express themselves in the local languages. Deployment of health workers is not based on which language the health personal is competent in. It makes it difficult for them to adequately impart health promotion knowledge in their patients.

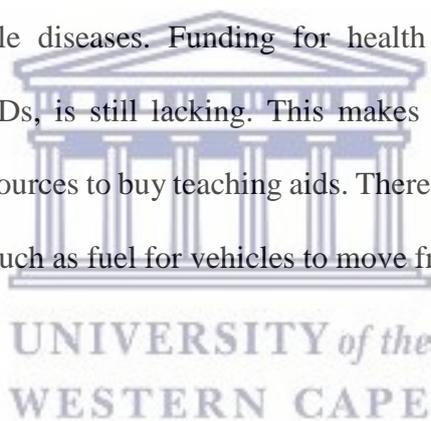
“Language barrier is a big challenge... not only in medical terms, but just expressing yourself and making sure that the patient understands what you are talking about.” (GP1b)

“Most patients, especially here (rural area), only speak the local language and most of us are not fluent in it...so this acts as a barrier in providing health promotion.” (GP8)

“Sometimes we have translators to help us, but translations are sometimes not done properly.” (GP4b)

ii) Lack of funding

Both disciplines echoed that little, and in some cases, no funding is available for health promotion programmes. The Ministry of Health in Zambia mainly concentrates on the management of communicable diseases. Funding for health promotion activities, especially with regard to NCDs, is still lacking. This makes it difficult to educate communities due to lack of resources to buy teaching aids. There is also lack of funding to cater for running expenses such as fuel for vehicles to move from one community to another.



“We lack materials to use in the implementation, because people respond more to visual aids.” (GP9)

“We lack enough funds to cater for expenses like fuel to enable us to visit remote areas.” (PT2a)

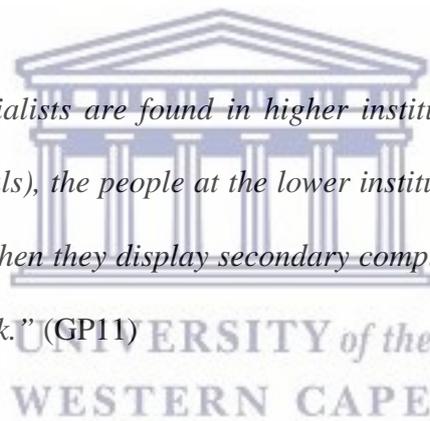
“The health sector is already struggling with funding... so funding for NCDs is also affected. We therefore need more donors to come on board to help us in this area.” (GP10)

iii) Poor referral systems

Health practitioners are required to refer patients to team members for further management, especially in the case of NCDs which requires specialist treatment. GPs indicated that the health practitioners in the health centres and first level hospitals, in most cases, refer the patients late for specialist management. Late referral could negatively affect the outcome of the patient.

“The referral system is poor... some patients are referred very late to higher institutions.” (GP2b)

“As most specialists are found in higher institutions (secondary and tertiary hospitals), the people at the lower institutions tend to refer the patients only when they display secondary complications... thus giving us a double task.” (GP11)



The same sentiment is echoed by the PTs. Patients are only referred in the later stages of the disease; hence hampering the rehabilitation process. PTs felt that if patients could be referred earlier, the management would be less costly and more effective.

“Patients are mostly sent to the physiotherapy department when they are already affected by NCDs and not when they are presenting with the signs and symptoms, particular CVA and diabetes. Yet, exercises have been proved to be beneficial to prevent the onset and development of complications of NCDs.” (PT10)

iv) Lack of capacity building programmes

Both the GPs and the PTs emphasised that the institutions they are employed at pay little attention to capacity building opportunities. This leads to a gap in their knowledge regarding HP, especially with regards to NCDs. The participants indicated that the knowledge they have is what was acquired at their respective tertiary institutions (colleges and universities). It deprives them of the opportunity to enhance their knowledge with regards to the current modes of NCDs management. The participants thus indicated that this acts as an obstacle in their application and implementation of HP.



“In as much as we apply health promotion, we are not doing it as much as we are supposed to. This is due to lack of exposure and adequate information on health promotion for NCDs and its necessity.” (GP3a)

“Lack of capacity building programmes within the hospitals and the Ministry are real. The management of conditions changes with new research. Thus, new guidelines are often created, and we need to be updated.” (PT4b)

Participants felt workshops would keep them updated with the latest literature regarding the prevention and management of NCDs. They are also of the view that implementation of workshops will enhance their knowledge and encourage a multidisciplinary approach in the health promotion for NCDs. The reason behind this

is that workshops bring people of different departments together, thus giving an opportunity for different people to holistically manage the patients.

“The multidisciplinary approach to health promotion will be enhanced by having workshops where all the different key players will come together and discuss what they can contribute.” (PT5c)

“Workshops are a platform for us to interact as different departments... so we can know when to refer a patient to which department and when our management as clinicians ends and another department takes over.” (GP6c)

v) Cultural beliefs, myths and religion

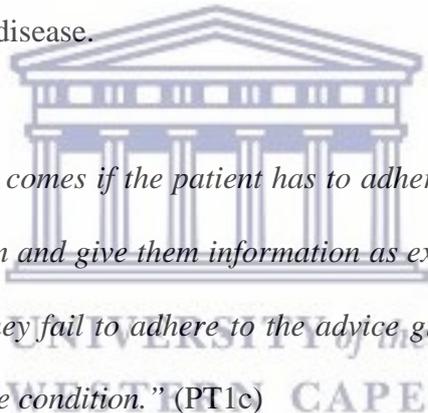
Culture beliefs, myths and religion of most patients were cited as hindrances to health promotion, especially in rural areas. Patients believe that whatever illness affects them, especially those related to NCDs, is witchcraft-related. For example, a person suffering from a diabetic ulcer is said to have been bewitched as the wound healing is slow and, in most cases may lead to an amputation of the affected limb. In terms of religion, Zambia is a Christian nation, but even when patients are taught to look out for specific signs and symptoms of a disease and report to the hospital as soon as possible, they prefer to first go to Church and only go to the hospital when the disease has progressed.

“Patients come with a lot of myths and beliefs making it difficult for us to impart health promotion which could help to improve their life and reduce further complications.” (GP6b)

“Patients come in when they already have secondary complications, especially those related to NCDs which target certain organs like the eyes, liver, heart and renal failure. So, we start treating eye, heart and circulatory complications... leading to an increased financial burden.”
(GP3c)

vi) Poor attitude and understanding of the patients

The patients themselves tend to have a negative attitude towards information concerning health promotion, especially if they are not yet affected with a particular condition. Even when information is provided to the patients, they only want to apply it when they have the specific disease.



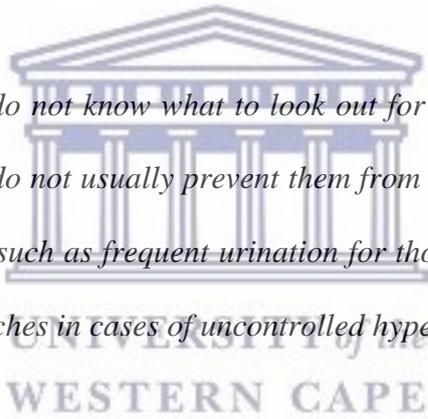
“The challenge comes if the patient has to adhere to the advice given. You advise them and give them information as expected, but when they go out there, they fail to adhere to the advice given... thus leading to worsening of the condition.” (PT1c)

“For me, the main one (problem) is the patients themselves. They feel if they have no physical signs, they are okay. That is not the case. So, we have this perception... I don’t know... in this country... on this continent... if I am okay, then everything inside must be fine too. But this of course is not the case most times. When we age, we are predisposed to other ailment, which can be prevented through health promotion.” (GP4c)

Furthermore, the poor understanding of the subtleness of the initial signs and symptoms of most NCDs also hamper the effectiveness of NCD management. Most people think having a fever or a bleeding should warrant a visit to the hospital, while NCD-related symptoms are often ignored or self-treated.

“Most of the patients do not know what to look out for in NCDs. This is because most of the signs and symptoms of NCDs are subtle... like constant headache could be an indication of high blood pressure. The patients will thus self-medicate until the situation is out of control.”

(GP5a)



“Our patients do not know what to look out for in NCDs as the signs and symptoms do not usually prevent them from carrying out activities of daily living, such as frequent urination for those at risk of diabetes, constant headaches in cases of uncontrolled hypertension.” (GP11)

The PTs further stated that most patients adhere to treatment while admitted in the hospitals, but once discharged, the adherence the rehabilitation sessions in physiotherapy is poor.

“When patients are admitted, it is easier for us to follow up treatment and monitor their progress. You find that the patients also adhere to the treatment (rehabilitation services). However, once the patients are discharged, they miss their sessions and, in most cases tend to stop their home programmes.” (PT10)

“Due to the long recovery rate of NCDs, most patients stop adhering to their treatment as they cannot see immediate results.” (PT2a)

Poor adherence to treatment negatively influences the management process. The poor attendance of outpatient rehabilitation is ascribed to various reasons, e.g. lack of transportation and lack of immediate significant results as these conditions require prolonged treatment.

vii) Staff shortage

From the GPs point of view, staff shortage affects the provision of health promotion. The few staff members have to work in the hospital wards as well as see to the outpatient department. In an ideal situation, each of these departments should have their own medical doctors. This situation urges the medical practitioners to prioritise their choice of management. As health promotion can be time-consuming to impart adequate knowledge to the patient, it is often the aspect of management that is much neglected, as the excerpts below illustrate:

“Implementing health promotion actually requires time and we are understaffed. We see so many patients, which makes it difficult for us to educate all the patients. So, some of them end up being deprived of this knowledge, especially those in the outpatient departments.” (GP5)

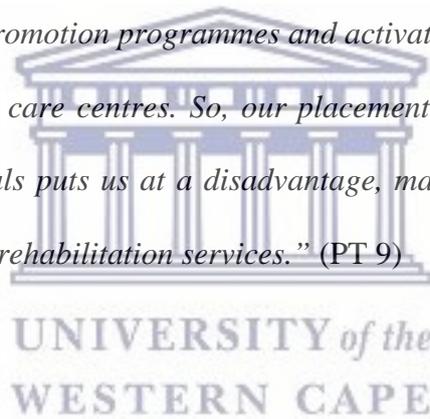
“We need more manpower to be able to adequately implement health promotion. The current staffing levels are too low to handle both preventive and curative care.” (GP12)

viii) Placement in secondary and tertiary hospitals

A great concern for the physiotherapy practitioners are the fact that they are employed in secondary and tertiary hospitals. Even though they are able to offer health promotion services, they more often provide rehabilitative management and prevention of secondary complications for patients already affected by NCDs.

“We offer mostly secondary and tertiary health care services as we are a referral hospital, thus limiting our services to rehabilitation.” (PT6c)

“Most health promotion programmes and activates take place at primary health care centres. So, our placement at the secondary and tertiary hospitals puts us at a disadvantage, making us more inclined to provision of rehabilitation services.” (PT 9)



ix) Lack of a plan

Finally, the physiotherapy practitioners expressed their concern regarding the lack of an implementation strategy for health promotion programmes. The participants acknowledged the existence of the National Health Strategic Plan (NHSP) but were also quick to point out that to date, no workable plan has been distributed to either the districts mandated to implement health promotion programmes or the hospitals themselves. The lack of a plan makes it difficult to handle and manage health promotion programmes with regard to NCDs. Lack of a formal plan by the government to move away from curative to preventive management strategies for NCDs is urgently needed in Zambia.

“There is just no plan... there is a lot of talk about NCDs being on the rise, We have no clear plan as how we are going to tackle this... maybe at a certain stage people might say let us come together and fight these diseases.” (PT2b)

“Although health promotion has been there for quite some time now, there is need for a clearly laid out plan on how programmes on NCDs will be implemented and evaluated. This is to see if they (HP programmes) are effective or not and which areas need more attention or improvement. Without a clear plan we will continue dwelling on our old methods.” (PT11)



5.4. SUMMARY FOR THE CHAPTER

Results of the qualitative data help us to understand what both domains of health practitioners think health promotion entails, their role in providing health promotion, as well as the challenges they experience in their daily work environment that hinder the implementation of health promotion effectively. The next chapter will present the discussion of both the quantitative and qualitative results of the study.

CHAPTER SIX

DISCUSSION

6.1 INTRODUCTION

This chapter gives a deliberation based on the results generated in this study with respect to the research questions, aim and objectives, as indicated in the first chapter of the study. Triangulation of the quantitative and qualitative results will be in this chapter, to give a conclusive discussion. Finally, piecing together of the results and empirical evidence revealed in the literature review section, will be done to complete the discussion. The discussion opens with the state of NCDs in the Southern Province of Zambia, followed by factors that influence health promotion (HP), challenges faced by health practitioners in implementing HP strategies and finally, the perceptions of the health practitioners regarding HP for NCDs will be discussed.

As a country, Zambia tried to create and implement concrete methods of managing NCDs, as seen in the implementation of the Strategic Plan (2013-2016), specifically for NCDs. It is also evident in the 2017-2021 NHSP that greater emphasis is placed on the use of health promotion, as the current call is to shift from curative to preventive measures. This call is thus in line with WHO which places an emphasis on the employment of health promotion due to its strength in prevention of health risks for the development of NCDs, as opposed to only treating chronic illnesses (WHO, 1986 & WHO, 2011).

6.2 THE STATE OF NCDs IN THE SOUTHERN PROVINCE OF ZAMBIA

According to the NCD-SP (2013-2016) as well as a situation analysis for NCDs in Zambia, the provinces mostly affected by hypertension and diabetes are those involved in mining; namely, the Copperbelt and the Central and North-western provinces. The health practitioners resonated that both diabetes and hypertension are among the four most common NCDs on the rise in Zambia. The increased prevalence of diabetes and hypertension in the Southern Province has evident from the increased number of patients presenting with NCDs, as well as their complications. The health practitioners also indicated that the rise can be seen from the current number of deaths due to the NCDs and the increased rate of disability among the productive age group, namely people below the age of sixty years. This rise is supported by the statistics given by WHO (2016) that NCDs in Zambia have risen by 33% since 2014.

This increase in NCDs poses a negative impact at various levels, that is individual, health system and the government which in turn affects the social and economic development. this is in line with World Economic Forum (2011) stipulating that NCDs together with their increased disability rate which poorly impacts on the affected population while also placing social, economic and developmental burdens on the affected individuals, household, communities and the government at large as activity and productivity are abridged. Similarly Nikolic et al., (2011) state that the economic aspect is mostly affected due to the out- of pocket expenditure services for medicines, rehabilitation and other expenses like transportation leading to depletion of income thus increasing the poverty levels. In terms of Health systems, Samb et al., (2010) establishes that the management of NCDs puts a strain on the health workforce as the interventions needed for these patients are of long duration and need constant contact with health

professionals especially the gps and the pts. With the marked shortage of health workers, this entails increased workload on the already strained health care providers. Unless the government enhances the sensitization and implementation of health promotion programs for NCDs this fight will not be won. Health professionals should also endeavour to implement the advocated movement from curative to preventive like health promotion which have proved effective especially in the fight against NCDs.

6.3 KNOWLEDGE OF HEALTH PRACTITIONERS WITH REGARDS TO HEALTH PROMOTION FOR NCDs

In order to ensure that participants are aware of and understand the term health promotion (HP), this study determined the knowledge levels regarding HP of two groups of health practitioners, namely medical (GP) and physiotherapy (PT) practitioners respectively. The results demonstrated that the participants had adequate knowledge and understanding of health promotion with higher knowledge levels demonstrated by the GPs (98%) compared to the 90% of the PTs. During the focus group discussions (FGDs), the health practitioners were equally able to explain in detail their understanding of health promotion as indicated in chapter five. From both quantitative and qualitative data collected in this study, the results revealed that the GPs are more knowledgeable than the PTs with regard to HP. Their increased knowledge levels could be attributed to the level of education. The basic qualification for GPs is a Bachelor of Science while for the PTs it is a diploma.

However, the researcher discovered that despite the health practitioners portraying adequate knowledge on NCDs, a gap was identified. The knowledge possessed by the participants is that which they acquired during the tertiary attainment of their

qualification. Some of the participants have been working for more than 25 years. A plausible reason for this knowledge gap could be attributed to the lack of post-graduate training such as workshops within respective hospitals where the health practitioners are employed. The results thus correspond with a study conducted by Bowen and Zwi (2005). The researchers state that although a traditional approach in capacity building through various training initiatives, knowledge generation and translation of activities exists, there is a need to empower practitioners with the latest evidence-based knowledge from current research. This could influence the health practitioners' knowledge and methods in which they disseminate their information. Furthermore, Taukobong et al., (2015) are of the view that post-graduate education for physiotherapists and other health practitioners for the improvement of knowledge, especially regarding HP, is vital for the long-term perspective in the fight against NCDs. Therefore, government and the Ministry of Health should take responsibility to help avert the gaps in training by incorporating workshops to improve professionals' skills regarding HP for NCDs. The idea behind the cautious provision of this post-professional training is with clear acknowledgement that there are undisputable variations in the pattern of NCDs from one province to another. Accordingly, several authors have shown the importance of hospital management in providing a clear vision and strategy for health practitioners as it plays a key role in the commitment and implementation of health promotion programmes within a hospital set up (Johansson, Stenlund, Lundstrom & Weinehall, 2010; Kemppainen, Tossavainen & Turunen, 2013).

This knowledge gap thus entails that health care providers will keep using the same old information acquired in their respective tertiary institutions. This has a negative impact

on the patients as science has evolved and new cost effective ways of preventing and managing NCDs have emerged. Therefore the need to stay updated with current evidence based information is vital as it will enhance the fight against NCDs

6.4 ATTITUDES OF HEALTH PRACTITIONERS IN THE USE OF HEALTH PROMOTION FOR NCDs.

Several researchers articulated that grander accent ought to be placed on the attitudes and skills of the people providing HP, in this case GPs and PTs (Geirsson, Bendtsen & Spak, 2005; Yeh, Chen, Wang, Wen & Fetzer, 2005; Stark, Manning-Walsh & Vliem, 2005; Al-Kandari & Vidal, 2007). The researchers are of the view that a positive attitude helps to minimise health-risk factors and in turn increase not only the quantity, but also the quality of future practice. These results generated in this study are thus in line with the above sentiments as the health practitioners in this study portrayed a positive attitude towards health promotion. However, statistically, statistical significance was only found for level of education and attitude of the health practitioners despite the numerous variables examined. These results are consistent with the inferences made by Wellapuli and Gunawardena (2015) who equally associated a positive attitude with knowledge. They found that people of higher education possess better knowledge thus displaying a better attitude towards HP. Nevertheless, the findings are contrarily to the evidence provided by Abdullah et al. (2006) that age has an impact on the provision of HP as participants aged 30 years and below had an enhanced attitude and were eager to incorporate HP in their general practice. Another study conducted by Kluger (2014) on the patient's quality of care in diabetics established a significance between gender, as female doctors were more enthusiastic, compared to male doctors, in providing time for their patients thus enabling them to incorporate health promotion. Kamau (2017) found similar results

indicating that the age, gender, and work experience of health practitioners were affiliated with the attitude that they possessed towards HP.

6.5 PRACTICE OF HEALTH PROMOTION FOR NCDS BY THE HEALTH PRACTITIONERS

In this study, most of the GPs stated and acknowledged that their use of health promotion is not adequate enough due to a number of obstacles discussed below. The logistic regression results also show that the discrepancy is more inclined to the PTs as they are more likely to practise health promotion compared to the GPs. This entails that the GPs prioritise treatment for those already affected as opposed to providing information for all. These results concur with those of Bocquier et al. (2005) who indicated that, in instances where GPs apply preventive services, they are usually inadequate. However, the results from the present study is contradicting findings of Holmberg et al. (2014) who concluded that universal counselling as the provision of primary prevention for all patients, regardless of their risk status, was not established or desired by the interviewed GPs. The GPs in this study were opportunistic about providing primary preventative services to all patients, regardless of their risk status as they believed that a well-informed population will yield better results in the prevention of NCDs, as opposed to concentrating only on the risky and already affected populations.

Although more Physiotherapy practitioners (96.2%) in the current study always provide health promotion within their work sphere, they too seem to focus on the provision of preventive services like the GPs. PTs however attribute their application of HP at secondary and tertiary level to their placement in the secondary and tertiary hospitals

only. This practice and subsequent results are therefore not in line with the recommendations of WHO (2011) which state that the fight against NCDs should happen at primary health care level. Correspondingly, WHO (2011) and Bhutta et al. (2008) state that PHC focus on strengthening health care systems, not only through the concept that health is delivered in a cohesive fashion, but that it should also be prioritised and valued by governments due to its numerous benefits. This entails that the omission of GPs and PTs at PHC facilities creates a gap in the use of a crucial tool (HP) which is not only cost effective but also yields better results as opposed to the treatment of NCDs and their costly complications.

In the present study, health promotion practice for NCDs was however insignificant with the level of work experience. These results contradict the findings of a study conducted by Saliba, Sammut, Vickers and Calleja (2011). The researchers revealed that one's years of experience in clinical practice has a high significant association with practising health promotion. A conclusion that was drawn from this study using the logistic regression model was that PTs were more likely to practise health promotion compared to GPs.

6.6 CHALLENGES FACED BY HEALTH PRATITIONERS IN PRACTICING HEALTH PROMOTION

Although health promotion is part of the main activities outlined in the NHSP for NCDs (2013-2016) and most of the participants accept that health promotion is the way to go in the management of NCDs, a number of challenges sprout from the focus group discussions. These challenges should be addressed to curb the rise of NCDs in Zambia and most LMICs.

The following challenges are identified in the present study: low staff numbers, inadequate specialists to manage the NCDs and limited funding to conduct health promotion programmes. The aforementioned challenges are in line with the findings of the NHSP for NCDs (2013-2016). Other challenges that were raised include poor referral systems for both GPs and PTs from the lower level hospitals and interference from traditional healers in the management of NCDs. These findings are consistent with those of Igwesi-Chidobe (2012) who identified improper referral practices as well as the interference of the tradition healers to be among the barriers to the effective execution of HP. Another significant barrier raised by the respondents in this study was that of an increase in the number of churches with pastors asking people to stop taking medication for various NCDs such as hypertension, diabetes and cancer. This in turn puts the affected people at a risk of the development of NCD-related complications such as stroke and diabetic neuropathies as they present themselves late to the hospitals.

Observations made by Frantz and Ngambare (2013) regarding personal practices and cultural beliefs as barriers to health promotion were also noted by both health practitioners in the present study. The participants, especially those in rural areas,

indicated that cultural beliefs have a negative demeanour on the implementation of HP, especially with regard to NCDs and their complications. The patients attribute the effect of NCDs to witchcraft and therefore seek medical attention from traditional healers. When the patients do not see tangible results, they decide to seek medical attention. In order to mitigate abovementioned challenges, the community should be called upon and involved in the fight against NCDs as much as possible. Krishnan (2011), promotes community participation by stating that effective extermination of NCDs requires the consolidation of community as well as individually targeted interventions. This is because social-cultural aspects shape most lifestyle changes. It is through this consolidation that most of the cultural beliefs can be addressed and eradicated as barriers to HP for NCDs.



Findings in the present study further reveal that the lack of a proper database regarding NCDs makes it difficult to plan and execute health promotion actions. This is because of the government's dependency on collecting data from the health centres through the Health Management Information System (HMIS). The HMIS has nevertheless been condemned due to its provision of limited information on NCDs (Aantjes, Quinlan, & Bunders, 2014). The situation therefore calls for a more reliable database to monitor the progress of the various plans lined up in the NHSP for NCDs. An accurate database for NCDs could assist in the planning and implementation of preventive programmes. Lack of a proper NCDs database will continue to deprive adequate funding for HP programmes as the exact prevalence of the NCDs is unidentified.

In order to address the NCDs adequately, strategies as well as action plans were developed in a bid to offer an outline on how countries ought to construct their response

to these NCDs (WHO, 2016). Zambia is no exception, as can be deduced from the NHSP for NCDs (2013-2016). The NHSP for NCDs (2013-2016) was developed to provide direction for the government on how to manage these conditions. However, the plan lacks clarity on how to incorporate health promotion in the management and prevention of NCDs. It would be more beneficial to health practitioners if the government, through the different hospital management, could break down the NHSP into smaller manageable tasks per institution. This could include specific tasks relevant for primary, secondary and tertiary institutions.

6.7 PERCEPTIONS OF GENERAL MEDICAL PRACTITIONERS AND PHYSIOTHERAPY PRACTITIONERS REGARDING HEALTH PROMOTION

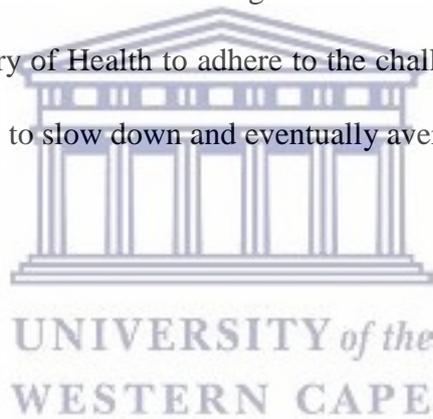
With the adequate knowledge portrayed above, the health practitioners, perception in the present study was equally positive towards health promotion. They are of the view that health promotion is not only cost effective, but it also helps to prevent morbidity and mortality. Health practitioners are equally of the perception that the creation of positions for GPs and PTs in PHCs is vital in the battle against NCDs. In accordance with WHO (2008), the use of PHC is important as it borders on the principles of equality in the dissemination of health care services. Furthermore, PHC uses appropriate technology, which is multi-sectoral and involves active participation of the community in most health care programmes. The emphasis is on the prevention of illness, rather than the cure. However, as noted by Mohan, Campbell and Chocklingman (2005), LMICs have poorly resourced PHCs, not only in terms of finance but also in terms of human resources which consequently acts as a barrier to the effective control, prevention and management of NCDs. The absence of experts in health promotion, such as the underemployment of physiotherapists in PHCs is equally not in line with the

NCD-SP (2013-2016, p.11) which states that, “the guiding principle of the health system in Zambia is the provision of equity of access to cost effective quality health care as close to the family as possible”. This in turn affects the accessibility of comprehensive health care services to the population at large.

The health practitioners in the present study, especially the physiotherapy practitioners are of the perception that for the fight against NCDs to be effective, there is need for creation of health promotion awareness programmes in schools, work place and the communities. Their sentiments are in line with those of Mlozi et al. (2006) who stipulate that the attainment of preventive and promotional health programmes in public health lies in community involvement. Likewise, Kemppainen et al. (2013) elaborate that, the realisation of the highest possible standard and holistic approach in nature lies in the involvement of the health practitioners and the community at large. The advocate for community involvement borders on the fact that NCDs are preventable once the risk factors are addressed. Consistency is thus seen in the assertion given by Sharma, Anand, Kishore, Dey and Ingle (2014) who report that lifestyle adaptation is influenced by a number of factors linked to personal history, cultural, economic, physical and environmental factors. Once these named factors are managed, it could yield better results in the fight against NCDs.

6.8 SUMMARY OF THE CHAPTER

With regard to the objectives of this discourse, the health practitioners in this study proved to have adequate knowledge. This is despite a few gaps that were identified, some of which are beyond them as they are ministry-related. The health practitioners also showed a positive attitude and practise health promotion in the best way they can in their respective domains. These health practitioners are also willing to use HP in the fight against NCDs. Even though the health practitioners possess adequate knowledge, a positive attitude and practise health promotion, these services are inadequate as the NCDs have continued to rise. The rise is attributed to a number of challenges that the health practitioners present in the FGDs. The obligation now lies with the government of Zambia through the Ministry of Health to adhere to the challenges encountered by these health practitioners so as to slow down and eventually avert the NCDs.



CHAPTER SEVEN

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

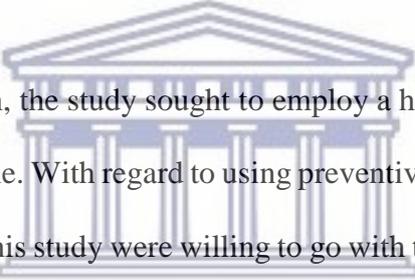
This final chapter provides a summary and conclusion of the study. In addition, the limitations of the study will be discussed. Finally, recommendations that emerged based on the findings of this study will be outlined.

7.2 SUMMARY OF THE STUDY

The Ministry of Health in Zambia, through its planning to reduce and curb the occurrence of NCDs, has shown impressive efforts with the NSP (2017-2021) as well as the creation of the specific plan for NCDs implemented from 2013-2016. However, despite these concerted efforts, NCDs continue to rise in Zambia. The overall aim of the present study was to determine general practitioners and physiotherapists' knowledge, attitude and practice of health promotion as well as their perceptions regarding health promotion for NCDs. Secondly, the study sought to determine the perception of both the GPs and PTs towards health promotion. This is because HP is a vital and cost-effective tool which is also user-friendly, especially for LIMCs. Therefore, a combination of prevention, treatment and finally rehabilitation would offer a far more holistic approach in the management of NCDs.

Health promotion looks at the provision of knowledge to various stakeholders in order to empower the population with skills on how to avoid the development of various conditions. The health practitioners in the present study displayed adequate understanding and interpretation of health promotion which enables them to fight

NCDs in a proper manner. However, with regards to the knowledge of HP, a critical gap was identified. The participants stipulated that the lack of post-graduation training hampered their delivery of health promotion strategies. Little research has been done in line with effective strategies that can be used to manage NCDs, especially in LMICs that are already struggling with health funding to improve on the application of health promotion. Although the GPs in the present study demonstrated high levels of knowledge and positive attitude towards health promotion, the study revealed that PTs are more likely to practise health promotion. This finding is in accordance with the results from the FGDs where GPs stated that lack of time and staff shortages hampered their ability to apply HP strategies in their daily work environment.

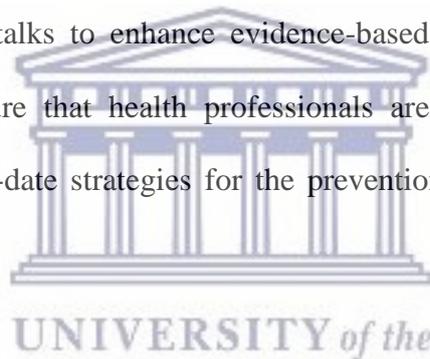


As indicated in the introduction, the study sought to employ a holistic approach which looks at the individual as a whole. With regard to using preventive measures as opposed to curative, the participants in this study were willing to go with the call by the Ministry of Health, through the NHSP (2017-2021), to move from a curative to a more preventive approach. However, a number of barriers to the implementation of HP in their daily practice were mentioned by the participants.

The participants in the present study were more concerned about the lack of positions for GPs and PTs, as the staff shortages impeded on appropriate service delivery. The absence of PTs in primary health care centres creates a gap in the effective implementation and use of health promotion for NCDs, as the “experts” are excluded at the grassroots. The lack of appropriate health professionals at primary care level leads to an increase in workload at secondary and tertiary levels. As a result, the health care professionals employed at secondary and tertiary level have to bear the brunt of

managing the complications of NCDs, a scenario that could have been prevented with the early identification of patients at risk at primary health care level. The participants in the present study are of the view that more provision of positions for PTs and more posts for GPs at primary health care level could enhance the coordination and implementation of health promotion programmes in the community. This could in turn enable health professionals to identify people at risk as well as those already showing signs and symptoms of NCDs and in order to send them for appropriate management.

The onus thus now falls on the Ministry of Health to revise the policy that excludes the PTs at primary health care level. In addition, all health care facilities should provide post-graduate workshops or talks to enhance evidence-based knowledge of health professionals. This will ensure that health professionals are able to provide and implement appropriate, up-to-date strategies for the prevention and management of NCDs.

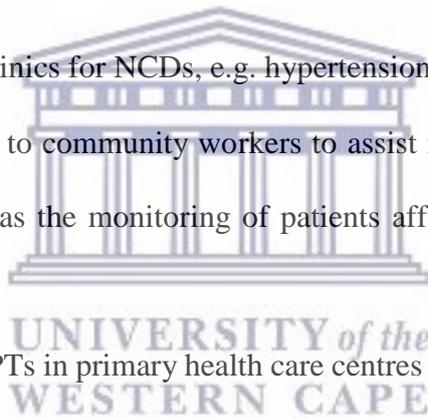


Finally, the fight against NCDs is not only the responsibility of the health practitioners. If one wants to curb the rise in NCDs, it should start in the school environment. It is well known that positive lifestyle habits such as physical activity and a healthy diet should be instilled at a young age. Therefore, the education sector should also be called upon to participate in the fight against NCDs. Community involvement is equally vital as it allows for the early identification of NCD signs and symptoms and the commencement or continuity of treatment for those already affected by NCDs.

7.3 RECOMMENDATIONS

Most of the challenges raised by the participants should be addressed by the Ministry of Health. The following recommendations are thus made to the Ministry of Health:

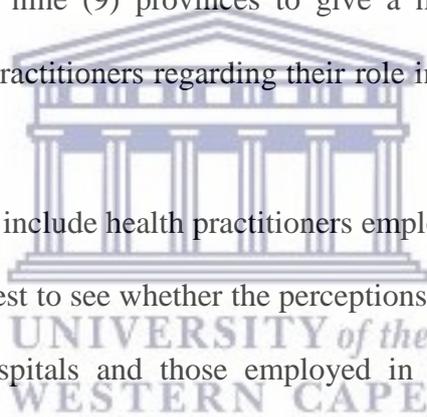
- Provision of workshops or talks to provide up-to-date evidence on the current practices of NCD management for all in-service health practitioners. This will enhance the knowledge of health professionals regarding the most appropriate prevention and management strategies available to curb the rise of NCDs.
- More awareness programmes as they play a pivotal role in improving the literacy levels of the general public thus helping people to embrace healthier lifestyles.
- Provision of specific clinics for NCDs, e.g. hypertension and diabetes clinics.
- Provision of education to community workers to assist in the identification of people at risk as well as the monitoring of patients affected by NCDs in the various communities.
- Provision of posts for PTs in primary health care centres for early detection and appropriate management/referral of NCDs at the grassroots level.
- Provision of more posts for GPs at all levels of care to reduce the work load on the current health care system.
- Creation of a data base for NCDs specifically. This could assist with early identification of NCDs thus providing appropriate management, depending on the “stage” of the patient.
- Provision of smaller plans, other than the NHSP, for easy follow up of programmes in various provinces, depending on the prevailing NCDs in that particular province.



- Provision of more funding to the districts mandated to carry out health promotion activities.
- Government policies on NCDs to emphasise and encourage more of preventive strategies as they are cost-effective and promote better health outcomes.

7.4 LIMITATIONS OF THE STUDY

- The study focused only on two divisions of medical practitioners due to limited funding.
- The study was also limited to one province only. This then calls for future research for the other nine (9) provinces to give a holistic picture on the perceptions of health practitioners regarding their role in health promotion for NCDs in Zambia.
- Future research should include health practitioners employed at private clinics. It will be of great interest to see whether the perceptions of health practitioners working in public hospitals and those employed in private clinics, differ regarding HP.



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LIST OF APPENDICES

Appendix 1: Ethical clearance from: University of Western Cape



OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

Private Bag 817, Bellville 7535
South Africa
T: +27 21 959 2900/2940
F: +27 21 959 3170
E: research-ethics@uwc.ac.za
www.uwc.ac.za

08 August 2017

Ms MM Kapapa
Physiotherapy
Faculty of Community and Health Sciences

Ethics Reference Number: BM17/6/13

Project Title: Health Promotion for non-communicable diseases: Perceptions of physiotherapy and general practitioners in the Southern Province of Zambia

Approval Period: 28 July 2017 to 28 July 2018

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Patricia Josias'.

*Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape*

PROVISIONAL REC NUMBER -130416-050

Appendix 2: Ethical clearance from Excellence in Research Ethics and Science (ERES)



33 Joseph Mwiilwa Road
Rhodes Park, Lusaka
Tel: + 260 955 155 633
+ 260 555 155 634
Call: + 260 966 765 503
Email: erescconverge@yahoo.co.uk

I.R.B. No. 00005948
EWA. No. 00011697

5th September, 2017

Ref. No. 2017-Aug-013

The Principal Investigator
Ms. Musambo Mutinta Kapapa
401-542 Bonaventure
LUSAKA.

Dear Ms. Kapapa,

**RE: HEALTH PROMOTION FOR NON-COMMUNICABLE DISEASES-
PERCEPTIONS OF PHYSIOTHERAPY AND GENERAL PRACTITIONERS IN
THE SOUTHERN PROVINCE OF ZAMBIA.**

Reference is made to your corrections dated 29th August, 2017. The IRB resolved to approve this study and your participation as Principal Investigator for a period of one year.

Review Type	Ordinary	Approval No. 2017-Aug-013
Approval and Expiry Date	Approval Date: 5 th September, 2017	Expiry Date: 4 th September, 2018
Protocol Version and Date	Version-Nil	4 th September, 2018
Information Sheet, Consent Forms and Dates	• English.	4 th September, 2018
Consent form ID and Date	Version-Nil	4 th September, 2018
Recruitment Materials	Nil	4 th September, 2018
Other Study Documents	Data Collection Tool.	4 th September, 2018
Number of participants approved for study	-	4 th September, 2018

Where Research Ethics and Science Converge.

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

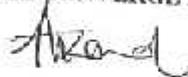
Conditions of Approval

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to the IRB within 5 days.
- All protocol modifications must be IRB approved prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to the IRB within 5 working days.
- All recruitment materials must be approved by the IRB prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. Documents must be received by the IRB at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Any documents received less than 30 days before expiry will be labelled "late submissions" and will incur a penalty.
- Every 6 (six) months a progress report form supplied by ERES IRB must be filled in and submitted to us.
- ERES Converge IRB does not "stamp" approval letters, consent forms or study documents unless requested for in writing. This is because the approval letter clearly indicates the documents approved by the IRB as well as other elements and conditions of approval.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

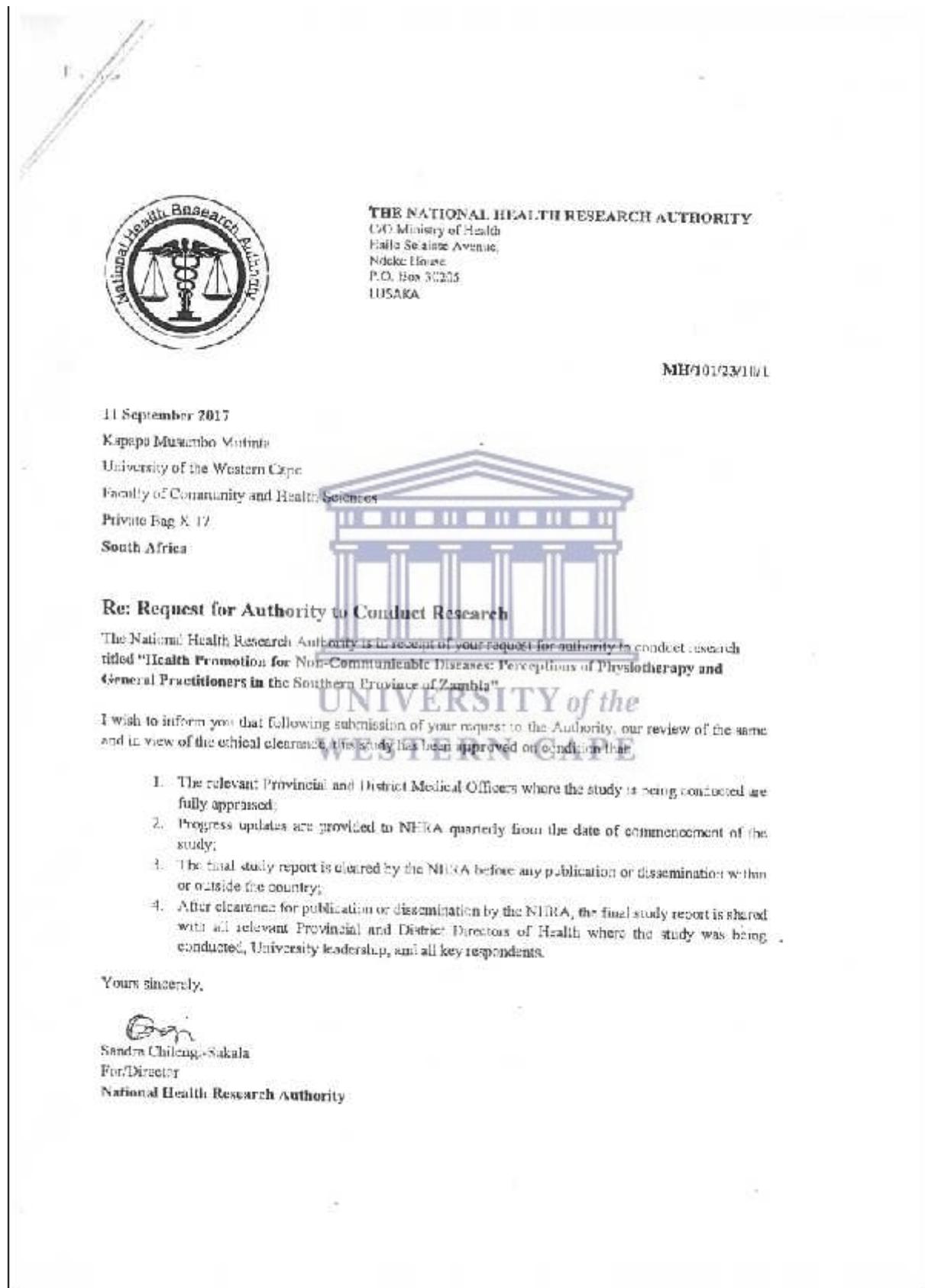
On behalf of ERES Converge IRB, we would like to wish you all the success as you carry out your study.

Yours faithfully,
ERES CONVERGE IRB



Prof. E. Mungula-Nkandu
BSc (Hons), MSc, MA Bioethics, PgD REEthics, PhD
CHAIRPERSON

Appendix 3: Ethical clearance from the National Health Research Authority



APPROVED
05 SEP 2017
ERES CONVERGE
P/BAG 126, LUSAKA.

APPENDIX A: INFORMATION SHEET



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2549 Fax: 27 21-959 1217
E-mail: tsctyt@uwc.ac.za

Research Title: Health promotion for non-communicable diseases: perceptions of physiotherapy and general practitioners from hospitals in the Southern Province of Zambia.

What is this study about?

This study is being conducted by Musambo Mutinta Kapapa, a Masters student at the University of the Western Cape, South Africa. The purpose of this research is to determine your knowledge, attitude and practice as well as to explore the perceptions of physiotherapy and general practitioners with regard to their role in health promotion against NCDs. Exploring the perception of physiotherapist and GPs regarding their role in health promotion could provide valuable information that can be used to change their work culture into a more preventative one. In turn it could reduce the high cost of managing NCDs. Furthermore, this study will provide policy makers and health care administrators with evidence-based information of physiotherapists and GPs with regard to NCD management. This could influence the designing of feasible interventions for the prevention of NCDs.

What will I be asked to do if agree to participate?

You will be asked to:

- Complete a self-administered questionnaire regarding your knowledge, attitude and practice with regards to health promotion consisting of two parts. The completion of the questionnaire will take approximately 10 minutes.
- Participate in a focus group organised by the researcher. The focus group discussion will be recorded after you have signed the consent form. The focus group discussion will take about 30 to

1

45 minutes. The information from the tapes will help the researcher to comprehend what transpired in the discussion.

Will my participation in this study be kept confidential?

Your participation in this study will be kept confidential at all times and to help enhance this confidentiality, the following measures have been put up.

- **Questionnaires** will not contain any information that will identify you personally as your name will not be included. Only codes known to the researcher will be used for identification purposes. The researcher will be the only one who will have access to this information. The data collected will be stored in a locker only accessible to the researcher.
- **Focus group discussions:** Confidentiality is dependent on your fellow participants. However, all participants will sign a focus group confidentiality binding form. From the researcher's point, your name will not be included in the recordings and the typed documents. Only codes will be used to identify you. All the tapes will be destroyed once the data has been transcribed and documented. The transcribed verbatim data will be stored on a password protected computer of which only the researcher will have access to.

If a report or article about this study is published, your identity will be protected as Pseudonyms will be used to protect participants' identities when results are published.

What are the risks of this research?

Minimal risks are anticipated in this study. However, all human interactions and talking about one's experience or just the profession at large carry some amount of risk. Risks will be reduced by encouraging each participant to respect each other's opinion during the discussion. Any sensitive issues or questions which may arise from the study and could affect the participant will be observed and carefully handled accordingly or referred to an expert for appropriate attention.

What are the benefits of this study?

This research is not designed to benefit you personally but your participation and the results of this study will help the researcher to learn more about your perceptions in health promotion with regard to NCDs management. The information you will provide will be used to help policy makers in their implementation of health promotion strategies based on the results of this study. Furthermore, this study may serve as an area of further research based on the findings.

Do I have to be a part of this research and can I withdraw my participation at any time?

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05 SEP 2017

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P/BAG 125, LUSAKA.

2

You are free to decide whether or not to take part in this study. If you decide to participate, you are free to withdraw from the study at any time and you will not be penalised in anyway.

What if I have questions?

This research is being conducted by **Musambo Mutinta KAPAPA**, a Masters student in the Physiotherapy Department at the University of the Western Cape. If you have any questions about this research, contact Musambo Mutinta KAPAPA on +260977371409 or email me at 3764870@myuwc.ac.za.

Who to call if you have questions or problems with this study?

Dr Nondwe Mlenzana

Head of Department: Physiotherapy

University of the Western Cape

Private Bag X17

Bellville 7535

nmlenzana@uwc.ac.za

Prof Rina Swart

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

APPROVED

05 SEP 2017

ERES CONVERGE
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This study has been approved by the University of the Western Cape's Biomedical Research Ethics Committee (BMREC).

ERES Converge can also be contacted for any questions or queries

Professor Easter Munalula Nkandu

Chairperson of ERES Converge board

33 Joseph Mwilwa Road

Rhodes Park

Lusaka

Em_munalula@yahoo.com

CONSENT FORM



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2549 Fax: 27 21-959 1217

E-mail: ntcyk@uwc.ac.za

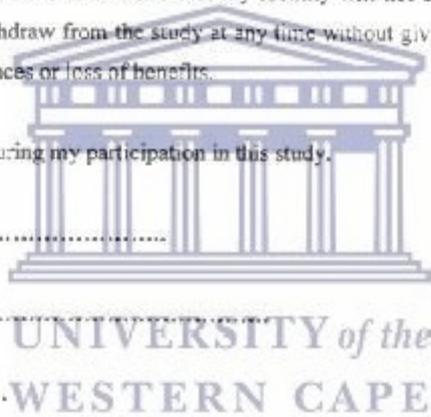
The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

I agree to be audiotaped during my participation in this study.

Participant's name.....

Participant's signature.....

Date.....



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Appendix 6: Questionnaire

Appendix D: QUESTIONNAIRE

ID code

This questionnaire is aimed at obtaining information on the Knowledge, attitudes and practices for physiotherapy and general practitioners. It contains two sections, A and B. You are requested to respond to both sections and if you have any questions, the researcher will be at hand to give clarity. Your participation and contribution will be very helpful in attaining the objectives of this study. I therefore request that you respond as honest and objective as you can be.

INSTRUCTIONS: Please tick in the for your best response

SECTION A

DEMOGRAPHIC PROFILE

1. Age of the participant:

20-25	<input type="checkbox"/>
26-30	<input type="checkbox"/>
31-35	<input type="checkbox"/>
36-40	<input type="checkbox"/>
45-50	<input type="checkbox"/>
50+	<input type="checkbox"/>



UNIVERSITY of the
WESTERN CAPE

2. Gender of the participant: male

female

3. Highest level of education: Diploma

Degree

Masters

PHD

4. Work experience: below 6 months

>6 months- 5 years

5-10years

10-15 years

15-20 years

+20 years



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P/BAG 123, LUSAKA

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SECTION B

05 SEP 2017

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P/BAGS 125: LUSAKA

This section evaluates the knowledge, attitudes and practices of physiotherapists and GPs.

Statement related to knowledge about health promotion. N (%)	Yes	No	Unknown
K1. Health promotion activity involves building health policy to promote health of the population			
K2. HP intervention calls for professionals to be involved in improving and maintaining health status for all			
K.3 Health promotion intervention involves early detection and prevention of diseases			
K.4 Health promotion intervention involves strengthening community action to prevent diseases			
K.5 Health promotion intervention involves developing personal skills to stay healthy			
K.6 Health education is a process of implementing health promotion			
K.7 Health promotion can be achieved through environmental modification			
K.8 Disease prevention program such as vaccination is a method of health promotion			
K.9 Health promotion includes the implementation of lifestyle and behaviour change programs			
K.10 Health promotion calls for reorientation of health care services beyond clinical and curative services			
	AGREE	DISAGREE	NEUTRAL
Statement about attitude toward health promotion services in physiotherapy practice. N (%)			
A.1 Physiotherapy and general practitioners (GPs) etc. well positioned to integrate health promotion in practice			
A.2 physiotherapists should be involved in the efforts to promote physical activity (not for GPs)			
A.3 Health education on healthy diet should be part of the physiotherapy and GPs treatment plan			
A.4 physiotherapists should be involved in educating people within their workplaces and in the communities about ergonomics (not for GPs)			
A.5 physiotherapists and GPs should participate in developing health and safety regulations for a healthy population			
A.6 The health educator role is appropriate for physiotherapists and GPs			
A.7 physiotherapists and GPs should align their practice of health promotion efforts to the ministry of health			
A.8 Health promotion should form an integral part of physiotherapy and GPs at all levels of health care			

FOCUS GROUP CONFIDENTIALITY BINDING FORM



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Research Title: Health promotion for non-communicable diseases: Perceptions of physiotherapy and general practitioners from hospitals in the Southern Province of Zambia.

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way. I hereby agree to uphold the confidentiality of the discussions in the focus group by not unveiling the identity of other participants or any aspects of their contributions to members outside of the group.

I agree to be audiotaped during my participation in this study

I do not agree to be audiotaped during my participation in this study

Participant's name.....

Participant's signature.....

Date.....

APPROVED
05 SEP 2017
ERES CONVERGE
P/RAG 125, LUSAKA

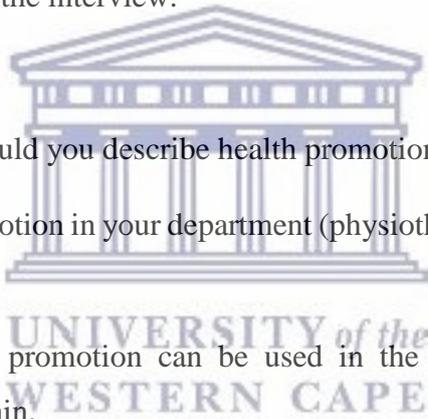
Appendix 8: Focus group discussion guide

Introduction

Hello everyone, my name is Musambo Mutinta Kapapa. Thank you for accepting to take part in this research. I will be leading the discussion and would like to encourage you all to participate fully and to be as interactive as possible in this discussion.

You are reminded not to use your real names or anything that will identify you or other. Please be honest in sharing your opinions, experiences and your perception in health promotion with regard to non-communicable diseases as these will help the researcher to make better recommendations. During this interview, there will be times when the researcher will ask follow up questions to seek clarity.

Do you have any questions before we start? With your permission, I would like to turn on the tape recorder and begin the interview.

- 
1. In your own words, how would you describe health promotion?
 2. How do you use health promotion in your department (physiotherapy department and consultation rooms for GPs)?
 3. How do you think health promotion can be used in the management of non-communicable diseases? Explain.
 4. How often do you use health promotion in the management of your patients? Explain.
 5. What is your perception of health promotion with regard to your profession?
 6. Do you face any challenges in the use of health promotion?
 7. What factors hinder members of your profession from implementing health promotion as a prevention of NCDs?
 8. Have you attended any workshops to enhance your knowledge in health promotion?
 9. What do you think is the way forward for the management NCDs?

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