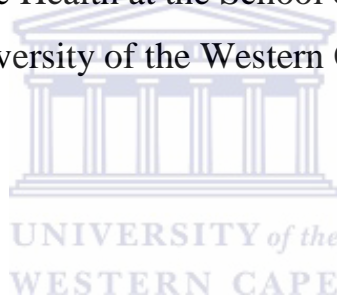


**PERCEPTIONS, ATTITUDES AND CHALLENGES ABOUT OBESITY
AND ADOPTING A HEALTHY LIFESTYLE AMONG HEALTH
WORKERS IN PIETERMARITZBURG, KWAZULU-NATAL PROVINCE**

Patrick Simfukwe

A mini-thesis submitted in partial fulfilment of the requirements for the degree of
Master of Public Health at the School of Public Health,

University of the Western Cape



Supervisor: Dr Charl Swart

Co-Supervisor: Prof Brian Van Wyk

ABSTRACT

The prevalence of obesity is reported to be high among health workers both in high-income and low-income countries. This is alarming, as health workers not only serve the community's health needs, but should also serve as role models for a healthy lifestyle. Health workers are instrumental in delivering quality health care to patients and the entire population at large and if they are unable to take care of their own health, staff shortages may become severe, resulting in deteriorating health service delivery. It is therefore important that obesity among health workers is reduced before it gets worse. It has been noted that there is an increasing prevalence of obesity among health workers, which in turn is a common risk factor in all non-communicable diseases.

The current study explored perceptions and attitudes about obesity amongst health workers in Pietermaritzburg, KwaZulu-Natal province. This was an explorative and descriptive qualitative study utilizing in-depth interviews for data collection. A total of 18 health workers from the three selected hospitals in Pietermaritzburg medical metropolitan were interviewed. Thematic analysis was done, using *a priori* themes from the health belief model.

The current study found that all health workers were *aware* of the negative consequences of being overweight or obese. However, only a few of the participating health workers chose to adopt a healthy lifestyle as a result of their weight. Some of the positive motivators were improving their public image, improving their health status and becoming more flexible, while negative motivators were finding it difficult to fit into old clothes, fear of suffering from obesity related conditions and reducing the risk of suffering from NCDs.

The health worker participants reported that African cultural beliefs, limited operational times of physical activity facilities and unavailability of healthy food were barriers to adopting a healthy lifestyle. The African cultural belief of considering people who are overweight to be healthy, progressive and prosperous prevents people from changing their behaviour on weight control. In addition, participating hospitals do not have independent physical exercising facilities as such the available physiotherapy departments give priority to patients, resulting in staff members having

only limited hours for exercising. Lastly, the participating hospitals did not sell healthy food options in the cafeterias resulting in health workers buying what is available.

Public health care facilities need to invest in their work force. This may include giving health workers access to physical exercise facilities and affordable healthy food within the hospital. The infrastructure and system should enable them to pursue a healthy lifestyle. Institutions should introduce health-behaviour change programmes on obesity and other NCDs in order to combat established cultural norms, which advocate for overweight body sizes to be desirable because of positive cultural connotation afforded to them.



DECLARATION

I declare that “Perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, Kwazulu-Natal province, South Africa.” is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources that I have used have been indicated and acknowledged by means of complete references.

Full Name: Patrick Simfukwe

Date: 12/11/2015.

Signed:



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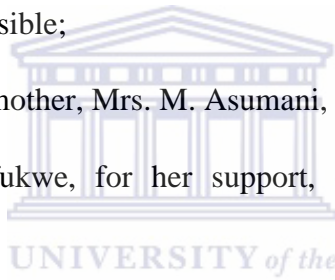
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KEYWORDS

Body image

Body Mass Index

Health lifestyle

Health workers

Obesity

Overweight

Perception on obesity

Physical exercise

Qualitative research

South Africa



ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
BMI	Body Mass Index
CHCW	Community Health Care Workers
DOH	Department of Health
HBM	Health Belief Model
KFC	Kentucky Fried Chicken
KZN	KwaZulu-Natal
NCD	Non-Communicable Disease
TB	Tuberculosis
WHO	World Health Organization



TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	1
1.1. INTRODUCTION.....	1
1.2. BACKGROUND	2
1.3. PROBLEM STATEMENT	4
1.4. AIMS AND OBJECTIVES.....	4
1.4.1. AIM	4
1.4.2. OBJECTIVES	4
1.5. RESEARCH QUESTIONS.....	5
1.6. CHAPTER OUTLINE.....	5
CHAPTER 2: LITERATURE REVIEW	6
2.1. INTRODUCTION.....	6
2.2. HEALTHY LIFESTYLE THEORY.....	6
2.3. OBESITY.....	7
2.4. PREVALENCE OF OBESITY IN SOUTH AFRICA.....	8
2.5. PERCEPTIONS OF OBESITY.....	8
2.6. PERCEPTION OF BODY SIZE.....	9
2.7. ATTITUDES ABOUT OBESITY.....	11
2.8. THEORETICAL FRAMEWORK.....	12
2.9. CONCLUSION	14
CHAPTER 3: RESEARCH METHODOLOGY	16
3.1. INTRODUCTION.....	16
3.2. STUDY DESIGN.....	16
3.3. DESCRIPTION OF STUDY SETTINGS.....	16
3.4. STUDY POPULATION AND SAMPLING	17
3.5. DEVELOPMENT OF IN-DEPTH INTERVIEW GUIDES	18
3.6. DATA COLLECTION	19
3.7. DATA ANALYSIS	20
3.8. RIGOUR.....	20
3.8.1. CREDIBILITY.....	21
3.8.2. TRUSTWORTHINESS.....	21

3.9. ETHICS CONSIDERATIONS	22
CHAPTER 4: RESULTS	23
4.1. INTRODUCTION	23
4.2. DESCRIPTION OF THE STUDY PARTICIPANTS	23
4.3. PREDETERMINED THEMES	24
4.3.1. PERCCEIVED SUSCEPTIBILITY TO NON-COMMUNICABLE DISEASES ..	27
4.3.2. PERCEIVED SERIOUSNESS OF OBESITY	29
4.3.2.1. OBESITY IS LIMITING	29
4.3.2.2. CONSEQUENCES OF OBESITY	30
4.3.3. PERCEIVED BENEFITS OF LEADING A HEALTHY LIFESTYLE	30
4.3.3.1. PRODUCTIVITY OF WORKFORCE	31
4.3.3.2. PREVENTION OF NON-COMMUNICABLE DISEASES	32
4.3.3.3. PHYSICAL APPEARANCE	32
4.3.3.4. ROLE MODELLING	33
4.3.4. PERCEIVED BARRIES TO LEADING A HEALTHY LIFESTYLE	33
4.3.4.1. BELIEFS	33
4.3.4.2. UTILIZATION OF HEALTH PROMOTING SERVICES	34
4.3.4.3. CULTURAL NORMS	37
4.3.5. CUES TO ACTION	38
4.3.5.1. PERSONNEL DIAGNOSED WITH HEALTH PROBLEMS	39
4.3.5.2. APPEARANCE	39
4.3.5.3. POSTERS	40
4.3.6. SELF-EFFICACY	40
4.3.6.1. GOAL SETTING	41
4.3.6. 2. SELF-MOTIVATION	41
4.3.6. 3. SOCIAL ASSISTANTANCE SEEKING	41
4.4. SUMMARY	42
CHAPTER 5: DISCUSSION	44
5.1 INTRODUCTION	44
5.2. PERCEIVED SUSCEPTIBILITY TO NON-COMMUNICABLE DISEASES	44
5.4. PERCEIVED BENEFITS OF LEADING A HEALTHY LIFESTYLE	45
5.5. PERCEIVED BARRIERS TO LEADING A HEALTHY LIFESTYLE	46

5.6. CUES TO ACTION	47
5.7. SELF-EFFICACY	48
5.8. SUMMARY	49
CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS	50
6.1. CONCLUSIONS	50
6.3. RECOMMENDATIONS	51
REFERENCES	53
LIST OF APPENDICES	60



CHAPTER 1: INTRODUCTION

1.1. INTRODUCTION

Overweight and obesity are serious Public Health problems. These are conditions in which a person has excessive body fat such that it poses a risk of ill health (WHO, 2013b). The most used measure of overweight and obesity is Body Mass Index (BMI). BMI is a statistical measure comparing a person's weight and height. It is used for screening problems in weight status that may lead to healthy risk and people who have a BMI greater than or equal to 25 are considered to be overweight and those with weight of 30kg/m^2 or more are considered obese (WHO, 2000). However the two terms are often used synonymously.

Recent studies suggest that the prevalence of obesity among health workers is a growing global phenomenon (WHO, 2010). This is alarming, as health workers not only serve the community's health needs, but should also serve as role models for a healthy lifestyle. WHO (2005) reported the prevalence of obesity in the United States of America (USA) to be 27% among men and 32% among women. Ettarh, Van de Vijver, Otis and Kyobutungi (2013) reported in their study on overweight, obesity and perception of body image among slum residents in Nairobi that 43.4% of women and 17.3% of men were overweight or obese. Puoane, Steyn, Bradshaw, Laubscher, Fourie, Lambert and Mbananga (2002) also found that 29% of men and 56% of women are overweight or obese in South Africa.

The increase in obesity among populations includes health workers in various countries. Abbe, Giorgianni, Munao, Beninato, D'Arrigo, D'Arrigo, D'Arrigo and Brecciaroli (2006) reported that 13.3% of male and 13.6% of female health workers were obese in Italy. Al-Haddad, Al-Haddad and Al-Sayyad (2013) also reported a high prevalence (70%) of obesity among health workers in Bahrain.

Studies in middle-income countries show similar results. Chaitali, Mangala and Subrahmanyam (2014) found that 37.5% of nursing students in India were overweight or obese. These results are supported by Selvaraj and Sivaprakasam (2013) who found similar findings in their study on the

prevalence of overweight and obesity among medical students in South India at Meenakshi Medical College and Research Institute, where they found that 24% of medical students were overweight and 8.6% were obese.

African studies have reported similar findings. Kasu, Ayim, and Tampouri (2015) reported the overall prevalence rate of overweight or obesity among health workers in Ghana to be 38.0%. The prevalence of overweight or obesity was 42.4% among females and 32.9% among males. Iwuala, Ayankogbe, Olatona, Olamoyegun, OkparaIgwe, Sabir and Fasanmade (2015) found 27.3% health service providers in Nigeria to be obese and 44.7% were overweight. This was supported by Garrido, Semeraro, Temesgen and Simi (2009) who found that 28.7% of health workers were obese and 27.3% were overweight in Botswana.

Research conducted in South Africa found that many health workers are overweight or obese. Onyebukwau (2010) reported that 29.7% and 41% of health workers were overweight or obese respectively at Mafikeng provincial hospital. Another study, conducted at a public tertiary hospital in Pretoria by Skaal and Pengpid (2011) found that 75% of health workers were obese. These results were further supported by Van den Berg, Okeyo, Dannhauser and Nel (2012) who reported that 49.7% of nursing students at the University of Fort Hare in the Eastern Cape Province were obese.

These studies illustrate that weight problems and obesity among health workers is a serious public health concern in South Africa. However, little is known about the perceptions about obesity and the attitudes of health workers towards obesity. It is, therefore, necessary to explore the perceptions of obesity among this important group in public health who should be knowledgeable and serve as role models at the forefront of tackling this public health problem.

1.2. BACKGROUND

Nishida and Mucavele (2005) reported that obesity prevalence has been on the increase in South Africa and Moloi (2013) supported this finding, concluding that 61% of South Africans are obese. This trend signifies that there is an increase in obesity among South Africans, health workers

included. Considering the South African studies cited above, it is clear that obesity is a problematic issue amongst health workers (Onyebukwau, 2010; Skaal & Pengpid, 2011; Van den Berg et al., 2012).

It is expected of health workers to act as role models in their communities and for their patients by adopting a healthy lifestyle. These are people who are presumed to have knowledge of lifestyle choices that would prevent obesity. However, based on the above mentioned studies, this does not appear to be the case. Importantly, there is a positive relationship between health workers and the preventive health practices of their patients. Oberg and Frank (2009) demonstrated this in their study, which found that patients are convinced to practise health-promoting activities if their physicians act as positive role models. This was supported by Frank, Breyan and Elon (2000) who concluded that patients who observe the good health habits of their physicians are likely to be healthier than those who do not observe such practices in their physicians.

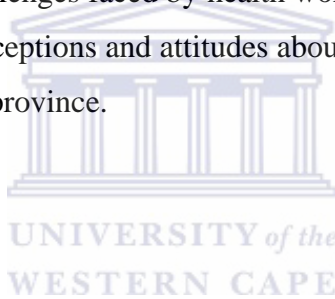
Oberg and Frank (2009) argue that if health workers are obese, it will be difficult for them to give effective health-promoting advice to their clients regarding weight management and healthy lifestyle choices. If they are unable to give effective advice, clients' chances of suffering from chronic obesity-associated diseases like cardiovascular diseases, diabetes type 2, hypertension, strokes and chronic respiratory diseases will be increased. These are non-communicable diseases (NCD) which are treated for a very long time and are rarely cured (WHO, 2013).

Furthermore, when health workers are unable to practise a healthy lifestyle, they are more likely to suffer from NCDs of which obesity is a precursor. Bradshaw, Groenewald, Laubscher, Nannan, Nojilana, Norman, Pieterse and Schneider (2003) reported that NCDs reduce the quality of life and increase the rate of absenteeism at work in due course. This creates an added burden on the health workforce, resulting in added strain on health service delivery. If obesity remains uncontrolled, it could add to staff absenteeism. Phiri, Draper, Lambert and Kolbe-Alexander (2014) argue that absenteeism from work causes work burn-out in other staff members, making the problem of staff shortages a vicious cycle. Connelly, Veriava, Roberts, Tsotetsi, Jordan, DeSilva and DeSilva (2007) found that during the HIV/AIDS epidemic in the twentieth century, because of increased mortality and morbidity among health workers, there were acute staff

shortages. The loss of health workers due to the HIV/AIDS pandemic has already been severely felt in sub-Saharan Africa and the added obesity and NCDs burden will further aggravate this situation. A healthier work force is imperative to mitigate the abovementioned challenges.

1.3. PROBLEM STATEMENT

It has been noted in a number of quantitative studies that obesity is a problem among health workers (Onyebukwau, 2010; Skaal et al., 2011; Van den Berg et al., 2012). If the problem of obesity among health workers persists, it could lead to reduced productivity of the health workforce, as well as increased turnover amongst health workers. In addition, overweight and obese health workers are not in a position to provide effective advice to their clients. To date, no studies have been done to explore health workers' perceptions about obesity, their attitudes towards the condition, and the challenges faced by health workers in adopting a healthy lifestyle. The current study explored the perceptions and attitudes about obesity amongst health workers in Pietermaritzburg, KwaZulu-Natal province.



1.4. AIMS AND OBJECTIVES

1.4.1. AIM

The aim of the study was to explore health workers' perceptions and attitudes about obesity in Pietermaritzburg, KwaZulu-Natal province.

1.4.2. OBJECTIVES

The objectives of the study were:

- To explore the perceptions about obesity and body image among health workers;
- To explore the attitudes towards behaviour change among health workers;
- To identify the barriers to adopting a healthy lifestyle among health workers in Pietermaritzburg medical metropolitan complex.

1.5. RESEARCH QUESTIONS

- What are perceptions about obesity and body image among health workers?
- What are the attitudes towards behaviour change among health workers?
- What are the barriers to adopting a healthy lifestyle among health workers in Pietermaritzburg medical metropolitan complex?

1.6. CHAPTER OUTLINE

Chapter 2 comprises a critical review of relevant literature from journals, articles and reports reviewed on the study topic. It is divided into two sections. The first section presents a literature review on healthy lifestyles, the prevalence of obesity and perceptions of obesity. The second section, presents one theoretical perspective of the many theories that explain health-seeking behaviours. It highlights the challenges that prevent health workers from controlling their weight, acting as role models and counselling their clients and communities in a more effective manner on overweight or obesity.

Chapter 3 contains the description of the study methodology. It describes the study site, the study design, data sources, sampling, data collection methods and analysis.

Chapter 4 describes the study participants' demographics and, thereafter, the results based on the perceptions, attitudes and challenges encountered by health workers in adopting a healthy lifestyle. The results are presented using the six predetermined themes from the health belief model (HBM).

Chapter 5 elaborates on and discusses the results of the study, comparing the findings to other qualitative studies on obesity.

Chapter 6 provides conclusions and recommendations that could assist the DOH and other institutions to support their workers in adopting a healthy lifestyle.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

The literature reviewed was sourced through searches of electronic databases: Pubmed, Medline and Google scholar. The following key words were used in the search strategy: perceptions of obesity; perceptions of causes of obesity; attitudes about obesity; healthy lifestyle; prevalence of obesity; and health belief model. The search was conducted for studies published in English from 1990-2015. This chapter is divided into two sections. The first section presents a literature review on healthy lifestyle, prevalence of obesity and perceptions of obesity. The second section presents one theoretical perspective of the many theories that explain health-seeking behaviours. It highlights the challenges that prevent health workers from controlling their weight, acting as role models and counselling their clients and communities in a more effective manner on overweight and obesity.

2.2. HEALTHY LIFESTYLE THEORY

According to Cockerham (2005: 55) “Healthy Lifestyle theory as a concept which combines the ideas of agency and structure to demonstrate that in modern society, not all individuals are provided equal opportunities to be healthy. The agency refers to an individual’s ability to choose a behaviour or action, and notes that there must be alternative options that the individual does not choose. Structure is defined as sets of mutually sustaining schemas and resources that empower or constrain social action and tend to be reproduced by that social action.”

People as individuals have the right to choose their own lifestyle to adopt under any circumstance. Nevertheless, social determinants play a major role in achieving and sustaining this lifestyle. Poor people struggle to adopt healthy lifestyles because of challenges such as non-availability of places to practise physical activities and lack of access to healthy affordable food.

Cockerham (2005) reported that healthy lifestyle theory emerged as a reaction to scholars trying to come to grips with changing disease burdens, modernity and social identities. The initial change occurred with the twentieth century epidemiological transition when disease profiles changed from acute to chronic diseases, which became a major contributor to human mortality globally (WHO,

2013). Modern medical treatment can relieve symptoms of chronic diseases to improve the quality of life of patients, but they are rarely cured.

Prentice (2006) added that the second change was social modernization, which came with the industrial revolution, which resulted in a massive increase in economic productivity, promoting general improvement in living standards and purchasing power. He argued that this pattern used to be common in high-income countries like the United States of America and Germany, but now, the situation has changed. Kelly, Yang, Chen, Reynolds and He (2008) reported that the situation in middle-income countries like Brazil and South Africa has changed to be similar to that in the United States of America and Germany. These changes have been accompanied by an increased consumption of food high in refined oils and sugar. In addition, people's lives are now more mechanized, resulting in some people's becoming less physically active (Prentice, 2006). All of these factors increase the prevalence of obesity, which in turn is a main risk factor for all NCDs.

2.3. OBESITY

Obesity is the condition in which a person has excessive body fat that poses a risk of ill health (WHO, 2013b). The most commonly used measure for obesity is body mass index (BMI) which is a statistical measure comparing a person's weight and height as earlier mentioned in the introduction in chapter 1. It is used to assess the degree of obesity in individuals. People who have a BMI of 30kg/m^2 or more are considered obese (WHO, 2000). The WHO (2013 b) reported that 35% of the world adult population, 20 years and older, were overweight and 11% were obese in 2008, accounting for more than 1.4 billion overweight adults and more than 500 million people who were obese. Kelly (2005) reported that worldwide 33% of adults (1.3 billion people) were overweight or obese in 2005 and predicted the prevalence of obesity to go up to 57.8 % of the world's adult population by 2030 if the trend towards obesity remains uncontrolled. The consequences of obesity as a risk factor have been considered in both high and low-income countries as the major contributory factor to the cause of disability and premature death due to NCDs (WHO, 2005).

2.4. PREVALENCE OF OBESITY IN SOUTH AFRICA

South African studies have shown an increased incidence of obesity. Puoane et al. (2002) found that 56% of adult women in South Africa were obese or overweight while for adult males it was 29%. Further, Moloi (2013) also concluded that 61% of the people in the country are obese or overweight, of which one third are women. Gangerdine (2014) reported that 69.3% of South Africans are overweight or obese.

The increase in obesity is also prevalent among health workers. Onyebukwau (2010) reported that 29.7% and 41% of health workers were overweight and obese respectively in a study conducted at Mafikeng provincial hospital to determine the prevalence of overweight and obesity. Skaal and Van den Berg also affirmed these findings from their studies in 2011 and 2012 respectively. Skaal and Pengpid (2011) in their study conducted at a public tertiary hospital in Pretoria found that 75% of health workers were overweight or obese and Van den Berg et al. (2012) found that 49.7% of nursing students at the University of Fort Hare in Eastern Cape were overweight or obese. These results show that obesity is a serious public health problem.



2.5. PERCEPTIONS OF OBESITY

Obesity is perceived differently based on race and cultural beliefs within society. Studies conducted in developed countries reported that at the dawn of the 20th century, when tuberculosis (TB) was prevalent in North America, people preferred to be overweight or obese as a sign of wealth and also to disassociate themselves from those suffering from TB (Grivetti, 2001). This conception of maintaining a large body size among inhabitants of high-income countries only changed after the 2nd World War to a preference for lean body sizes (Grivetti, 2001). This perception is still common in Africa, where a preference for increased weight is observed among people who associate this status with good health and a wealthy status. Holdsworth, Gartner, Landais, Maire and Delpeuch (2004) argued that being overweight was desired in urban Senegalese women, although obesity itself was seen as undesirable, associated with greediness and the development of diabetes and heart diseases. In addition, Matoti-Mvalo (2006) in her exploration of perceptions about thinness, HIV/AIDS and body image amongst black South

African women, also found that the majority of women associated thinness with HIV/AIDS and as a result they preferred to be overweight or obese than to be stigmatised as having HIV/AIDS. These findings mentioned are consistent with Kasu et al. (2015) who reported that Ghanaians desire overweight body sizes.

2.6. PERCEPTION OF BODY SIZE

Body size is viewed differently in many respects depending on race and culture. In many cases Stunkard's scale for self-reported body image is used to determine the preferred body size by individuals (Stunkard, Sørensen & Schulsinger, 1983). It contains nine silhouettes for both women and men that are on an ordinal scale (Stunkard's scale-Appendix 1).

A number of studies have reported different preferences of body size by different people. Craig, Halavatau, Comino and Caterson (1999) reported that Tonganese prefer larger bodies for they perceive them to be attractive and healthy. In the same study, perception of big body size in the Tongan community was also noted. Tongan women underestimated their body size but both Tongan and Australian men overestimate their weight. Nevertheless, a study by Chaitali, Mangala and Subrahmanyam (2014) found that 37.5% of nursing students in India, who were overweight or obese, were not satisfied with their weight.

In Africa, there is a different perception about body sizes: many African women prefer fuller bodies because they associate them with beauty and wealth. Holdsworth et al. (2004) found that urban Senegalese women prefer to be overweight as in Senegal this the most socially desirable body type. This is further supported by Ettarh, Van de Vijver, Otis and Kyobutungi (2013) in their study on overweight, obesity and perception of body image among slum residents in Nairobi. The study found that among overweight/obese participants, 34.6% of women and 16.9% of men underestimated their weight. More than one third of women and men preferred body sizes classified as obese or overweight.

However, some African women prefer slim bodies. Tlili, Mahjoub, Lefèvre, Pierre, Tarek, Habiba, Sabrina and Holdsworth (2008) concluded that Tunisian women perceive having a slim body as desirable and having less risk of diseases. This phenomenon supports western culture's perception of body size. Cultural diversity has an influence on preferred body size. Many white females prefer

slim bodies unlike black African women in high/middle and low-income countries (Mvo et al., 1999). Cogan, Bhalla, Sefa-Dedeh and Rothblum (1996) in their study found that Ghanaian students rated larger body sizes as ideal for both males and females and also assumed that these larger sizes are held as ideals in society, as opposed to USA students.

The study by Puoane et al. (2002) found that women had incorrect perceptions about their body weight. Puoane et al. (2002) discovered that 22% of women of all races perceived themselves as obese or overweight whereas in reality 56.6% were overweight. Amongst black women, only 16% perceived themselves as being overweight, while 26.7% were in fact overweight and 31.8% obese (Puoane et al., 2002). A similar study by Matoti-Mvalo (2006) supported this finding, noting that more than 80% of the women who participated in their study were overweight or obese and thought that being overweight or obese was healthy and that it made a person feel dignified. Another study by Mvo, Dick and Steyn (1999) reported that increased body mass was regarded as a token of well-being because marital harmony was perceived to be reflected in increased body weight. The available studies reviewed showed that many Africans have preference for overweight or obese body sizes.

These perceptions on obesity develop while children are growing and this is supported by Puoane, Tsolekile and Steyn (2010) in their study which found that some girls prefer big bodies as a sign of dignity and looking good. In the same study, it was noted that people recognize the association between food, pleasure and comfort. Thinness and loss of weight were associated with times of anxiety and problems, which are associated with a negative lifestyle. Even though people are aware of the risks of obesity, they are willing to accept these in exchange for the perceived benefits of being associated with good health and a wealthy status. According to Puoane (2002) and Devanathan (2013), despite study participants knowing that obesity is a risk factor of NCDs, they still prefer to be obese or overweight. This is supported by literature (Holdsworth et al., 2004; Puoane, Tsolekile & Steyn, 2010; Devanathan, Esterhuizen & Govender, 2013; Ettarh et al., 2013).

The abovementioned cultural concept has a bearing on the African continent, including the South African context. Perceptions of body weight are influenced by the large cultural diversity in South Africa. Amongst African women, it has been reported that there is a perception that being overweight and even obese is desirable and has many positive connotations (Puoane et al., 2002;

Puoane, Fourie, Shapiro, Rosling, Tshaka & Oelefse, 2005; Mvo, Dick & Steyn, 2009; Puoane, Tsolekile & Steyn, 2010; Devanathan, Esterhuizen & Govender, 2013).

2.7. ATTITUDES ABOUT OBESITY

The way people think about obesity differs depending on race, age, culture and custom. Certain people consider obese people to be lazy and worthless in relation to normal weight people. This is supported by studies by Neumark-Sztainer, Story and Harris (1999), Foster, Wadden, Makris, Davidson, Sanderson, Allison and Kessler (2003) and Brown (2006). However, there are few studies on attitudes towards obesity in Africa (Prentice, 2006). Neumark-Sztainer et al. (1999) in their study in Minneapolis found that 20% to 25% perceived obese persons to be more emotional, less tidy, less likely to succeed at work, and to have more family problems than persons that are not obese.

Negative attitudes towards obese individuals have also been noted in health workers and this is a major concern. Health workers are supposed to care for all members of the public including obese clients: if health workers have negative attitudes about obese patients, the level of care provided could be compromised. Foster et al. (2003) in the U.S.A found that more than 50% of physicians viewed obese patients as awkward, unattractive, ugly, and noncompliant. Brown (2006) argued that even if there are limited studies on attitudes of nurses towards obese patients, the studies available consistently suggest that a proportion of nurses have negative attitudes towards adult obese patients. This is supported by Poon and Tarrant (2009), who compared the attitudes of registered nurses and nursing students in Asia. They concluded that registered nurses had considerably higher levels of 'fat' phobia and more negative attitudes than did student nurses. The majority of participants perceived that obese people liked food, over-ate and were shapeless, slow and unattractive. Pantenburg, Sikorski, Lupp, Schomerus, Konig, Werner and Riedel-Heller (2012) also concluded the same from their study among medical students.

Nevertheless, many African studies on obesity show mostly positive attitudes towards the condition (Prentice, 2006). Faber (2008) conducted a study in KwaZulu Natal province on dietary intake, perceptions regarding body weight, and attitudes towards weight control of normal,

overweight and obese black females. The positive attitudes discovered were that overweight women are well cared for by their husbands (45%) and that overweight women are beautiful (44%). This was affirmed by Puoane et al. (2005) who found that overweight was associated with happiness, dignity, respect, health, wealth and strength and being treated well by one's husband.

Some negative attitudes were reported by Faber (2008) such as that overweight people cannot work hard (70%), that men prefer fat women (62%) and that thinner people get jobs more easily (88%). This was supported by Brown (2006) who reported that obese people are considered to be lazy.

2.8. THEORETICAL FRAMEWORK

There are many health behaviour theories and models: trans-theoretical theory, theory of reasoned action, protection motivation theory, subjective expected utility theory and the health belief model. In this thesis only three are described in detail.

2.8.1. Trans-theoretical theory (TTM)

TTM can be applied to the population at risk of a disease. This model is used in a broad range of health and mental behaviours to assist individuals to adopt health/behaviour change while the entire population benefits. It has been applied to cigarette smoking cessation, alcohol abuse, eating disorders and HIV prevention programmes. The model uses a systemic approach which has five stages: recruitment, retention, progress, processes and outcome (Glanz, Rimer & Viswanath, 2008). The programme is designed to assist participants to progress through the stages of change by applying processes that match their individual needs at each stage. The impact of the programme is evaluated at the end by assessing the outcomes. This model deals with addictive behaviours like cigarette smoking.

2.8.2. Theory of Reasoned Action

The Theory of Reasoned Action (TRA) provides a framework to identify key behavioural, normative, and control beliefs affecting behaviours (Rimer & Viswanath, 2008). The model is designed to target and change beliefs, thus affecting attitude or perceived control and leading to changes in behaviours and intentions. TRA explains a variety of health behaviours, including investigating individual behaviour towards new products or innovation and how individuals respond to such developments.

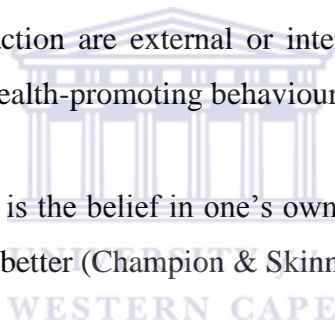
2.8.3. Health Belief Model

The Health Belief Model (HBM) is a theoretical framework that is used to understand how health behaviour can prevent and detect a disease (Champion & Skinner, 2008). It is mostly utilized to study people's behavioural responses to health-related conditions that are determined by seven personal beliefs about a disease (Champion & Skinner, 2008). These seven constructs, namely perceived susceptibility, perceived seriousness/severity, perceived benefits, perceived barriers, cues to action and self-efficacy, are the bases of the HBM (Burns & Groove, 2001).

HBM was selected for this study because it explains health related behaviour at the level of individual decision-making (Champion & Skinner, 2008). The model is used to envisage different preventive health behaviours where perceived risks are studied (Burns & Groove, 2001). Most of the key concepts used in the model are applicable to this study. This study and its structure are guided by the HBM theoretical framework. The HBM provided the theoretical framework used to explore health workers' perceptions about obesity, their attitudes towards the condition, and the challenges faced by health workers in adopting a healthy lifestyle in the Pietermaritzburg medical metropolitan complex, Kwazulu Natal province. This framework is the rationale that will direct the course of the study and let the researcher link the findings to knowledge in the health science area (Burns & Groove, 2001). The HBM is divided into the following main components:

- **Perceived susceptibility:** Perceived susceptibility refers to beliefs about the possibility of getting any disease (Burns & Groove, 2001).

- **Perceived seriousness:** Perceived seriousness refers to opinions of an individual on the seriousness of contracting an illness or the consequences of leaving a condition untreated (Burns & Groove, 2001; Champion & Skinner, 2008).
- **Perceived Benefit:** The term “perceived benefit” is frequently used to explain an individual’s motives for adopting a type of behaviour or intervention (Burns & Groove, 2001; Champion & Skinner, 2008).
- **Perceived barriers:** A perceived barrier is a person’s estimation of the level of challenge of social, personal, environmental, and economic obstacles to a specified behaviour or their desired goal status on that behaviour (Champion & Skinner, 2008).
- **Cues to action:** Cues to action are external or internal triggers that are necessary for prompting engagement in health-promoting behaviours (Champion & Skinner, 2008).
- **Self-efficacy:** Self-efficacy is the belief in one’s own ability to do something in order to change the situation for the better (Champion & Skinner, 2008).



2.9. CONCLUSION

The chapter discussed the literature on perception, attitudes and challenges of obesity. Extensive literature is available both in South Africa and internationally which highlights that obesity is a common condition in both high and low-income countries (Puoane et al, 2002; Abbt et al, 2006; Ettarch et al, 2013 & Al-Haddad et al 2013). This condition is found to be of high prevalence among health workers as well, which makes it of great concern to public health as this category of workers are supposed to be role models in healthy lifestyle adoption and help in prevention of obesity related health problems.

Healthy lifestyle has a lot of benefits which includes reducing the chances of suffering from NCDs, cultivating a healthy self-image and being healthy and more productive (Tili et al, 2008). The negative effects include increased chances of suffering from NCDs, not able to fit in old clothes and being less productive. The discussions of healthy lifestyle theory demonstrated that people’s

behaviour choices and the environment in which they live pre-disposes them to obesity. The broad literature search showed that obesity is common among black people due to positive connotation attached to it including; looking beautiful, being wealthy and progressive. These beliefs pose a challenge to the implementation and effectiveness of health programmes related to obesity reduction (Holdsworth et al., 2004; Puoane, Tsolekile & Steyn, 2010; Devanathan, Esterhuizen & Govender, 2013; Ettarh et al., 2013).

The study and its structure are guided by the HBM theoretical framework because this theory deals with health related behaviour at individual decision-making level (Champion & Skinner, 2008). Trans-theoretical theory, theory of reasoned action, protection motivation theory, subjective expected utility theory were also discussed.



CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

This chapter describes the study design, study settings, study population and sampling, data collection, data analysis, rigour and ethics as applied in the current study.

3.2. STUDY DESIGN

An explorative and descriptive qualitative study was conducted in order to explore the understanding of health care workers' knowledge about body weight, obesity and adopting a healthy lifestyle. Malterud (2001: 483) describes the purpose of qualitative research as: “...*the exploration of meanings of social phenomena, as experienced by individuals themselves in their natural context*”. The qualitative approach was used to investigate the perceptions and attitudes of health workers about obesity in Pietermaritzburg health metropolitan, as health workers participating in the study were able to share their experiences with regard to obesity, as well as the barriers encountered to following a healthy lifestyle.

Mays and Pope (1995) argue that an understanding of participants' experiences and constructed meanings about particular issues within their natural settings is one of the most important aspects of qualitative research. In line with Mays and Pope, all participating health workers were interviewed in their respective hospitals. The qualitative approach is most suitable to explore perceptions, attitudes and challenges about obesity as it allows the researcher to explore and understand health workers' perceptions on susceptibility to NCDs, severity of NCDs, benefits of leading a healthy lifestyle, barriers to following a healthy lifestyle, cues to action and self-efficacy.

3.3. DESCRIPTION OF STUDY SETTINGS

The study was conducted at Edendale, Northdale and Grey's hospitals in uMgungundlovu district in Pietermaritzburg. Edendale hospital historically served the African population, Northdale the Indian population and Grey's the White population. The district covers an area of 125.15 km² and has a population of 223448 (Adrian, 2012). Its population comprises of 70% black African, 8.4%

Indian/Asian, 14.2% White and 6.9% Coloured (Adrian, 2012). The provincial unemployment rate stood at 33% in 2011 (Lehohla, 2012).

Edendale provincial hospital is a 900-bed regional and district hospital, located in a semi-urban township called Edendale. It is surrounded by Dambuza and Imbali townships, which are home to a majority of lower-income black Africans who live in impoverished conditions. The hospital offers surgery, obstetrics, gynaecology, medicine, orthopaedics, anaesthesia, paediatrics and neurosurgery services.

Northdale hospital is a district hospital offering district level services that includes surgery, obstetrics, gynaecology, medicine, anaesthesia and paediatrics. The hospital is located in the northern part of Pietermaritzburg which is predominantly a middle-class Indian suburb and it is surrounded by the suburbs of Coopersville, Raise Thorpe and Bombay Heights.

Grey's hospital is a 530-bed referral hospital offering tertiary services including surgery, obstetrics, gynaecology, medicine, orthopaedics, anaesthesia, paediatrics, maxilla facial and neurosurgery services. The hospital is located in what was previously a 'white' neighbourhood/area in central Pietermaritzburg which is predominantly an upper-middle class income suburb.

3.4. STUDY POPULATION AND SAMPLING

The study population was constituted of health workers from the above-mentioned hospitals which are part of the Pietermaritzburg medical metropolitan complex. The inclusion criteria for eligible participants were health workers who:

- (1) Have been working for more than one year;
- (2) Are permanently employed at one of the selected hospitals;
- (3) Have at least three years of professional training;
- (4) Are working closely with overweight or obese patients.

This study included relatively small sample sizes that were purposefully selected, as the researcher's primary concern was quality of data and not statistical representation (Mays & Pope, 2000). In qualitative studies, selected participants grant access to information on a particular phenomenon under study and, as such, they represent a perspective rather than a population, thus providing the researcher with more detailed and richer data.

Six health workers from each hospital site were recruited for data collection. Physiotherapy managers informed various component managers about the proposed study, who then assisted in recruiting suitable participants from their respective components. The researcher included two obese health workers from each institution, allowing these individuals to share perceptions surrounding obesity, thus making the study more inclusive. All participants were recruited using purposive sampling, with the intention of ensuring representation from as many of the professional categories as possible.

After obtaining permission from all relevant authorities, the researcher contacted the physiotherapy managers of the three selected hospitals by email asking them to assist in recruiting the research participants. The managers were informed about the selection criteria and information sheets for participants were attached to the email so that willing participants had access to the study information and expectations. After approximately two weeks, the managers responded with the contact details of the willing participants. After that, the researcher telephonically contacted the participants checking if they fulfilled the criteria for the study and making arrangements as to when and where to meet each participant for the interview.

3.5. DEVELOPMENT OF IN-DEPTH INTERVIEW GUIDES

An interview protocol was developed in order to ensure consistency between interviews. This included welcoming remarks to interviewee, ensuring that informed consents are signed and confidentiality of participants. Constructs from the Health Belief Model were used to guide development of questions for the two interview guides. Questions were based on the following constructs: perceived susceptibility to non-communicable diseases, perceived seriousness of

obesity, perceived benefits of leading a healthy lifestyle, perceived barriers to leading a healthy lifestyle, cues to action and self-efficacy.

Through exploration of these questions, the researchers aimed to identify perceptions and attitudes of health workers about obesity in Pietermaritzburg health metropolitan. The interview guide was tested by interviewing a nursing colleague lecturer who is specialized in qualitative research to establish if the questions are yielding answers to the study topic.

3.6. DATA COLLECTION

Data collection was conducted between April and May 2015. The researcher pre-tested the interview guide by interviewing a nursing colleague lecturer who is specialized in qualitative research to ascertain if the questions would yield answers to the study topic. In-depth interviews were conducted to collect data as the researcher wanted to be able to capture verbal and non-verbal communication, as well as making participants comfortable to be able to fully engage in the discussion topic during the interview (Robson, 2011). This also assisted the researcher in fully capturing the perceptions and beliefs of the participants.

The researcher conducted the interviews. During all interviews, the researcher was assisted by a work colleague, who is studying Public Health at the University of KwaZulu-Natal (UKZN). The interviews were conducted at a suitable time for each participant and at the venue of their choice. The research assistant acted as the timekeeper during interviews and each interview lasted approximately 30 minutes.

Two different semi-structured interview guides were used to guide the in-depth interview for obese/overweight and normal weight health workers (Interview guide for normal weight health workers: Appendix 8 and Interview guide for obese/overweight health workers: Appendix 9). All the interviews were conducted in English and were audio recorded using an electronic voice-recorder. After the interview, participants were served with refreshments, as a gesture of appreciation for their time and participation.

3.7. DATA ANALYSIS

The analysis of the data started when the researcher performing the interview listened carefully during the discussions and when transcribing the interviews. This enabled the researcher to become familiar with the questions and, where gaps were identified and additional information was required to address the research questions, subsequent questions could be added to the interview. Tape-recorded data was transcribed verbatim and analysed manually. Thematic content analysis was done to realize the objectives of the study.

The researcher transcribed the interview verbatim. After transcription, the transcripts were printed with enough room for notes and were spread on three large tables in the study room. The researcher then used the themes from the Health Belief Model (HBM) to highlight relevant information. Using a highlighter, the researcher highlighted the codes in order to elicit meaning from the text. Codes that were similar were clustered together as sub-themes and then the sub-themes were rearranged to align with the health belief model components as themes.

The HBM was used to inform the analysis. For this purpose, the following six predetermined themes were applied to the data:

- Perceived susceptibility to non-communicable disease;
- Perceived severity of obesity;
- Perceived benefits of leading a healthy lifestyle;
- Perceived barriers to leading a healthy lifestyle;
- Cues to action;
- Self-efficacy.

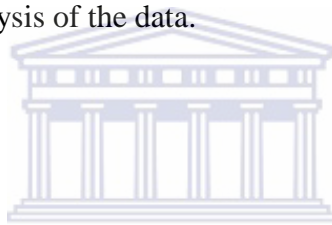
These themes were determined before the individual interviews to purposefully guide the researcher, as they relate closely with health behaviour at the individual decision-making level. The data was then rechecked for consistency and dependability to ascertain that no major categories were omitted.

3.8. RIGOUR

Rigour is the way of establishing the credibility and integrity of the qualitative research process (Robson, 2011:155). Rigour was improved by paying consideration to credibility and trustworthiness in the study.

3.8.1. CREDIBILITY

Credibility refers to the truthfulness of the description of the phenomenon in question (Robson, 2011). It addresses the issue of whether or not there is consistency between the participants' opinions and how the researcher has represented them. Credibility of the study was enhanced by the researcher listening carefully during interviews in order to get new information on the topic. Descriptions of the perceptions and attitudes of health workers' views from all the interviews were presented in verbatim transcriptions. When the interviews were completed, the researcher re-checked the interpretation and analysis of the data.



3.8.2. TRUSTWORTHINESS

Trustworthiness is an integral part of rigour which is achieved when the researcher leaves a clear audit trail regarding the study from the beginning to the end (Robson, 2012; 155). This makes it possible for another researcher or reader to follow the way the study process was done and will aid in understanding their reasoning. In this study, trustworthiness was achieved through documentation of the study's development and keeping records of the study process. All the study documents were archived, including the diary and the audio interview recordings.

In addition, at the end of each interview, peer-debriefings with the participants to clarify the researcher's understanding of a particular response were done to ascertain if the responses were in line with the original thinking of the respondents. Cresswell and Miller (2000: 129) describe peer-debriefing as "the review of the data and research process by someone who is familiar with the research or the phenomenon being explored". In this study, the researcher and the research assistant debriefed after every data collection event, for the purpose of making the study more trustworthy.

3.9. ETHICS CONSIDERATIONS

Ethics approval for the study was granted by the Senate Research committee of the University of the Western Cape: registration No: 14/10/40 (Appendix 2). Permission to conduct the study at Edendale, Grey's and Northdale hospitals was obtained from the respective Chief Executive Officers of these hospitals (Appendix 3: 3A: Greys hospital. 3B: North dale hospital 3C: Edendale hospital). Permission was also granted by the KwaZulu-Natal Department of Health Research and Knowledge Management [(KZN DOH - HRKM) REF: KZ 2015RP 920] (Appendix 4).

The researcher then selected research participants via a process previously described and arranged to meet them. On the first meeting with each participant, the researcher went through the participant information sheet in English with each participant explaining the details of the study, the risks and benefits, the voluntary nature of the study and assuring them of confidentiality (Participation sheet: Appendix 5). After confirming that they understood what was expected from them, all those willing to participate signed the consent form voluntarily before the interview commenced (Informed consent: Appendix 6).

Participants were also assured that they could choose to stop participating at any time without giving an explanation, should they desire to do so. Those who wished to seek medical help were assisted in doing so by the researcher's referring them to the appropriate service provider, such as a medical officer or psychologist.

CHAPTER 4: RESULTS

4.1. INTRODUCTION

This chapter will discuss the results of the study starting with a description of the study participants. The chapter will then present the findings using the predetermined themes.

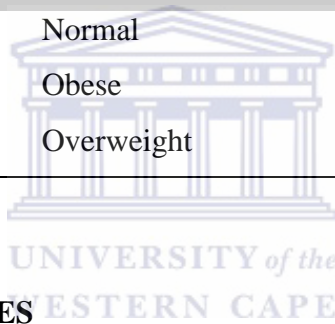
4.2. DESCRIPTION OF THE STUDY PARTICIPANTS

Table 1 below describes the socio-demographic characteristics of the study participants. 18 participants were interviewed. The study sample consisted of 14 females and 4 males, and the majority were between 46-50 years old. There were 7 black Africans, 6 Indians and 5 whites in the sample. There were more black African female participants, which is reflective of the health worker population in KZN province (Lehohla, 2012). The white population is the lowest in KZN province and the number of white health workers is correspondingly lower (Lehohla, 2012). The number of self-reported body size was ten as normal weight, two as overweight, and six as obese. Interestingly enough, of the six workers categorised as obese, all described themselves as such. All the racial groups were represented in the study.

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Table 1: Socio-demographic characteristics of study participants

		Frequency
Gender	Male	4
	Female	14
Age (in years)	<40	2
	41 - 50	13
	>51	3
Ethnicity	African	7
	Indians	6
	Whites	5
Self-perceived body weight	Normal	10
	Obese	6
	Overweight	2



4.3. PREDETERMINED THEMES

All the highlighted text was coded in line with the predetermined themes according to the relevance in describing each category from health belief theory. The six predetermined themes are indicated in table 2.

Table 2. Classification of main themes, subthemes and codes

Themes	Sub-themes	Codes
Perceived susceptibility to non-communicable diseases	Perceived susceptibility to non-communicable diseases	<ul style="list-style-type: none"> • Eating habits • Exercising is uncomfortable • Dependence on machinery
Perceived severity of obesity	Being overweight/obese limits work efficiency	<ul style="list-style-type: none"> • You cannot get close enough to patients • You cannot manipulate patients effectively
	Consequences of obesity	<ul style="list-style-type: none"> • Higher risk of NCDs • Heart diseases • It can kill you • Poor quality of life
Perceived benefits of leading a healthy lifestyle	Productivity of workforce	<ul style="list-style-type: none"> • Healthy workers
	Prevention of NCDs	<ul style="list-style-type: none"> • Taking care of ourselves first • Health population
	Physical appearance	<ul style="list-style-type: none"> • Enhanced beauty • Enhanced body image
	Role modelling	<ul style="list-style-type: none"> • An example to clients and the community
Perceived barriers to leading a healthy lifestyle	Beliefs about obesity	<ul style="list-style-type: none"> • Thin people are sick/unhappy • Fat people are happy and healthy
	Utilization of health promotion services	<ul style="list-style-type: none"> • Lack of reliable information on diet • Lack of accessibility to healthy food • Lack of physical exercising facilities • Lack of management support • Lack of time • Poor salaries
	Cultural norms	<ul style="list-style-type: none"> • Big is beautiful

Cues to action	Personnel diagnosed with health problems	<ul style="list-style-type: none"> • Workmates suffering from NCDs • Family members suffering from NCDs
	Appearance	<ul style="list-style-type: none"> • Limited wardrobe • Clothes not fitting properly
	Posters	<ul style="list-style-type: none"> • Display of posters on NCDs
Self-efficacy	Goal setting	<ul style="list-style-type: none"> • Starting an exercise programme • Progress in program adherence
	Self-motivation	<ul style="list-style-type: none"> • Coping with the new program • New eating habits • Weight reduction • Losing weight is motivating
	Social support	<ul style="list-style-type: none"> • Group exercises • Family members helps • Eating buddies

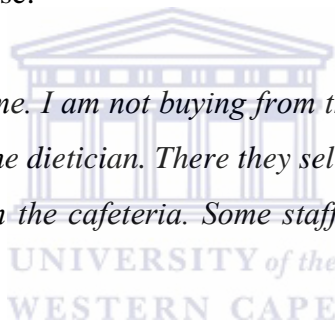


4.3.1. Perceived susceptibility to non-communicable diseases

Perceived susceptibility refers to beliefs about the possibility of getting a disease such as diabetes and other NCDs (Burns & Groove, 2001). For instance, a person must believe there is a possibility of getting diabetes before he or she becomes interested in going for diabetes screening.

The participants acknowledged that they are aware that their choices of food consumption contribute to obesity and that people can eventually die from obesity related conditions. Despite having knowledge about obesity, some participants conceded that they choose to eat unhealthy food as its convenient and there is limited availability of healthy food options in the hospital. The food sold in the institution is very rich in saturated fats, which is known to be the unhealthy type of fat. A radiographer narrated that taking care of what you eat is vital because oily foods can contribute to a person's getting obese:

“I bring my lunch from home. I am not buying from the cafeteria. I bring mine because I am following orders from the dietician. There they sell oily food. Although there are some salads, I do not still buy in the cafeteria. Some staff eat fat cakes mixed with polony.”
(Female, Obese)



The views of the radiographer were supported by the participating occupational therapist who shared that healthy food is not readily available in the hospital. She, at times, buys food from the hospital cafeteria which is unhealthy and it usually consists of fat cakes, fried chips and oily curry. Choices are further limited by the short amount of time for meals, limiting health workers from buying meals outside the hospital grounds:

“I know here in the cafeteria, the most food sold is oily curry-and-rice at times with salads but no fruits. Anyway at times I have no option but to buy and eat.” (Female, Overweight)

Participants had different views on their reasoning behind their choice of unhealthy food: a professional nurse narrated that she eats any food she wishes to eat without taking into account the health value of the food. Certain health workers continue to indulge in unhealthy food despite their knowledge of the consequences. There are no clear reasons as to why, although some mentioned

simply giving into cravings for these foods. An obese professional nurse confirmed that despite her knowledge about obesity, cravings make her eat from restaurants selling junk food:

“Yaaa. These junk food we like eating and not abiding to lifestyle modification. We do not care; we just eat whatever you find. You just feel like eating that time - no matter what. You know most of the time we just like these junk foods because it is nice and accessible. To roll (spoil) yourself you just go there in the restaurant and buy McDonald’s triple or double burgers with chips.” (Female, Obese)

Participating health workers reported that their behaviour is influenced by the expectations within their communities. For example, in certain African communities, it is believed that if a person is doing well financially, it has to be reflected by the type of food eaten and sizes of portions served. In addition, consumption of take-away food from fast food outlets like McDonalds and Kentucky Fried Chicken (KFC), and serving large portions of food during meal times at home, is considered to be a reflection that the family is doing well financially. An obese social worker shared that in black African families, prosperity is considered to be reflected in the way the family honours visitors during meals. This means that guests and family members indulge in these types of food when entertaining, which happens often within the abovementioned culture and, as a result, they end up becoming obese:

“In our family, food is not measured and visitors eat as much as they can so that they will go back to their homes full.” (Female, Obese)

The study also found that certain participating health workers do not like exercising or controlling their diet, as it is difficult and laborious:

“Exercising is not one of my strongest points; I would rather drink slimming tablets because exercising is like punishment.” (Female, Obese)

Some participants reported that the nature of their jobs resulted in their being physically inactive, yet mentally and physically exhausted at the end of the work day. For example, a male radiographer

narrated that his work is not physically strenuous but that he needs to focus mentally in order to ensure that good quality x-rays are taken:

“Exercising is good but I operate an x-ray machine for 8 hours and the only time I have to relax is watching news and soaps at home.” (Male, Obese)

The views of the radiographer were complemented by the dental technician who reported that he found it difficult to exercise after work but preferred to often watch television instead. The habit of inactivity predisposes a person to obesity, yet certain people are still under the impression that this habitual behaviour cannot lead them to becoming obese:

“After work, I watch television from 17:00 until I go to sleep at about 22:00 every day. I think this is in the family.” (Female, Normal)

4.3.2. Perceived seriousness of obesity

Perceived seriousness refers to opinions of an individual on the seriousness of contracting an illness or the consequences of leaving a condition untreated (Burns & Groove, 2001; Champion & Skinner, 2008). These consequences, which include pain and disability, could also have social consequences on an individual, their work and family life, as well as social relations. The following sub-themes arose from this theme:

- Obesity is limiting;
- Consequences of obesity.

4.3.2.1. Obesity is limiting

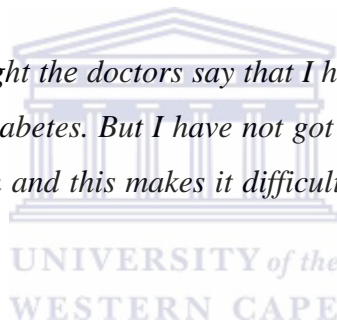
The study found certain obese health workers find it difficult to interact physically with their clients, as their size limited their mobility and their ability to handle patients. This experience was shared by a radiographer who said that he experiences difficulties in performing procedures on patients:

“It is absolutely not healthy, because the overweight can limit the productivity of a health workers. They will be more vulnerable to injury because with the movement, you know there will be limitations to move easy and flexibly.” (Male, Overweight)

4.3.2.2. Consequences of obesity

The study reported that participating health workers are aware of obesity being a major risk factor for cardiovascular diseases, type 2 diabetes, hypertension, stroke, cancer and chronic respiratory diseases. These diseases have severe consequences on the individual’s performance at work and quality of life is compromised. A person who is sickly fails to work effectively and efficiently. One obese professional nurse suffering from hypertension shared that due to her ill health, she is finding it difficult to work:

“Haa! Because of overweight the doctors say that I have hypertension and I am prone to have cardiac failure and diabetes. But I have not got them yet. Haa. The only thing I am having now is hypertension and this makes it difficult for me to cope at work.” (Female, Obese)



Participating health workers know that obesity may negatively impact on their ability to complete their work. Certain health workers reported negative experiences related to the consequences of obesity. A professional nurse, who has been employed for more than 15 years, shared that she nearly lost her job due to back pain resulting from obesity:

“Obesity is not good. It will kill you by decreasing your life expectancy. I was nearly boarded out of work by DOH because of severe backache. I was on long extended sick leave. Imagine what could happen to my family.” (Female, Overweight)

4.3.3. Perceived benefits of leading a healthy lifestyle

The term “perceived benefit” is frequently used to explain an individual’s motives for adopting a type of behaviour or intervention (Burns & Groove, 2001; Champion & Skinner, 2008). For

example, a person who believes that taking action would reduce their vulnerability to suffering from a particular disease, is said to have perceived the benefit of taking such action. The following sub-themes arose from this theme:

Productivity of workforce;

Prevention of non-communicable diseases;

Physical appearance;

Role modelling.

4.3.3.1. Productivity of workforce

The study found that participating health workers who follow a healthy lifestyle are more effective and productive at work. Participants said that health workers who do not exercise are lazy and slow to attend to patients. A female speech therapist added that obese health workers cannot get closer to the bed of the patient when doing patient manipulation or manoeuvres:

“I think there is a significant increase in the number of health workers that are obese/overweight and I have noted it specifically in the wards, like obese health workers are unable to move patients as quickly as they should because they do not have strength to lift or move patients, especially the nurses. They can also not move close enough to lift the patient properly and they struggle walking up the stairs so they always wait for lifts.”

(Female, Normal)

The study also reported that it is vital to keep the work force healthy as it is beneficial to the communities they serve. It is difficult to control staff absenteeism due to sickness. A healthy work force is more productive and effective. A medical officer narrated that it is beneficial to invest in the work force by supporting them in adopting a healthy lifestyle:

“Health workers are the engine of the hospital because without staff you cannot function so taking care of your staff is the right thing to do. To keep your staff protected and healthy is important because no system can make staff healthy apart from healthy education. This

will improve their health and productivity. Systems like incapacity leave and others on absenteeism may not help you.” (Male, Normal)

4.3.3.2. Prevention of non-communicable diseases

The researcher also found that participating health workers who keep fit and follow the proper diet are more likely not to suffer from NCDs. Proper diet means eating a healthy diet, which consists of food that is not rich in saturated fats and oil, and a combination of five fruits and vegetables per day. A female medical officer reported that she usually makes sure that she exercises and eats the correct diet and this makes her healthy:

“It’s beneficial to start exercising on a small scale with realistic goals, and also to give up sugar. Myself, I do exercise 4-5 times a week for at least an hour. You can see how effective I am as a person.” (Female, Normal)

Participating health workers were aware that NCDs are preventable by following a healthy lifestyle, which involves eating healthy food and doing physical exercise regularly. Physical exercise is considered effective if done for 30 minutes three to four times a week (Skaal & Pengpid, 2011). A physiotherapist added that it is important to combine both eating healthy food and exercising:

“Like I said before, there are a lot of conditions associated with obesity. We need to maintain a healthy life style and remain more active. We need to exercise regularly in order to remain healthy even if it means just walking around the neighbourhood.” (Female, Normal)

4.3.3.3. Physical appearance

The study reported that health workers following a healthy lifestyle are in a better state of health and appear healthier. These workers also have enhanced self-image. This can be seen in the way

they conduct themselves at work and when they are in public. A dental therapist added that beauty is paid for through sweat and commitment to you own health wellbeing:

“I feel that health workers who start following a healthy lifestyle to be healthy but they get even more encouraged when the adopted lifestyle makes them look beautiful.” (Female, Normal)

4.3.3.4. Role modelling

The researcher also reported that clients and patients find it easy to take the advice received from health workers who look physically healthy and this gives them motivation to look like these health workers. They assume that health workers who look healthy know what they are doing and as such they are more willing to be assisted. A medical doctor cited that health workers should look healthy in order to be good role models:

“I think it will be a good thing if the health worker is an example. Imagine that when patients came to the hospital and see that the health workers are not healthy, it becomes very difficult for them to trust what the health worker is telling them.” Male, Normal)

4.3.4. Perceived barriers to leading a healthy lifestyle

A perceived barrier is a person’s estimation of the level of challenge of social, personal, environmental, and economic obstacles to a specified behaviour or their desired goal status on that behaviour (Champion & Skinner, 2008). The following sub-themes arose from this theme:

- Beliefs;
- Utilization of health promoting services;
- Cultural norms.

4.3.4.1. Beliefs

Participating African health workers believe that people who are healthy are not supposed to be skinny. This belief is very strong among African respondents who usually associated being skinny

with poverty and ill health. In many cases, a thin person is suspected of illnesses such as TB and HIV/AIDS (Puoane et al., 2002; Puoane et al., 2005; Mvo et al. 1999; Puoane, Tsolekile & Steyn, 2010; Devanathan, et al., 2013). This sentiment is shared by those who have had ill relatives and/or friends. This belief discourages some health workers from adopting a healthy lifestyle for fear of being associated with HIV/AIDS. A male radiographer shared that people are very judgemental of how a person looks:

“Some people when they see a thin health worker they start considering that person to be sick with HIV/AIDS and they feel uncomfortable to be attended to by her.” (Male, Obese)

The other belief which was found to discourage health workers from adopting a healthy lifestyle was that both African males and females associate overweight/obesity with good living, progress and prosperity (Puoane et al., 2002; Puoane et al., 2005; Mvo et al. 1999; Puoane et al., 2010; Devanathan et al., 2013). They believe that when people have enough food, they should eat as much as possible as this is a reflection that they have enough money to spend on food and, as such, they are considered to be doing well. This belief encourages some people to eat large portions of food, certain health workers included. Consumption of large meal portions predisposes a person to higher chances of becoming obese. A female social worker narrated that black Africans think that a family is poor if they serve family members small meal portions:

“As Africans we believe that the family and friends should eat as much as possible, so food portions are not measured because people’s appetite on food is different.” (Female, Overweight)

4.3.4.2. Utilization of health promoting services

The study found that participating health workers are overworked: they usually report for work around 07:30 hours and finish work at 16:00 hours, a total of eight hours for those who work straight shifts. Some workers, such as nurses, work from 06:45 hours to 18:45 hours during normal working days and weekends. Junior medical officers work from 07:30 hours to 13:00 hours the following day, a total of 29 hours. The period health workers are on duty is long and at the end of

the shift, they are exhausted, and as such it is difficult to do physical exercise at the stipulated time in the hospital or go to the gymnasium outside the institution. A female medical officer cited that doctors find it difficult to attend to their own health:

“A junior doctor will come for work at 07:30 hours in the morning then they leave the next day at mid-day, so they are working for 29 hours. They are exhausted so to go and exercise will be very difficult. This could be the main reason why health workers do not exercise.”

(Female, Normal)

It was further found that the long working hours impact negatively on the health workers’ ability to prepare healthy meals at home. They reach home late and tired so they usually buy take-away from fast food outlets which are still open like McDonalds and KFC. Another male medical officer reiterated that lack of time to prepare home meals is what prompts health workers to buy junk foods.

“Spending much time at work makes it difficult for health workers to prepare home meals because they are too exhausted to cook and as such they end up buying any food available like junk food.” (Male, normal)

The facilities that are available in institutions to provide staff health promotion activities, like physiotherapy and dietetic departments, are considered by certain health workers not to be ideal for them based on the perception that they are of low quality. They are not comfortable to share the facility with junior members of staff. A white professional nurse narrated that it is very difficult for her to share the same bath and shower rooms with junior staff members:

“It’s not easy to be exercising, worse still sharing the same shower facilities with general assistants. I do not feel comfortable.” (Female, Obese)

The study also found that the available health promoting facilities have limited access. The facilities are opened from 12:00 to 16:00. A male radiographer shared his frustration about the operational times:

“We come in at 08:00 hours and we knock off at 16:00 hours and by the time we try to get to the facility, people who are running the facility also knock off so it really difficult to access it. Maybe dedicating some of the staff members to take over from those who knock off at 16:00 hours, and carry over until 18: 00 hours.” (Male, Overweight)

In addition, the study found that participating health workers do a lot of administrative work such as documentation during and after patient ward rounds. Documenting takes a lot of time to complete, therefore, there is very limited time when a health worker is free while on duty. A medical officer commented that there is no resting during working hours:

“In addition to following up on planned patient management and we do a lot of administrative work such as documentation pertaining to patient care all the time, this makes me so exhausted.” (Male, Normal)

The participating health workers also reported that poor salaries were another barrier to adopting a healthy lifestyle. Poor remuneration makes it difficult to afford healthy food: even if they wish to purchase pre-packed health foods or just fruit and vegetables, it is not easy because it is expensive. A physiotherapist shared that it is difficult to buy healthy food if you do not have enough money:

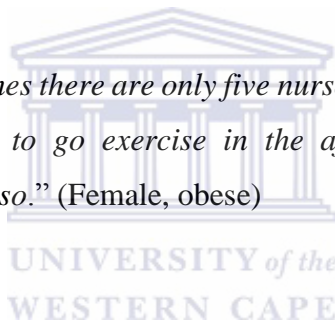
“I know here in the cafeteria, the most sold is curry and rice at times with salads but no fruits. Anyway they do have a tuck shop where they sell fruits but they are slightly expensive like one banana is R3.” (Female, Normal)

The study participants reported that hospital management is not very supportive of the health needs of staff. They offer no motivation in support of staff and maintenance of the available health promoting facilities. There is a need for management to address the challenges encountered by health workers in trying to follow a healthy lifestyle, in order to support them. For instance, nurses have meal times at very close intervals. The intervals in between meals are too short for proper digestion to take place. An obese professional nurse shared how tea and lunch breaks are taken:

“Like our teas and lunches are too close, if you had breakfast at 09:00 hours to 09:30 hours and your lunch is 12:00 hours in that gap you are still full but because you are short staffed, we do not have a break like at 15:00 hours, so we are forced to eat your lunch at 12:00 hours even if you are still full. But by 15: 00 hours you are hungry but there is no tea time break. I hope the management can do something to improve our eating pattern.”
(Female, Obese)

There is a policy from the KZNDOH (Appendix 7) which allows health workers to exercise for two hours while on duty. Some participants reported that despite the policy which allows health workers to do physical exercise for two hours while on duty, it is difficult to find time due to staff shortages:

“In a ward of 45 beds, at times there are only five nurses covering all the ward and as such it is difficult to find time to go exercise in the afternoons when the physiotherapy department allows us to do so.” (Female, obese)



4.3.4.3. Cultural norms

The study also reported that participating White and Indian health workers prefer slim bodies as they associate a slim body with being healthy and beautiful. However, participating black African health workers prefer body sizes which are either overweight or obese because positive connotations, like beauty and success are associated with these body types. Obesity is known to be a risk factor in all NCDs, but despite that African health workers participating in this study preferred to take the risk of wanting to be obese in order to adhere to their cultural preference. A participating African male professional nurse affirmed the preference for obese/overweight women saying that big is better:

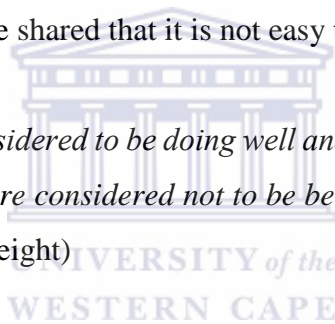
“In my culture, we believe that big woman is the one. Comparing our culture with Indian culture, they like thin women but us we like big women because the big ones are healthy.”
(Male, Overweight)

These ideas were also shared by a female physiotherapist who said that a women has to be thick and should have big hips:

“If you are thick, you are considered to be attractive to men but if you are skinny you are considered not. I know people want to please other people but it also depends on yourself like me I want to be between overweight and obese.” (Female African, Normal)

As earlier mentioned, participating health workers are aware of obesity’s being a major risk factor in cardiovascular diseases, diabetes type 2, hypertension, stroke, cancer and chronic respiratory diseases. Health workers who are African are equally aware that African culture appreciates a women’s body to be between overweight and obese and this makes it difficult for them to make a choice. An obese professional nurse shared that it is not easy to forsake your culture:

“If you are big, you are considered to be doing well and attractive according to our culture but if you are slender you are considered not to be beautiful and it will be difficult to find a spouse.” (Female, Overweight)



4.3.5. Cues to action

Cues to action are external or internal triggers that are necessary for prompting engagement in health-promoting behaviours (Champion & Skinner, 2008). The motivation with regard to cues varies between individuals due to differences in perceived susceptibility, seriousness, benefits, and barriers as, for example, one individual will be motivated to change unhealthy eating behaviours if they feel more susceptible to hypertension, whereas another individual does not perceive hypertension as being serious. The following sub-themes arose from this theme:

- Personnel diagnosed with health problems;
- Appearance;
- Posters.

4.3.5.1. Personnel diagnosed with health problems

The study also reported that participating health workers who have colleagues or family members diagnosed with NCDs were motivated to seek medical advice and to modify their lifestyles. They were motivated to attend disease screening at clinics like diabetic clinics. Some were motivated to change their unhealthy eating habits and to incorporate exercising in their lives. These health workers are trying their best to get help from other health professionals to prevent suffering from these diseases and to alleviate suffering for those who already have the diseases. Some visit dietitians to get advice on forming healthy eating habits. A medical officer narrated that despite heavy workloads, the number of health workers getting screened is increasing:

“I think, the main reason for honouring appointments is the fear of suffering from NCDs and prevention of disease progression. It may not suit all health workers to be assisted in clinics but it might suit some.” (Male, Normal)

Certain health workers find time to go for disease screening and they are usually assisted accordingly. An obese social worker reported that after she consulted a dietitian, she was motivated to consult additional health providers pertaining to her condition:

“The dietitian made me an eating plan and also suggested exercise together with dealing with insulin resistance so she suggested I go and see a doctor. I consulted the doctor who put me on Glucophage. It’s now two weeks since I started the medication.” (Female, Obese)

Another participant, a professional nurse cited similar sentiments:

“Basically, I gained a lot of weight, with incorrect lifestyle so I went to see a dietitian about two months ago.” (Female, Obese)

4.3.5.2. Appearance

Participating health workers are equally conscious about their body image both at work and in public places. They are worried when their clothes or uniforms start fitting tightly on them because it is not comfortable and this means that they need to buy new uniforms or clothes. It is frustrating to health workers participating in this study when they have to start changing their wardrobe and not being able to use old clothes. The fear of not looking good in public and buying new clothes motivates some health workers to change their lifestyle so that they can maintain a normal weight. A female medical officer narrated that changing the wardrobe is expensive but maintaining a healthy weight is beneficial and it helps to save some money:

“Ladies need to look good even at work whether in uniform or not to boost our own ego, but changing a wardrobe is expensive.” (Female, Normal)

4.3.5.3. Posters

The study further reported that the on-going awareness campaign in the institutions is a motivation to some health workers to change their lifestyle. There are posters on the notice boards in some hospitals on complications of obesity and other diseases and this acts as a reminder to health workers to start looking after their health. A dental technician cited that the posters boosted her to start doing physical exercises:

“The message on posters made me start running or at times just walking with my dogs from my home to the shopping centre and that takes me about an hour.” (Female, Normal)

4.3.6. Self-efficacy

Self- efficacy is the belief in one’s own ability to do something in order to change the situation for the better (Champion & Skinner, 2008). The study reported that health workers are at different levels of self-efficacy. Those who are active have higher self-efficacy than these who are inactive. Those with low self-efficacy are applying strategies of goal setting, self-motivation and social assistance to boost their self-efficacy. The following sub-themes arose from this theme:

- Goal setting;
- Self-motivation;
- Social assistance seeking.

4.3.6.1. Goal setting

The study reported that some of the participating health workers set goals for themselves to reach in their programmes in order to improve their self-efficacy. They set goals to attain in their exercising and eating programmes. A female professional nurse mentioned that she used to exercise two times a week but she has increased the frequency to three times. Her confidence increased after noticing the improvement in the exercise programme:

“I have noted a progress in my exercising programme so now, I wish to exercise five times a week.” (Female, Obese)



4.3.6. 2. Self-motivation

Participating health workers reported that their self-efficacy improves when they have noted improvements in their weight control programmes. A male professional nurse narrated that he was finding it very difficult to control his craving for fried meat. After starting his diet control programme of eating cooked meat, vegetables and fruits, he noted a reduction in his weight, and this has motivated him to continue and it has improved his self-efficacy:

“I was weighing 120Kg, now I am 100Kg just after one year of starting my weight control programme. This makes me feel good” (Male, Obese)

4.3.6. 3. Social assistance seeking

The study found that participating health workers felt that they needed someone to encourage them to continue exercising or to control their diet. There is a need to have someone to exercise with as a partner so that you are motivated. This could be a spouse, friend or family member. A male

radiographer narrated that he usually runs on the road in the morning but certain days he does not feel motivated enough to run but since he started running with his grandson, he gets encouragement from him:

“I think the best is to get a partner. If they have got kids, you should invite them as gym partners that is what I do myself. I go for running on the road with my grandson. This is very helpful because in most cases he encourages me to go run even if I might be feeling lazy that day.” (Male, Overweight)

The study also found that participating health workers find confidence when they have someone to share their healthy meals with during meal times. The eating buddy helps to adhere to good eating habits thus boosting self-efficacy. An occupational therapist narrated that she tries to control her weight by eating healthy food with a colleague at work She has ever since they started noted some adherence to healthy diet:

“We share the meals we prepared from home while at work during our meals times and this helps to monitor our eating habits. This does assist especially that we even share the recipe.” (Female, Obese)

4.4. SUMMARY

The results showed that participating health workers are aware that the choices they make with regards to their lifestyle may contribute to obesity. They know that obesity can contribute to their suffering from NCDs, and even lead to death. These conditions have many associated negative consequences such as lethargy, inefficiency at work and reduced chances of success. The results further showed that despite some participating health workers knowing the negative consequences of obesity, they concede to unhealthy eating habits and inactivity. Some participating health workers concede to poor eating habits due to cravings, limited access to healthy food within the institutions, and the inability to afford healthy food. Some participants feel they are unable to be physically active due to long working hours which make them feel tired, limited operational hours of available health promoting facilities in the institutions, as well as lack of management support.

Cultural beliefs such as preference for a big body size and serving of large portions are regarded as a sign of prosperity, health and doing financially well, especially in African culture.

The results also showed that participating health workers are aware of the perceived benefits associated with leading a healthy lifestyle. They mentioned that a healthy lifestyle reduces the chances of their suffering from NCDs, makes them appear healthy, makes them more productive and increases the chances of being positive role models. The study further reported that health workers are motivated to pursue a healthy lifestyle if they are getting assistance from family members and colleagues in terms of controlling diet and becoming physically active. Some health workers were motivated by seeing relatives and colleagues who suffer from NCDs or posters on the consequences of NCDs. These participating health workers came up with self-efficacy plans of goal setting, self-motivation and social assistance seeking in order to practise a healthy lifestyle.



CHAPTER 5: DISCUSSION

5.1 INTRODUCTION

Health workers in South Africa have a high prevalence of obesity and, as such, they might be unable to give effective advice on obesity and to act as healthy role models for their clients and individuals within their communities. In this study their perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle were explored and described. In this chapter these findings are discussed in order to contribute to the body of knowledge regarding perceptions, attitudes and challenges about obesity in health workers.

5.2. PERCEIVED SUSCEPTIBILITY TO NON-COMMUNICABLE DISEASES

Health workers are aware of the negative consequences of increased weight or obesity. The study reported that participating health workers know that being obese can predispose them to NCDs and eventually lead to health complications. Some health workers have realised that the chances of their suffering from these conditions are high and they are now involving themselves in health promoting programmes such as modifying their eating habits and doing physical exercise. The results of the current study are consistent with studies that were done in the USA (Kim, Harrison & Kagawa-Singer, 2007; Agne, 2012).

Studies conducted in South Africa also show the same trend. Puoane et al. (2005) similarly found that more than half of community health care workers tried to reduce weight by reducing food consumption or taking slimming tablets in order to reduce the chances of suffering from NCDs. These findings are supported by other South African studies (Skaal & Pengpid, 2011; Dalais, 2013; Phiri et al., 2014).

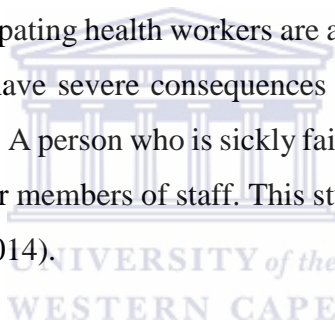
In addition, the study reported that few health workers bring cooked food from home to avoid unhealthy food. The consumption of unhealthy food over a prolonged period of time can increase their chances of becoming obese. Home cooked meals are the best because a health conscious person can regulate the amount of additives they add to the meal, like salt and cooking oil.

Consumption of oily food and refined sugar is unhealthy as it contributes to a person's becoming overweight or obese (Prentice, 2006).

5.3. PERCEIVED SERIOUSNESS OF OBESITY

This study found certain obese health workers find it difficult to interact physically with their clients, as their size limits their mobility and their ability to handle patients. This was in agreement with Agne (2012) who reported that Latin-Americans associated weight gain with the presence of multiple physical symptoms of obesity, discomfort, and reduced physical capability, such as breathlessness, fatigue, and low energy. This was further supported by Dalais (2013) in the study on educators.

This study also reported that participating health workers are aware of obesity's being a major risk factor for NCDs. These diseases have severe consequences on individual performance at work possibly due to depression or stress. A person who is sickly fails to work effectively and efficiently and this impacts negatively on other members of staff. This study's results are similar to Phiri and colleagues' findings (Phiri et al., 2014).



5.4. PERCEIVED BENEFITS OF LEADING A HEALTHY LIFESTYLE

This study reported that health workers who lead a healthy lifestyle have enhanced self-esteem, are physically flexible and they are able to manoeuvre around patients easily. They are usually more productive and do their work more effectively. These results are similar to the findings from previous studies in South Africa (Mvo & Steyn, 1999; Puoane et al, 2005; Puoane et al, 2012; Dalais, 2013).

This study also reported that participating health workers who keep fit and follow a healthy diet are unlikely to get sick from NCDs. This is consistent with Agne's (2012) findings that Latin-Americans considered weight loss as a way to improve personal health and wellbeing. This is supported by local South African studies (Mvo & Steyn, 1999; Puoane et al., 2005; Puoane et al., 2012; Dalais, 2013).

This study reported that health workers following a healthy lifestyle are in a better state of health and appear healthier than those who do not follow healthy practices. These workers also have enhanced self-image. This can be seen in the way they conduct themselves at work and when they are in public. These findings are supported by Puoane et al. (2010) in their Cape Town study among health workers.

This study also reported that clients and patients who are being attended to by health workers who look physically healthy become motivated to look like them. They assume that the health worker knows what they are doing and, as such, they are more willing to be assisted. This is consistent with the study by Oberg and Frank (2009) and Frank et al. (2000).

5.5. PERCEIVED BARRIERS TO LEADING A HEALTHY LIFESTYLE

Participating African health workers believe that people who are healthy are not supposed to be skinny. This belief is very strong among African respondents who usually associated being skinny with poverty and ill health. In many cases, a thin person is suspected of illnesses such as TB and HIV/AIDS. Some South African studies support these findings. Puoane et al. (2007) reported that health workers preferred to be overweight because of the stigma associated with thinness. This was also supported by other studies conducted in Africa (Mvo et al., 1999; Puoane et al., 2002; Puoane et al., 2005; Matoti-Mvalo, 2006; Puoane et al., 2010; Devanathan et al., 2013).

This study also found that certain participating health workers believe that when people have enough food, they should eat as much as possible as this is a reflection that they have enough money to spend on food and, as such, they are considered to be doing well. This belief encourages some people to overeat, thus ending up being obese. This belief discourages health workers from adopting a healthy lifestyle. This is consistent with local South African studies (Matoti-Mvalo, 2006; Puoane et al., 2010; Devanathan et al., 2013).

This study reported that institutions are utilizing physiotherapy departments for physical exercise in these hospital but these departments are not ideal because they have limited operational times. Physiotherapy departments are primarily to serve patients, therefore, the departments are open to

members of staff only at times when there are few patients. Staff can only access this service during those times. This limits access to the facility. This is consistent with local studies (Skaal & Pengpid, 2011; Dalais, 2013; Phiri et al., 2014).

This study also reported that the opportunities for health workers to exercise while at work are not utilised fully due to challenges such as the short operational hours of these exercise centres and heavy workloads. The exercise centres are operational during working hours but some health workers find it difficult to get time to do physical activities or to consult dieticians due to heavy patient workload and staff shortages in the hospitals. These findings are supported by other local studies (Dalais, 2013; Phiri et al., 2014).

Hospitals have a limited selection of healthy food and as a result health workers buy the food which is available in the institution. This study reported that food outlets within the hospitals sell beef and chicken curries without fruit or vegetables. Fruit is mainly sold by vendors outside the hospital but is expensive. This finding regarding the high cost of healthy food is supported by other studies in different countries (Kim et al., 2007) and by a South Africa study by Phiri et al. (2014) that reported that the high cost of healthy food in the hospital cafeteria prevents nurses from buying healthy food and consuming the required quantity of fruit and vegetables.

This study also found that institutional Employee Assistant Practitioners (EAP) conduct wellness and open days annually and it is on this day that health workers are officially allowed to participate in health promoting practices like physical activities, dancing classes, consultation with dieticians and other health components. This practice is not effective in encouraging staff to be aware of their health because the health lifestyle wellness days take place at very long intervals. There is a need to have more of these days in order to encourage health-promoting behaviour in health workers. This conclusion is consistent with South African studies (Skaal & Pengpid, 2011; Phiri et al., 2014).

5.6. CUES TO ACTION

On cues to action, this study reported that participating health workers who have colleagues or family members diagnosed with NCDs were motivated to seek medical advice and to modify their lifestyle. Some were motivated to attend disease screening at clinics like diabetic clinics and others changed their unhealthy eating habits and incorporated this change with exercising. Some of them needed assistance from family and colleagues in order to achieve their goals. This is consistent with study findings by Pantenburg et al. (2012) and Dalais (2013).

This study also reported that some participating health workers were equally conscious about their body image both at work and in public places. They were worried when their clothes or uniforms did not fit or got tight on them because then they needed to buy new uniforms or clothes. This was reported by Dalais (2013) who showed that educators were motivated to lose weight in order to find clothing or uniforms that fit more comfortably. These findings were also supported by the findings from previous studies in South Africa (Mvo & Steyn, 1999; Puoane et al., 2005; Puoane et al., 2012).

This study further reported that the on-going awareness campaign in the institutions is a motivation to some health workers to change their lifestyle. There are posters on the notice boards in some hospitals on the complications of obesity and other diseases and this acts as a reminder to health workers to start looking after their health. This study also reported that clients and patients who are being attended to by health workers who look physically healthy get motivated to look like them. This is supported by the study findings by Oberg et al (2009) and Frank et al (2000).

5.7. SELF-EFFICACY

This study found that participating health workers felt that they needed someone to encourage them to continue exercising or to control their diet. Many individuals find it motivating to have an exercise partner or someone to share meals with. This could be a spouse, friend or family member. This is consistent with studies by Agne (2012) and Dalais (2013). The same results were supported by Kim et al. (2007) who also reported the need for exercising with a buddy in order to increase self-efficacy.

5.8. SUMMARY

The results of this study highlighted issues that personally affect health workers and institutional management, as well as those issues which are directly related to the environment in which they work. Some of the findings of this study were that health workers are aware about the negative consequences of increased weight or obesity and some of them are attempting to change their lifestyle by starting to adopt a healthy lifestyle. Some participating health workers find it difficult to adopt a healthy lifestyle on their own but need partners to assist them to achieve these goals.

Participating health workers were aware of the benefits of leading a healthy lifestyle such as enhancing body self-image, reducing the risk of NCDs, becoming physically flexible and improving their ability to manoeuvre easily around patients. Identified barriers relating to adopting a healthy lifestyle were African cultural beliefs of associating obesity with being progressive and prosperous.

Participating hospitals utilize physiotherapy departments for exercising but health workers struggle to find time for exercising and these institutions do not sell healthy food in their cafeterias which further limits the efforts of health care workers to adopt a healthy lifestyle. The institutions have Employee Assistant Practitioners (EAP) who conduct wellness and open days annually which is not sufficient to influence health workers to adopt a health-behaviour change.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1. CONCLUSIONS

This study explored health workers' perceptions and attitudes about obesity in Pietermaritzburg, KwaZulu-Natal province. A description of these aspects related to health workers may be vital in the development of guidelines for the Department of Health (DOH) to empower health workers on proper counselling of patients and adopting a healthy life style.

Despite health workers having knowledge of obesity, they cannot act without institutional support. Workplace health promotion programmes focusing on increasing opportunities for physical activities and availability of healthy food choices should be established to encourage long-term health worker well-being. The hospitals need to enable health workers to access physical exercise facilities and provide affordable healthy food options. Physical activities facilities should be built so that they are ideal for all health workers. This involves building health gymnasiums within the institutions and not modifying the physiotherapy departments. These facilities should be accessible at any time.

Healthy food should also be made accessible and affordable by the hospital management, facilitating discussions and agreements between hospital cafeteria operators and food suppliers so that healthy food can be made available at affordable prices. The infrastructure or system should enable health workers to pursue a healthy lifestyle. Mandatory health-behaviour promotion programmes on obesity and other NCDs should be instituted in institutions. This will assist in combating older cultural norms which advocate overweight body size as desirable because of positive cultural connotation accorded to it.

As an important limitation to the study, it needs to be recognised that the results of this study cannot be generalised to all health workers in S.A. due to the small sample size and the local nature of the region studied.

6.3. RECOMMENDATIONS

The high burden of overweight and obesity among health workers in this study calls for concern and action. Health workers in South Africa need to be sensitized and empowered to be role models of healthy weight in the society. Based on the findings of the study the following recommendations are made.

Firstly, the DOH should be responsible for and involved in the development and implementation of a sustainable wellness and health programme for health workers. The DOH should have policies which are related to the promotion of healthy behaviours. Health workers should be encouraged to practise health-behaviour changes, through the provision of gymnasiums in the institutions. The current policy on healthy lifestyle initiation (Appendix 7) should be supported by hospital management so that it can be implemented effectively. The programme should be aimed at health-behaviour change on weight control and maintaining a healthy lifestyle. This should include proper diet and the provision of physical activities centres within the hospitals.

Secondly, time was mentioned as a very important consideration; therefore, shift duration and structures should be modified to enable health workers to exercise at work. The health and wellness programme should be incorporated into the hospital programme or be made part of staff development or a team building programme where the buddy system is encouraged and specific time is set aside for health workers monthly for these activities.

Thirdly, heavy workloads and work burnout should be reduced by involving the institutional management in the wellbeing of health workers. Heavy workloads and burnouts can be attributed to staff shortages and absenteeism. Absenteeism can be reduced by improving staffing of health workers by filling all vacant posts and effectively training section managers to implement effective leave management.

Lastly, the assessment tool which is used for evaluating hospital performance both for clinical and managerial capabilities (Core standards assessment tool) should include the health promotion of health workers. This will encourage health institutions to hold the executive management accountable for the health of their workers.



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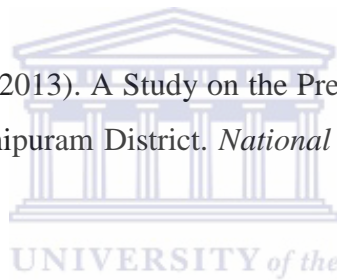
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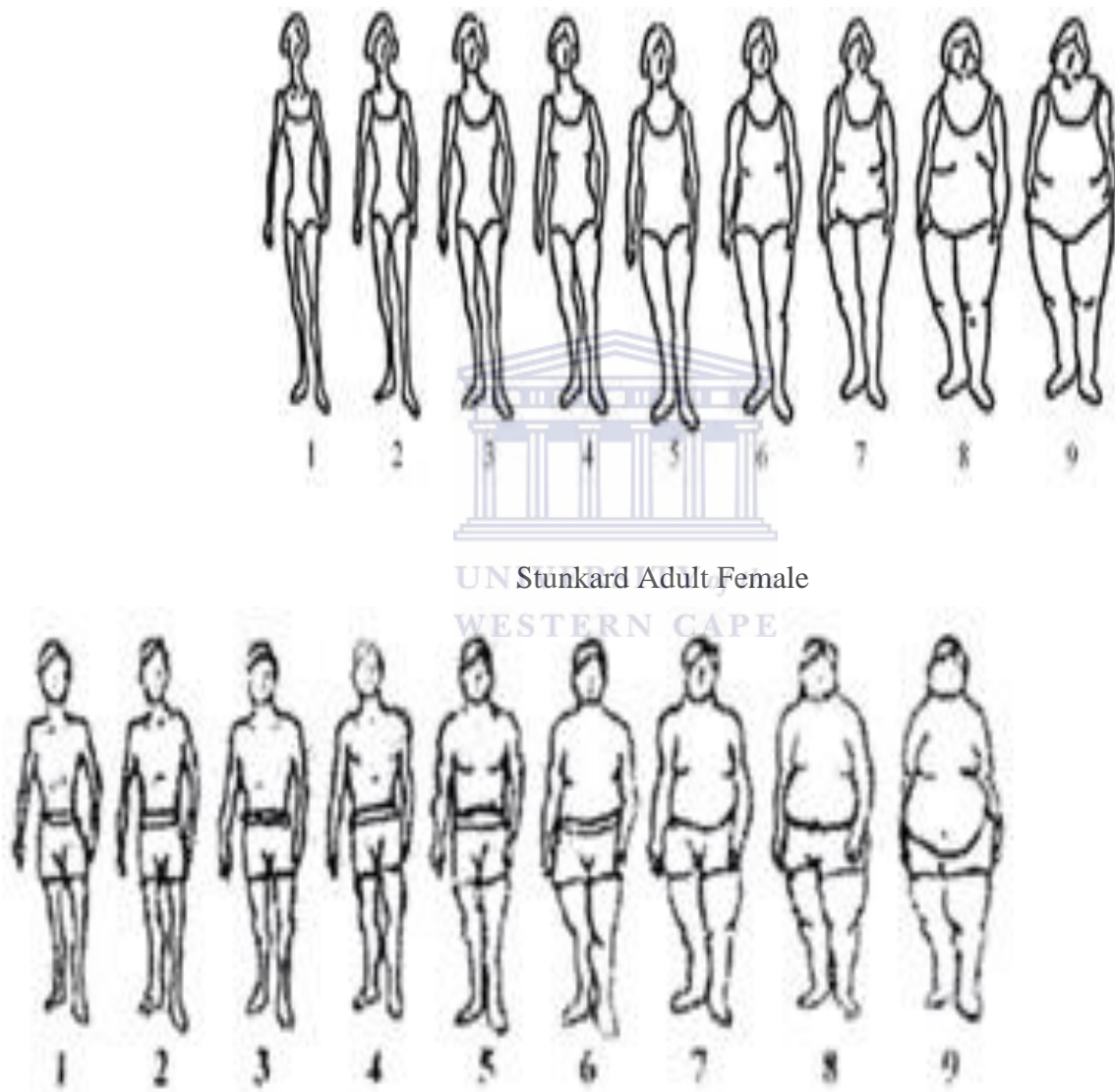
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LIST OF APPENDICES

Appendix 1

Stunkard's scale for self-reported prior, current, or ideal body image of the respondents. It contains nine silhouettes for both women and men that are on an ordinal scale.



Stunkard Adult Male

Adopted from Stunkard, A. J., Serensen, T. & Schulsinger, F. (1983)

Appendix 2: UWC ethical approval



OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

29 January 2015

To Whom It May Concern

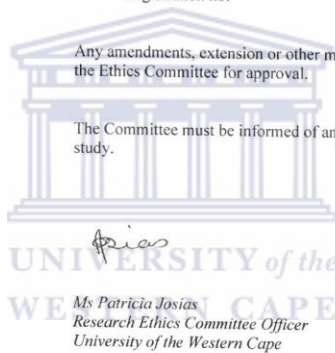
I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:
Mr P Simfukwe (School of Public Health)

Research Project: Perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, KwaZulu-Natal Province.

Registration no: 14/10/40

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

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



Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: pjosias@uwc.ac.za
www.uwc.ac.za

A place of quality,
a place to grow, from hope
to action through knowledge

Appendix 3A: Approval from Greys hospital



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

GREYS HOSPITAL
OFFICE OF THE CEO
Private Bag X 9001, Pietermaritzburg, 3200
Town Bush Road, Chase Valley, Pietermaritzburg, 3201
Tel.: 033 – 897 3321 Fax.: 033 - 8973398
www.kznhealth.gov.za

To:	Patrick Simfukwe Physiotherapy Manager – Edendale Hospital
From:	Dr. K. B. Bilenge CEO - Greys Hospital
Date:	5 February 2015
Re:	Request for permission to conduct research at Grey's Hospital: <i>Perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, KwaZulu-Natal province</i>

Dear Mr. Simfukwe

Your request to conduct research at Grey's Hospital refers.

Permission to conduct the above study is hereby granted under the following conditions:

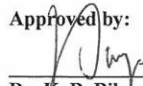
- Your ethics approval is assumed to be valid;
- You are also required to obtain approval for your study from the Provincial Department of Health KZN Health Research Unit prior to commencing your study at Grey's Hospital. You will find more information on their website: <http://www.kznhealth.gov.za/hrkm.htm>
- Confidentiality of hospital information, including staff and patient medical and/or contact information, must be kept at all times;
- You are to ensure that your data collection process will not interfere with the routine services at the hospital, i.e. **interviews with participants to be conducted after hours or during tea/lunch breaks;**
- You are to ensure that hospital resources are not used, e.g. staff collecting data; photocopying; telephone; facsimile, etc.;
- Informed consent is to be obtained from all participants in your study, if applicable;
- Policies, guidelines and protocols of the Department of Health and Grey's Hospital must be adhered to at all times;
- Professional attitude and behaviour whilst dealing with research participants must be exhibited;
- The Department of Health, hospital and its staff will not be held responsible for any negative incidents and/or consequences, including injuries and illnesses that may be contracted on site, litigation matters, etc. that may arise as a result of your study or your presence on site;
- You are required to submit to this office a summary of study findings upon completion of your research.
- You are requested to make contact with the Occupational Medical Practitioner, **Dr M. Pillay**, at the Staff Clinic at Grey's Hospital once you are ready to commence data collection.

Recommended by:


Dr L. Naidoo
Senior Manager: Medical Services

05/02/2015
Date

Approved by:


Dr. K. B. Bilenge
Hospital CEO

05/02/2015
Date

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix 3B; Approval from Northdale hospital



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

NORTHDALE HOSPITAL
Private bag x 9006, Pietermaritzburg, 3200
1389 Dr Chota Motala Road, Pietermaritzburg, 3200
Tel.033-3879000.; Fax.: 033-3871990
Email.:Hlengiwe.grace@kznhealth.gov.za
www.kznhealth.gov.za

Date: 27 February 2014
Enquiries: Dr MAG Molla
Ref: research study

Dear Mr P Simfukwe

RESEARCH PROJECT : PERCEPTIONS, ATTITUDES AND CHALLENGES ABOUT OBESITY AND ADOPTING A HEALTHY LIFESTYLE AMONG HEALTH WORKERS IN PIETERMARITZBURG, KWAZULU NATAL PROVINCE : MASTERS IN PUBLIC HEALTH

Your request regarding "Perceptions, Attitudes and Challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, Kwa-Zulu Natal province"

I have pleasure in informing you that permission has been granted to you by Northdale Hospital to conduct research on "Perceptions, Attitudes and Challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, Kwa-Zulu Natal province"

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. This research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
3. Please ensure this office is informed before you commence your research.
4. The Hospital will not provide any resources for this research.
5. You will be expected to provide feedback on your findings to Northdale Hospital.
6. Participation in study of Health care workers is on a voluntary basis.
7. Hospital Management will facilitate but not participate in the study.

Thank you.

Sincerely


Mrs F.M Du Preez
Hospital Manager
Northdale Hospital

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix 3C; Approval from Edendale hospital



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Edendale Hospital
Private Bag X 509, Plessislaer, 3216
Tel: 033 395 4040, Fax: 033 395 4087
email: sanele.mkhize2@kznhealth.gov.za
www.kznhealth.gov.za

OFFICE OF THE CHIEF EXECUTIVE OFFICER

Reference No.33/5/1

Enquiries: Mrs. PP Sigcawu
Tel: 033-3954039

Date: 05 February 2015

Ms P. Josias
Research Ethics Committee Officer
University of the Western Cape

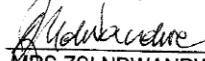
Dear: Ms Josias

RE- REQUEST TO CONDUCT A RESEARCH: "PERCEPTIONS, ATTITUDE AND CHALLENGES ABOUT OBESITY AND ADOPTING A HEALTHY LIFESTYLE AMONG HEALTH WORKERS IN PIETERMARITZBURG, KWAZULU NATAL PROVINCE".

Your request to conduct the above-mentioned surveillance is supported by Edendale Hospital Management, subject to approval by Provincial Health Research Committee in the Department of Health.

UNIVERSITY of the
WESTERN CAPE

Yours sincerely,


MRS ZSI NDWANDWE
CHIEF EXECUTIVE OFFICER
EDENDALE HOSPITAL

uMnyango Wezempilo. Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix 4: DOH approval



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

Health Research & Knowledge Management sub-component
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hkrkm@kznhealth.gov.za
www.kznhealth.gov.za

Reference : HRKM55/15
NHRD Ref.: KZ_2015RP19_920
Enquiries : Ms G Khumalo
Telephone : 033 – 395 3189

Dear Mr P Simfukwe

Subject: Approval of a Research Proposal

1. The research proposal titled 'Perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, KwaZulu-Natal province' was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at Northdale, Greys and Edendale Hospitals.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hkrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge
Chairperson, Health Research Committee

Date: 17/03/15

uMnyango Wezempilo. Departement van Gesondheid

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Appendix 5: Participant information sheet

Appendix 5

FACULTY OF COMMUNITY AND HEALTH SCIENCES School of Public Health

Private Bag X17, Bellville, 7535
South Africa
Tel: +27 (0) 21 959 2809/2166
Fax: +27 (0) 21 9592872
Email: soph-comm@uwc.ac.za
Website:
<http://www.uwc.ac.za/faculties/chs/soph>

INFORMATION SHEET

Project Title: Perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, Kwazulu Natal province.

What is this study about?

This is a research project being conducted by **Patrick Simfukwe**, a student at the University of the Western Cape. We are inviting you to participate in this research project because you are a member of staff in the Pietermaritzburg medical metropolitan.(Grays, Edendale and Nothdale Hospitals). The purpose of this research project is to explore the perceptions, attitudes and challenges about obesity and adopting a healthy lifestyle among health workers in Pietermaritzburg, Kwazulu Natal province.

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

You will be asked to answer the following questions and the duration will be about 30 minutes:

- Biographical information - Life history, life goals, identity, life satisfaction.
- Your perception about HWs being obese.
- Your perception and belief why HWs fails to maintain normal body weight.
- The barriers encountered by HWs when they wish to maintain normal body weight.
- Possible suggestions how HWs can be encouraged not to be obese.
- How can HWs be able to give effective healthy promoting messages to their clients?

Would my participation in this study be kept confidential?

A WHO Collaborating Centre for Research
and Training in Human Resources for
Health



UNIVERSITY of the
WESTERN CAPE

A place of quality, a place to grow, from hope to action through knowledge

Appendix 6: Consent form

Appendix 6

**FACULTY OF COMMUNITY
AND HEALTH SCIENCES**
School of Public Health

Private Bag X17, Bellville, 7535
South Africa
Tel: +27 (0) 21 959 2809/2166
Fax: +27 (0) 21 9592872
Email: soph-comm@uwc.ac.za
Website:
<http://www.uwc.ac.za/faculties/chs/soph>

CONSENT FORM

Title of Research Project:

The study has been described to me in language that I understand and I freely and voluntarily agree to participate.

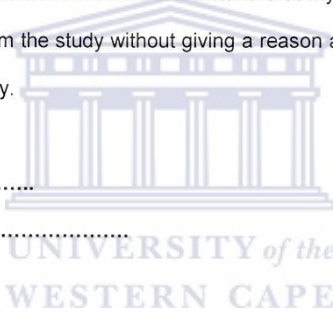
My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name.....

Participant's signature.....

Witness.....

Date.....



A WHO Collaborating Centre for Research
and Training in Human Resources for
Health



**UNIVERSITY of the
WESTERN CAPE**

A place of quality, a place to grow, from hope to action through knowledge

Appendix 7: Healthy lifestyle circular



Health

Department:
Health
PROVINCE OF KWAZULU-NATAL

EMPLOYEE HEALTH AND WELLNESS

Postal Address: Private Bag X 9051
Pietermaritzburg
3200
Physical Address: 330 Longmarket Street
Pietermaritzburg
3200
Tel.: 033-3952022,
Fax: 033-342008
Email: Dan.Dumisa@kznhealth.gov.za
www.kznhealth.gov.za

Enquiries: Mr DD Dumisa
29 April 2013

TO : DISTRICT MANAGERS
HEAD OFFICE MANAGERS
HEADS OF INSTITUTIONS

Ref: HRM 16/P

HRM CIRCULAR NO: 47/2013

RE: HEALTHY LIFESTYLE INITIATIVE IN THE WORKPLACE

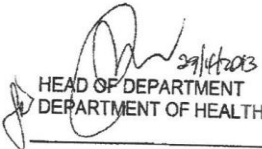
The MEC for Health launched the integrated Wellness and healthy lifestyle in the Workplace project in February 2012 where he with all District Managers signed a Pledge and in turn the District Managers are expected to sign the same with the Chief Executive Officers of health facilities. District Managers need to sign a pledge with the Senior Executive members of the District so that all the District office personnel are also involved. This process needs to be filtered down to lower supervisory level in all health institutions.

The vision is to have all employees of the Department intrinsically motivated towards living healthy lifestyles and therefore need to be seen actively living healthy lifestyles.

At some stage our employees must be committed in such a way that they feel guilty if a day passes without physical activity.

The Head of the Department supported the project by granting two (2) hours a week for physical activities. It has however been noted that not all supervisors and managers have signed a pledge of commitment to the programme, or and not all of them understand Employee Health and Wellness as part of their responsibilities.

It is therefore directed that all managers and supervisors sign the pledge of commitment to health screening, eating healthy, controlling tobacco products usage, being physical active 2 hours per week (by end of June 2013) and copies of the pledge be properly filed for audit purposes. It is believed that if the managers and supervisors' lead by their example, their positive role modeling will play greater role in influencing their colleagues positively. A long and a healthy life for all our employees in the Department will be achieved.


HEAD OF DEPARTMENT
DEPARTMENT OF HEALTH

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope

Appendix 8:

Interview Guide for In-depth interview for health workers

The interview guide is for me and my supervisor. The participant will not have access to the guide.

Introduction

This is a research being conducted by Patrick Simfukwe, a student at the University of the Western Cape. We are inviting you to participate in this research because you are a member of staff in the Pietermaritzburg medical metropolitan hospitals (Grays, Edendale & Northdale hospital). The proposed study aims to explore health workers perceptions, attitudes and the challenges about obesity, and adopting a healthy lifestyle in Pietermaritzburg, Kwazulu Natal province.

Key questions

1. Can you please comment on how you feel about the noted increase in overweight or obese among health workers worldwide?
 - a) Is the knowledge from your training and in your current job enough to help health workers develop positive attitude towards obese patient?
2. Are there any existence of health promoting programs in the hospital?
 - a) What challenges stops health workers from actively getting involved in healthy promoting activities like physical exercise/eating healthy food?
3. Do you think health workers have access to healthy food outlets within the hospital?
 - a) What type of food is available in the food outlets?
 - b) How well are these food stuffs accepted by hospital staff?
 - c) How can the food available be improved?
 - d) Are vegetables and fruits available in the shops?
4. Do you think some health workers are obese?
 - a) Why?

b) What do you think can be done in order to prevent most health workers from getting overweight/ obese?

5. How serious are the consequences of being obese?

6. What do you think patients think about obese health workers?

a) Do you think obese health workers are able to give proper advice about obesity to obese clients?

7. What recommendations or advice would you give to follow health workers in this hospital about obesity?

8. Is there anything more you would like to add?

We have come to the end of our discussion. Thank you for your time.



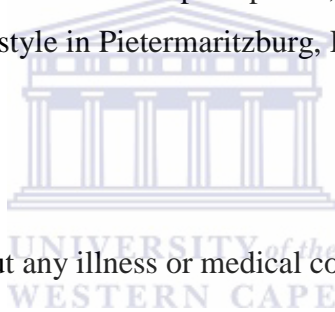
Appendix 9

Interview Guide for In-depth interview for overweight or obese health workers

The interview guide is for me and my supervisor. The participant will not have access to the guide.

Introduction

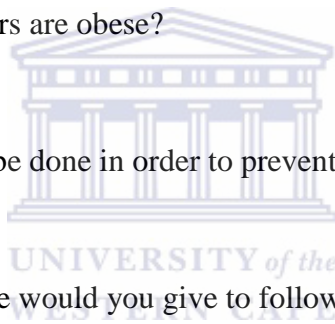
This is a research being conducted by Patrick Simfukwe, a student at the University of the Western Cape. We are inviting you to participate in this research because you are a member of staff in the Pietermaritzburg medical metropolitan hospitals Grays, Edendale & Northdale hospital). The proposed study aims to explore health workers perceptions, attitudes and the challenges about obesity, and adopting a healthy lifestyle in Pietermaritzburg, Kwazulu Natal province.



Key questions

1. Can you please tell me about any illness or medical conditions your doctor has said you have?
 - a) What health services have you used in the past 1 year especially where you have been seen regularly?
2. Can you remember when you were first advised about your weight?
 - a. What happened?
 - b. What advice or help you received about your weight?
 - c. What do you think causes obesity?
 - d. Do you know any consequences of obesity?
3. Do you think people judge you unfairly because of your body size?

- a) What do you think patients think about your body size when you give them advice on obesity?
- 4. Are there any challenges in maintaining a normal body weight?
 - a) Are there any advantages or disadvantages in being obese?
 - b) What is the most helpful thing your hospital can do in order for you to be able to give proper advice to obese patients on obesity?
- 5. Are you able to access healthy food outlets within the hospital?
 - e) How can the food available be improved?
 - f) Are vegetables and fruits available in these shops?
- 5. Do you think some health workers are obese?
 - c) Why
 - d) What do you think can be done in order to prevent most health workers from being obese?
- 6. What recommendations or advice would you give to follow health workers in this hospital about obesity?
- 7. Is there anything more you would like to add?



We have come to the end of our discussion. Thank you for your time