PERCEPTIONS OF PATIENTS AND DIETITIANS ON THE QUALITY OF NUTRITION CARE SERVICE DELIVERY IN PRIMARY HEALTH CARE FACILITIES OF THE WESTERN CAPE METRO

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A mini-thesis submitted in partial fulfillment of the requirements for the degree of Master in Public Health Nutrition at the Department of Dietetics,
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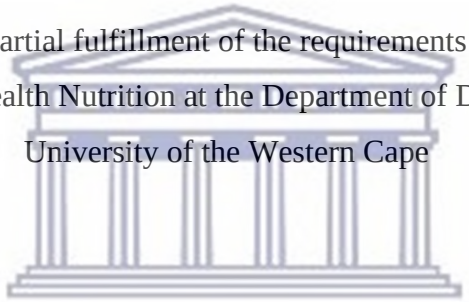

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KEYWORDS

Community Nutrition

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Experiences

Nutrition

Patient-Centred Care

Patient Satisfaction

Perceptions of Care

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Quality Nutrition Care Services Delivery

ABSTRACT

Introduction: The provision of quality nutrition care services is needed to address the national burden of diseases, and to reduce under- and overnutrition in South Africa. Globally, there is a lack of information and data about the perceptions, experience of, and satisfaction with the quality of nutrition care services, both from patients and dietitians. Patients and dietitians are in the best position to provide useful information pertaining to their perception and experience of nutrition care service delivery. The aim of this study was to determine the perceptions of patients and dietitians on the quality of nutrition care service delivery in the Klipfontein/Mitchells Plain Sub-Structure (KMPSS).

Methodology: This cross-sectional descriptive study design employed a mixed method approach. All patients consulted by the dietitians on the dates of data collection were conveniently sampled (n=120) across three Primary Health Care facilities in KMPSS (Hanover Park Community Health Centre (CHC), Mitchells Plain CHC and Heideveld Community Day Centre (CDC)) for participation in the quantitative component of the study. An interview-administered survey was used to gather information about patients' perceptions and experiences of nutrition care services. For the qualitative component, an all-inclusive sample of the four dietitians' employed in KMPSS participated in a Focus Group Discussion (FGD). The FGD included open-ended questions developed by the researcher to explore the perceptions of the dietitians on the quality of nutrition care service delivery.

Analysis: The Statistical Package for Social Sciences (SPSS) software was used to generate descriptive statistics for the quantitative data. Thematic analysis was used for the transcriptions of the FGD audio-recordings. The themes and sub-themes was identified through summaries and key findings on the perceptions of the quality of nutrition care service delivery through views and opinions.

Results: The quantitative results found that participants strongly agreed with positive statements regarding the dietitians' interpersonal skills, manner in which they presented themselves, and communicating health information. Nearly 80% of the participants perceived dietitians as being well presented, courteous, friendly, and polite, created a comfortable environment and were always on time for their appointments. Eighty percent (80%) of the participants were also satisfied with the nutrition care services provided by the dietitians in KMPSS. The qualitative findings revealed that the dietitians' had both negative and positive perceptions of the nutrition care service delivered within KMPSS. The dietitians' expressed

the need to improve the quality of nutrition care through management making and availability of necessary resources. This would enhance their work performance, communication and leadership skills.

Conclusion: The key results and findings of this study concur with other research that has been done within the dietetics profession. There is a need to promote quality nutrition care in dietetics by utilizing perceptions and experiences of patients and dietitians. It is imperative for continuous quality improvement initiatives in nutrition care to improve patient health outcomes in South Africa.

DECLARATION

I declare that "**Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro"** is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Eugene David Engle

Signed: 

Date: 18 November 2020

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LIST OF ABBREVIATIONS

AIDS:	Acquired Immunodeficiency Syndrome
BMREC:	Bio-Medical Research Ethics Committee
BOD:	Burden of Diseases
CBS:	Community Based Services
CDC:	Community Day Centre
CDL:	Chronic Diseases of Lifestyle
CHC:	Community Health Centre
ECD:	Early Childhood Development
FBO:	Faith-Based Organizations
FBS:	Facility Based Services
FGD:	Focus Group Discussion
HIV:	Human Immunodeficiency Virus
HPCSA:	Heath Professions Council of South Africa
IEC:	Information, Education and Communication
INP:	Integrated Nutrition Programme
KMPSS:	Klipfontein Mitchells Plain Sub-Structure
LMIC:	Low Middle- Income Countries
MDT:	Multi-Disciplinary Team
MHS:	Metro Health Service
NCD:	Non-Communicable Diseases
NDOH:	National Department of Health
NGO:	Non-Government Organizations
NPO:	Non-Profit Organizations
NTP:	Nutrition Therapeutic Programme
OT:	Occupational Therapist
PHC:	Primary Health Care

QA:	Quality Assurance
SADHS:	South African Demographic and Health Survey
SASSA:	South African Social Security Agency
SOPH:	School of Public Health
SPSS:	Statistical Package for Social Sciences
TB:	Tuberculosis
UWC:	University of the Western Cape
WHO:	World Health Organization

DEFINITION OF KEY TERMS

Community Nutrition- Dietitians working in the community setting, normally in Primary Health Care and rendering nutrition services to the identified and vulnerable population.

Dietetic consultation- The time patients spend with the dietitian during nutrition counselling sessions.

Dietitian- An individual trained in Dietetics specializing in the field of nutrition through improving human health and well-being, through a well-organized lifestyle and healthy eating habits.

Nutrition- The science that interprets nutrients and minerals through the intake of food and how it is utilized and absorbed in the human body.

Patient-centred care- The ability of dietitians to focus their nutrition services around the needs and concerns of patients in order to render quality nutrition services that in return influence patient experience and perceptions.

Patient experience- How patients feel about the nutrition services or whether it was positive or negative and whether they would return for follow up or recommend the service to other patients.

Patient satisfaction- the level or extent to which patients are satisfied and happy with the nutrition services rendered.

Perceptions of care- How patients perceive their care based on the information, counselling and communication (interpersonal) styles from the dietitians.

Primary Health Care- The first level of care and normally situated within communities; referred to as community health centres or community day centres. Normally covers a range of comprehensive primary health care services such as prevention, promotion, rehabilitation and treatment/curative.

Quality Nutrition Care Services Delivery- The nutrition services rendered by competent dietitians that are of high-quality standards, and that are evidence-based and effective to

improve the health outcomes of patients through nutrition support and counselling.

CHAPTER 1: INTRODUCTION

1.1. Introduction to the study

The provision of quality nutrition care was already noted in 1974 for its importance and effect on health status and patient outcomes (Butterworth, as cited by Laur, Marcus, Ray and Keller, 2016). Patients and dietitians are in the best position to provide useful information pertaining to their perception and experience of nutrition care service delivery within the health care environment. For decades, nutrition services were neglected on the developmental agenda to address child and maternal nutrition, as well as non-communicable diseases (NCD) (Delisle, Shrimpton, Blaney, du Plessis, Atwood, Sanders and Margetts, 2017).

Nutrition care service delivery is provided as part of the healthcare package in South Africa and is considered a national and provincial priority to address the burden of disease (Goeiman, Labadarios and Steyn, 2011). In South Africa, the nutrition care services are rendered within primary health care (PHC) and part of facility and community-based service (FBS and CBS) programmes. These services are specifically focused on the health needs of individuals through the stages of the human life cycle, namely; maternal, neonate, infant, early childhood, youth, adolescence, adulthood and the elderly (NDOH, 2003). The nutrition services also focus on addressing malnutrition in Human Immunodeficiency Virus (HIV), Acquired Immunodeficiency Syndrome (AIDS), Tuberculosis (TB) and other chronic debilitating conditions. External linkages are formed with various departments such as Social Development, Education and Agriculture to address the underlying causes of malnutrition (NDOH, 2003).

The Constitution of South Africa upholds the right to quality health care for all. This was aimed at improving access, reducing inequalities and improving the health system post-Apartheid (Begg, Mamdoo, Dudley, Engelbrecht, Andrews and Lebese, 2018). In public health nutrition, it is essential that nutrition care is provided by dietitians to maintain quality standards (Plint, Ball, Hughes and Desbrow, 2016). There is a commitment to improving the quality of care in the PHC, and that quality of care is measured as a first step and priority to improve population health and wellbeing (McLaren, Sharp, Zhou, Wasserman and Nanoo, 2017). Globally there is a lack of information on the perceptions of quality of care by patients and health providers (Papp, Borbas, Dobos, Bredehorst, Jaruseviciene, Vehko and Balogh, 2014).

Dietitians are primarily responsible for the provision of nutrition care services within district health services in the PHC component. They are committed to provide quality nutrition care that is safe and effective in the dietetic practice (Golley, 2017). Dietitians working in PHC settings that, render nutrition care services, have a vital role to play in the prevention and management of chronic diseases and malnutrition in people of all ages (O'Connor, Slater, Ball, Jones, Mitchell, Rollo and Williams, 2019). Dietitians need to work efficiently and effectively in the management of the nutrition care services to ensure that patient expectations and needs are met (O'Connor *et al*., 2019). Efficiency in this context is defined as how well dietitians can render nutrition care services through utilizing available resources to improve patient health outcomes, as well as based on their training and competency skills, and the application of values/ethics during their dietetic consultation (Figure 1.1). The effectiveness of dietitians are based on their allocated time in PHC facilities to render quality nutrition care services. Dietitians working in PHC have economic benefits to reduce cost and the burden on the health care facility. They are deemed as a valuable component of the PHC workforce (O'Connor *et al*., 2019). If money is invested in dietetic interventions, vast amounts can be saved on other health costs as a result of improved patient health outcomes (O'Connor *et al*., 2019). Career satisfaction will occur when dietitians are acknowledged for the work done and for their professional expertise within their scope of practice (Plint *et al*., 2016). Research indicates that patients' perception of quality is influenced by a variety of factors, such as features of the national health system, practice type, and the providers' personal and clinical skills (Papp *et al*., 2014).

Quality nutrition care services revolve around four main components: to identify malnutrition through screening and assessment, appropriate referral pathways, personnel that are adequately trained on the importance of good nutrition care, and management structures that are in place to ensure best nutrition care practices (Brotherton, 2010). The quality of nutrition care can either be clinical or process quality. Clinical quality is based on medical procedures, results or other diagnoses, whereas process quality is simply defined as the outcome or result of the service delivery (James, Calderon, and Cook, 2016). Process quality relates to the delivery of care, thus, components include, for example; the professionalism of the staff, their attitudes toward the patient, and waiting times to receive service (James *et al*., 2016). Process quality will form the foundation of this study in order to understand the different dimensions of quality of nutrition care services amongst patients and dietitians in PHC.

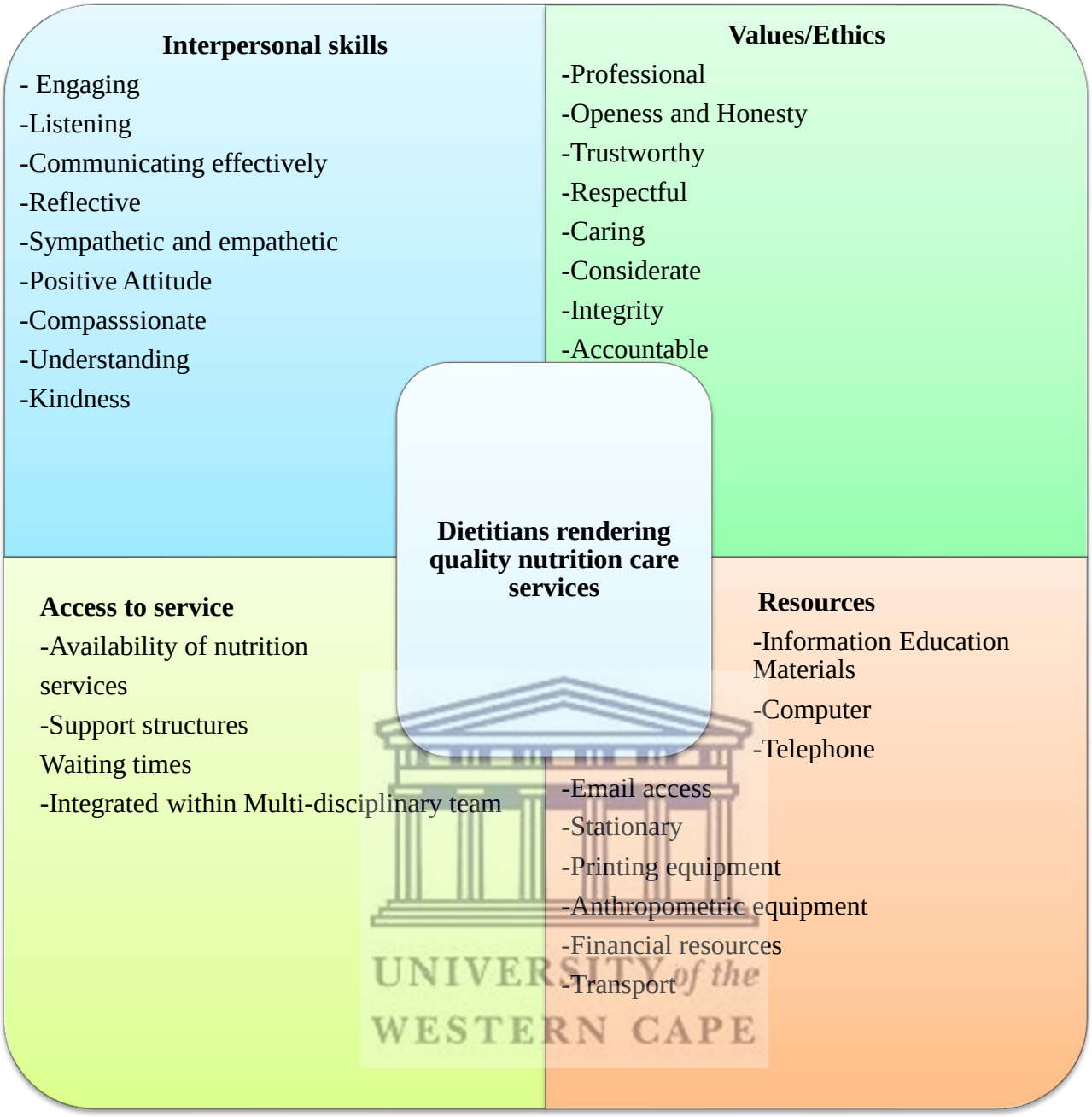

Figure 1.1: Requirements to render quality nutrition services (Source: Adapted from Cant and Aroni, 2008)

Dietitians have for many years been trying to facilitate improvements in the provision of nutrition care and to create awareness across many healthcare settings (Brotherton, 2010). Nutrition guidelines and standards are necessary to improve nutrition care; however, there are barriers and complexities to fully implement quality nutrition care service delivery. Resources and financial constraints have been noted, and this has proven to be a challenge in many health care systems with the lack of nutrition care knowledge that has been reported as the most common cause for inadequate nutrition care (Brotherton, 2010). Dietitians should ensure that strong emphasis is

placed on patient safety during consultation processes, that focus is placed on improving health outcomes and that the highest quality of care is maintained at all times (Brotherton, 2010). The provision of high-quality nutrition care is no easy task. Management buy-in is required to ensure that effective multi-disciplinary team (MDT) approaches are implemented to facilitate nutrition care across community settings. This will ensure clinical outcomes and positive patient experiences (Brotherton, 2010). It is recognized that dietitians need to work with many partners across the PHC setting and this includes non-profit organizations (NPO's), non-government organizations (NGO's), faith based organizations (FBO's), business industries, community leaders and other stakeholders that requires commitment and a collaborative approach that can only be attained through "good clinical leadership and innovative approaches" (Brotherton, 2010: 557).

The nutrition care services need to be integrated within the health care system (Pérez-Escamilla and Engmann, 2019). The World Health Organization (WHO) health systems framework comprises of seven building blocks, namely leadership and governance, financing, medical products, vaccines and technologies, information management, health workforce and service delivery (WHO, 2007). However, nutrition care services are better integrated with the service delivery and health workforce building blocks. Globally, there is an interest to measure primary care systems on service delivery, outputs and outcomes (Bresick, von Pressentin and Mash, 2019). Service delivery, according to the WHO (2007), entails providing health services that are safe, and ensuring that quality personal and non-personal health interventions are rendered to those that need them, with minimum waste of resources. Key benefits of integrating service delivery are improved quality of care, improved clinical outcomes and improved patient satisfaction (Atun, de Jongh, Secci, Ohiri, Adevi and Car, 2011). A well performing health workforce, according to WHO (2007), is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances. It is essential for the effectiveness of a healthy workforce to render quality nutrition care as it takes years to train and upskill dietitians to perform at satisfactory levels and evaluate the clinical outcomes in their patients (Plint *et al*., 2016).

1.2. Background

Currently, the Western Cape Department of Health employs about 92 dietitians that are based at PHC facilities and hospitals across the six health districts of the Province (Western Cape Annual Performance Plan, 2019). The dietitians work within the framework of the INP, which is a FBS and part of the PHC domain need to ensure that effective nutrition care services are delivered to

all population-based patients. The INP was initiated by the Department of Health in 1995 to address and prevent malnutrition. The INP is associated with direct and indirect nutrition interventions. Examples of the services include direct interventions such as nutrition education and promotion, micronutrient supplementation, food fortification, and disease-specific nutrition counselling and support. Indirect nutrition interventions could include parasite control, steps to improve access to food, provision of health care services, and provision of clean, safe water (NDOH, 2003). There are also the INP focus areas that dietitians need to cover namely:

- Disease-specific nutrition support, treatment and counselling. It involves the nutrition and dietetic practices for the prevention and rehabilitation of nutrition-related diseases and illnesses through counselling, support and treatment.

- Growth monitoring and promotion, which involves the regular measurement, recording, and interpretation of a child's growth patterns. Dietitians need to educate and counsel, follow up on recordings and promoting child health in the context of the first 1000 days.

- Nutrition promotion and advocacy to facilitate the objectives of nutrition in general and improve the quality of life for all people addressing nutrition related diseases.

- Micronutrient malnutrition control involves the activities to prevent, reduce or control dietary deficiencies of vitamins and minerals through direct supplementation of the vulnerable populations or groups with micronutrient supplements, dietary diversification and fortification of commonly consumed foods with micronutrients.

- Food service management that includes the activities of planning, development, control, implementation and evaluation of, and guidance, in respect of suitable food service systems for the provision of balanced nutrition to groups in the community and public institutions for healthy and/or ill persons.

- Promotion, protection and support of breastfeeding comprising of various activities as well in the context of the first 1000 days.

- Contribution to household food security which are the nutrition-related activities to contribute to adequate access by households to amounts of foods of the right quality to

satisfy the dietary needs and to ensure a healthy active life of all household members at all times throughout the year.

In South Africa, the 1998 and 2003 Demographic and Health Surveys indicated increasing rates of dissatisfaction with the public health services. A strategic plan was released in 2010 by the National Department of Health to improve patient care and satisfaction (Jacobsen and Hasumi, 2014). Findings of Jacobsen and Hasumi (2014) indicated that 88.5% of the respondents reported being satisfied with their last visit to their usual health care provider, and that dissatisfaction rates were between 6-8% for public hospitals and clinics. The South African Government is committed to addressing health inequities and improving the public services through a service delivery model that meets the basic needs of all South African citizens and provides improved access to health care services (Myburgh, Solank, Smith and Lalloo, 2005).

1.3. Problem Statement

In PHC facilities in the Western Cape, patients who access dietetic services are not routinely surveyed to determine their perceptions and experiences of care during dietetic consultations. In addition to this, there is a dearth of information regarding how dietitians themselves regard the quality of the services which they provide. Monitoring systems are lacking in the urban and rural health districts, and it is difficult to ascertain if patients are satisfied with the nutrition care received and, whether dietitians are able to meet the required norms and standards as set out by the Health Professions Council of South Africa (HPCSA). This research project aims to ascertain how patients and dietitians perceive the quality of nutrition care service delivery in the public health care context.

1.4. Purpose

This study was embarked upon to understand the perceptions of patients as well as the dietitians on the quality of care in the context of nutrition service delivery and how it affects the services rendered. Currently, there is a gap in the literature regarding patients' perceptions and experiences of nutrition care service delivery and how dietitians feel about the quality of the services rendered to their patients (Vivanti, Ash and Hulcombe, 2007).

The purpose of this study was to produce some evidence of the perceptions of nutrition care service delivery from the perspectives of both patients and dietitians. The evidence produced will have the potential benefit of improving the quality of nutrition care services, increasing patient

satisfaction and compliance with the nutrition care provided. There is a scarcity of information regarding nutrition care service delivery. The significance of the current research was in identifying shortcomings and providing recommendations for the improvement of the quality of nutrition care service delivery within the PHC facilities. Dietetic services and interventions that are successful at PHC level further reduces hospital admissions and improves health and nutritional outcomes of patients (Howatson, Wall and Turner-Benny, 2015). There is little focus on quality improvement for implementing quality nutrition care service, and it is too concentrated on standards and guidelines (Brotherton, 2010).

1.5. Aims and Objectives

1.5.1. Aim

This study aims to determine the perceptions of patients and dietitians on the quality of nutrition care service delivery in the Klipfontein/Mitchells Plain Substructure.

1.5.2. Objectives

1.5.2.1. To describe patients' perceptions of the quality of nutrition care service delivery.

1.5.2.2. To describe patients' experiences of the quality of nutrition care service delivery.

1.5.2.3. To determine patient satisfaction with the nutrition care service delivery.

1.5.2.4. To explore the perceptions of dietitians' on the quality of nutrition care service delivery.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This literature review aims to provide an overview of the quality of care in the context of nutrition care services in the South African PHC setting and the direct impact on patient and dietitian perceptions and experiences.

2.2. Current nutrition situation

In South Africa, nutrition is recognized as a human right and fundamental for development processes of the country and for sustainable growth (NDOH, 2013). South Africa has a population of 56.5 million people who reside within nine provinces and 52 districts (Bresick *et al*., 2019). The Western Cape Province has an approximate total population of 6.21 million people (Western Cape Department of Health Annual Performance Plan, 2019). In the public health sector of South Africa, 75% of the population access the health care system, whilst the private sector serves only 15% of the insured population (Neely and Ponshunmugam, 2019). Sixty-four-point seven percent (64.7%) of the patients reside in provinces that are largely rural and undeveloped (Mahlathi and Dlamini, 2017). Nutrition workforces are needed to provide quality nutrition care services to address the burden of disease (BOD) (Goeiman *et al*., 2011).

In 2017, there was a total of 43 277 doctors practicing in South Africa with a doctor to patient ratio of 0.91 per 1000 people. A total of 401 543 nurses and midwives are eligible to practice with a patient ratio of 3.157 per 1000 people (Mahlathi and Dlamini, 2017). Neely and Ponshunmugam (2019:218) found that the ratio is "23 doctors and 181 professional nurses per 100,000 uninsured people". Nutrition workforce and their services are at times overlooked, as the health profession often prioritizes doctors and nurses compared to dietitians (Delisle *et al*., 2017).

The double burden of undernutrition and over-nutrition in low to middle income countries (LMIC) is becoming complex and difficult to manage, due to the scarcity of public health interventions (Delisle *et al*., 2017). The National Department of Health (NDOH) developed the Roadmap for Nutrition in South Africa to address the situation of undernutrition, stunting and micronutrient deficiencies. These conditions co-exist with an increased prevalence of overweight and obesity with associated consequences of hypertension, cardiovascular diseases and diabetes (NDOH, 2013; Delisle *et al*., 2017). Maternal and child malnutrition are the primary source of morbidity and mortality in Sub-Saharan Africa with undernutrition in HIV/AIDS and household food

insecurity (Delisle *et al*., 2017; NDOH, 2013). Improving nutrition will ensure that the population is healthy and this in return will contribute to economic growth and investment in South Africa (NDOH, 2013).

2.1.1. Nutrition status of children under five

Twenty-seven percent (27%) of children under five in South Africa are stunted, 3% wasted, 6% underweight and 13% overweight. Thirty-two percent (32%) of infants under the age of six months are exclusively breastfed (SADHS, 2019).

2.1.2. Nutrition in adolescence

Nutrition in adolescence is important for health and wellbeing. "In South Africa, 27% of females and 9% of males are either overweight or obese by 15-19 years living in urban settings" (Wrottesley, Pedro and Norris, 2020:95).

2.1.3. Nutrition status of adults

According to the last national representative South African survey in 2016, twelve percent (12%) of women and 8% of men are reported to be in poor health and this situation is more evident in older age groups (SADHS, 2019). Hypertension has doubled since 1998 from 25% to 46% among women and from 23% to 44% among men (SADHS, 2019). Thirteen percent (13%) of women and 8% of men aged 15 and older are diabetic (SADHS, 2019). There are high proportions of women (64%) and men (66%) that are pre-diabetic (SADHS, 2019). Twenty-seven percent (27%) of women are overweight, 3% underweight, 41% obese and 20% severely obese. Ten percent (10%) of men are underweight, 20% are overweight, 11% obese and 3% severely obese (SADHS, 2019). The roadmap developed by the NDOH is in line with the focus areas of the INP and aims to increase life expectancy, decrease maternal and child health, combat HIV/AIDS, decrease the burden of diseases and strengthen health system effectiveness for nutrition care services (NDOH, 2013).

2.2. Burden of disease

South Africa's health system is not performing too well (Bresick *et al*., 2019) since it is overburdened by quadruple burden of diseases namely: HIV/AIDS, TB, maternal and child mortality, NCD such as hypertension, cardiovascular diseases, diabetes, cancer, mental illness, chronic lung disease like asthma, injuries and trauma (WHO, 2018a). The Western Cape has a demand for public health care services and, similar to the country, the province as a whole, is

facing a quadruple burden of diseases including cerebrovascular disease, cancer, chronic respiratory diseases and diabetes. The quadruple burden usually includes injuries and trauma that are significant to the Western Cape (Sheik, Evans, Morden and Coetzee, 2016).

2.2.1. Causes of death

Globally, there are between 5.7 and 8.4 million deaths per year associated with poor quality of healthcare. Poor quality of care is a result of reduced budgets for healthcare, under and over utilization of health services, limited resources and incompetent workforce leading to high burden of diseases (National Academies of Sciences, Engineering, and Medicine, 2018; Begg *et al*., 2018). Each year almost 830 million people with NCD are left untreated (National Academies of Sciences, Engineering, and Medicine, 2018). The main causes of death in South Africa are TB (8.8%), influenza and pneumonia (5.2%), HIV (5.1%), cerebrovascular disease (4.9%), diabetes mellitus (4.8%), other form of heart diseases (4.6%) and hypertensive disease (3.7%) (WHO, 2018b).

In the Western Cape, "non-communicable diseases have continued to account for approximately two thirds of all deaths and with HIV/AIDS and TB accounting for approximately 15 per cent of deaths" (Western Cape Department of Health Annual Performance Plan, 2019:11). Ischaemic heart disease remained the leading cause of death in the Western Province (Sheik *et al*., 2016). According to Morden et al., (2016), NCD accounted for the largest proportion of deaths between 2009 (57%) and 2013 (61%). The burden of NCD remains a concern when considering the high prevalence of risk factors such as obesity, smoking and physical unfitness (Western Cape Department of Health Annual Performance Plan, 2019).

2.3. Quality of care

The South African National Department of Health (2017) defines quality of care as the safe, effective, patient-centred, timely, efficient and equitable provision of health care services to achieve desired health outcomes. Quality of care takes cognizance of patient safety, to prevent harm to patients and focuses on clinical governance processes to assure quality. Quality can also be defined as excellent standards and expectations that have been met (Campbell, Roland and Buetow, 2000). The Institute of Medicine defines quality as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes, which are consistent with current professional knowledge (as cited by Begg *et al*., 2018).

Quality of care can be broken into two components, that is, technical quality and process quality. Technical quality refers to achieving standards of care and an environment of excellence. In dietetics an example can be patient flow, whereby attempts are made to improve the way in which patients move through the health facility to collect their folders at reception for their appointments and locate the dietitian consulting room within minutes due to visible signage. This type of quality can drastically impact patients' experiences on waiting times as movement through the facility is reduced. In technical quality, dietitians can support the concept of continuous improvement through clinical governance where they are accountable to ensure that the quality of their services and standards are maintained, while process quality refers to the delivery of health care services. The latter relates to satisfaction with health professional attributes such as kindness, attitude and manners displayed through the process of service delivery. Both these types of quality will affect patient perceptions and experiences by using patient satisfaction as a measure for organization performance (James *et al*., 2016).

Quality of care can be broken into access and effectiveness through the care patients receive based on their health needs and the effect the treatment has on their outcomes. Therefore "quality is whether individuals can access the health structures and whether the care received is effective" (Campbell *et al*., 2000:1614). Similar to the quality definitions of Campbell *et al*. (2000) and James *et al*. (2016), the Donabedian quality framework categorizes quality in terms of structure that accounts for the physical setting at which where care is delivered, process whether good or bad practices are followed and the outcome that has an impact on the health status of patients (Donabedian, 1988).

2.4. Quality nutrition care

Quality nutrition care begins with competent dietitians who are able to provide evidence-based practices that in turn will result in improvement in the nutrition care service to add value through the outcomes, processes and structural measures (McCauley and Byrne, 2010). According to the Health Professions Council (HPCSA, 2020), a dietitian is defined as an expert on diet and nutrition. The dietetic profession depends on "research to guide clinical practice and to provide evidence" that might lead to the demand for nutrition care services (Dougherty, Burrowes and Hand, 2015:1001). Dietitians employed in PHC settings can apply a "robust scientific knowledge about food and nutrition to promote optimal health and leading to excellent patient outcomes" (Howatson *et al.*, 2015:325). The ethical rules of conduct for practitioners registered under the Health Professions Act of South Africa, 1974, state that a dietitian shall confine himself or herself

to the performance of professional acts in the field of dietetics. Dietitians should be educated and trained, and in which they gained experience; and shall not fail to communicate and cooperate with other registered practitioners in the treatment of a patient (Government Gazette 29079, 2006:24).

Structural readiness is a setting where the necessary equipment, guidelines, policies, registers, skills and knowledge of dietitians to perform their duties are in place (Billah, Saha, Khan, Chowdhury, Garnett, Arifeen and Menon, 2017). These dimensions allow for patients referred to the dietitians to receive high quality nutrition care. Process quality ensures that the nutrition care services are available at all times, and that the referral pathways are in place to ensure dietitians consult and see appropriately referred patients. Dietitians need to understand their roles in the quality process and how measurements like patient satisfaction can be used to predict the quality of care (McCauley and Byrne, 2010). The outcomes in nutrition care services are important to ensure patients comply with the dietitians' education and counselling to improve their health status, and are satisfied with the care provided (Table 2.1).

Table 2.1: Dimensions of quality of nutrition care (Source: Adapted from Donabedian, 1988: Billah *et al.*, 2017)

Dimension	Indicators/Information
Structural Readiness	Availability of equipment, guidelines, record keeping, Nutrition Therapeutic Programme (NTP) registers, computer, office space, transport and knowledge and training of dietitians.
Process	Nutrition service delivery during consultation with patients.
Outcome	Patients are satisfied with the nutrition care services received.

"Nutrition care is any practice conducted by a health professional such as a dietitian to support a patient to improve dietary behaviours" (Ball Eley, Desbrow, Lee and Ferguson, 2015: 606), improving the nutritional status by managing various public health issues and addressing the burden of diseases according to the INP focus areas. Dietetic interventions in PHC might take years to evaluate, and there are difficulties in determining success rates. A measure of the dietetic intervention success such as patient satisfaction is needed to improve the value of nutrition care services in PHC (Howatson *et al.*, 2015). If more dietitians are employed in PHC, there would be fewer hospital admissions and improved health and nutritional outcomes for people with chronic

conditions, including the NCD (Howatson *et al*., 2015).

Dietitians need to use appropriate policies, programs and nutrition principles and work according to their scope of dietetic practice to prevent, treat and manage nutrition related diseases and perform at the highest level to provide the best quality nutrition care (McCauley and Byrne, 2010). It is essential that dietitians understand their norms and standards in order to render quality nutrition care services, as well their accreditation status, as they are responsible for their patient well-being.

Cognizance of patient satisfaction with nutrition care services is important as it may result in improved adherence to care plans. When dietitians are adequately trained, the knowledge of patients increase, they are able to take control of their lives, implement and adhere to diet therapy and recommendations, and adopt healthy lifestyle behaviours (Vivanti *et al*., 2007). It is essential to assess and understand how dietitians are performing in the workplace as well in PHC.

2.5. Primary health care performance

In the Western Cape, the performance of PHC, in general, was evaluated, whereby patients found the first contact utilization, information coordination, family centredness, comprehensiveness, and competency of health personnel as acceptable to good. Patients remained, however, dissatisfied with accessibility to health care services (Bresick *et al*., 2019). Ongoing care with the same provider ensures improved health outcomes. The performance on access, community orientation and comprehensiveness of services was rated the lowest, and the coordination of information competence and teamwork was rated the highest (Bresick *et al*., 2019). Quality nutrition care services should be established to ensure that patients are satisfied with the level of care provided at PHC level.

2.6. Dietetic consultations in PHC

Dietetic consultation is defined as the face-to-face contact session to help individuals improve health outcomes (Mitchell, Ball, Ross, Barnes and Williams, 2017). The purpose of dietetic consultations is to follow a structured nutrition care process (Mitchell *et al*., 2017). During dietetic consultations, individual needs and circumstances are addressed, where the dietitians need to function as facilitators in the patient-centred approach (Hancock, Bonner, Hollingdale and Madden, 2012). Positive patient experiences include good patient-dietitian communication; patient receiving scientific evidence that is effective and reliable from the dietitian; and regular

support with follow up appointments; and patient feeling valued in the treatment process (Hancock *et al*., 2012). Evidence of the effectiveness of dietetic consultations and the nutrition care provided by dietitians in PHC settings, has yet to be determined (Hancock *et al*., 2012; Mitchell *et al*., 2017).

The role of dietitians in PHC settings needs to be understood in order to assist with the dietary behaviours of individuals and patients (Mitchell *et al*., 2017). Dietitians have the ability to enhance and improve dietary behaviours and should be recognized as the first line and approach to treatment. Dietitians are the only allied health workers trained on educating and counselling patients through the provision of nutrition care focusing on dietary behaviours and patterns. There is a need for a strong recommendation for the role of dietitians to function within a South African MDT consisting of doctors, nurses, other allied health professionals (social worker, occupational therapist and physiotherapist) and community health workers to improve lifestyle behaviours (Mitchell *et al*., 2017).

A comprehensive review of literature is required to detail the perceptions and experiences prior to the implementation of nutrition care processes, given the fact that nutrition care process can add value to clinical practices (Vivanti, Ferguson, Porter and O'Sullivan, 2011). Mitchell *et al*. (2017) assert that this type of research evidence in understanding the dietetic practices, has the potential benefit to increase and expand the nutrition care services in the PHC setting and provides an opportunity to advocate for more dietitians. The nutrition care process should include assessment, nutrition diagnosis, intervention and nutrition monitoring and evaluation (Mitchell *et al*., 2017). When dietitians render services in PHC settings, there will be improved health outcomes for patients, as the quality of care between dietitians and patients is improved (Mitchell *et al*., 2017).

2.7. Dietitian-patient relationship

Patient-centred care has been in operation since 1950 as an essential part of health care; thus, dietitians focus on individualizing nutrition care to understand the needs of patients (Sladdin, Ball, Gillespie and Chaboyer, 2019). It is important to focus on fostering and maintaining caring relationships, delivering individualized care, enabling patient involvement and allowing patients to take control of their own health (Sladdin, Chaboyer and Ball, 2018). Perceptions of care are also dependent on partnership and collaboration between the dietitian and patient, resulting in patient-centred care (Cant and Aroni, 2008). Patient-centred care leads to a positive impact on patient outcomes and enhances patient satisfaction (Whitehead, Langley-Evans, Tischler and Swift, 2009). Skilled listening will enable the patient to understand what their current situation is

like. This will result in more information being disclosed as a trust relationship is formed between the dietitian and patient (Cant and Aroni, 2008), which thereby enhances the patient experience of quality nutrition care.

2.8. Patient experience

A study of patient experience in LMIC reported that 34% of patients had a poor experience of the healthcare system, 41% had a lack of attention or respect from the health care providers, 37% reported long waiting times, 21% had a poor communication experience and 37% of patients stated that the time spent with the health care providers was too short (Kruk, Gage, Arsenault, Jordan, Leslie, Order-DeWan and English, 2018). Quality of health care is measured on two factors, namely patient outcomes and patient satisfaction. Patient experience and satisfaction is thus one of the top three priorities in health care to ensure quality of care is maintained (Rollins and Dobak, 2018).

Currently, there are no criteria available to define patient experience (Kruk *et al*., 2018). Patient experience of care is when the patient is centred in the delivery of health care (Papp *et al*., 2014). Patient experience should be positive and yield appropriate outcomes (Rollins and Dobak, 2018). Patients have a choice in their health care, and it is the responsibility of the dietitians to ensure that the needs of patients are met through the various nutrition care services.

Nutrition care services play an essential role in creating a positive patient experience, and that clinical nutrition intervention should be considered when effectively evaluating the overall patient experience (Rollins and Dobak, 2018). "Educating patients on nutrition care requires knowledge of nutrition services, customer or patient relations, health literacy and the individual nutrition care plan" (Rollins and Dobak, 2018: 805). Most dietitians understand that they are integrated within an MDT and that communication is essential to be proactive. When dietitians are able to change or amend the nutrition care services, significant improvements are noted in the quality of care, patient safety and efficiency (Rollins and Dobak, 2018), and concomitantly, it is also associated with lower health care cost and risk. Dietitians are considered as part of the frontline health staff, and the patient experience rests in their control to improve clinical health outcomes (Patten and Sauer, 2018).

Patients might not always be able to understand technical quality such as standards and excellence in health; however, they can provide accurate information regarding clarity of explanations,

helpfulness of information received, barriers to obtaining care or the dietitian's interpersonal behaviour. Patients should be encouraged to provide feedback on the service experienced as an essential part of the patient-centred care and parameter of quality (Sandager, Freil and Knudsen, 2016). The age and health status of patients is related to patient experience. Senior patients as well as patients with lower levels of education are in general positive towards the health care services (Sandager *et al*., 2016).

In the public sector, nutrition care services are free and patients do not have a choice as to their health care provider or dietitian. The experience of care is also dependent on the structure of health care, for example the opening hours, consulting times, waiting times, and booking systems for appointments and resources (Campbell *et al*., 2000).

2.9. Patient perceptions

Currently, there is scarcity of literature regarding patient perceptions and experience in quality of nutrition care in PHC settings for dietitians (Sladdin *et al*., 2018). Patient perceptions and experiences and their satisfaction levels are crucial to quality health care. There is a greater need for dietitians to enhance their nutrition care through the use of satisfaction tools. This is corroborated by Vivanti *et al*. (2007) who surmise that satisfaction evaluation tools for dietetics are limited and more research is required.

2.10. Patient perceptions of communication with dietitians

Effective communication and counselling skills of dietitians overall affect how well patients perceive their treatment and experience (Sladdin *et al*., 2018). There is limited information on how dietitians treat their patients through communication platforms to provide nutrition care services; studies typically focus on program outcomes and not the patient interaction within consultations (Cant and Aroni, 2008). Interpersonal communication is a vital skill that dietitians need to have in order to ensure that patients understand their medical conditions (Cant and Aroni, 2008). It is important to note that dietitians need to persuade and negotiate as part of their communication skills to enhance patient experiences. Dietitians need to persuade and negotiate through adequate and effective communication, which in turn, yield positive results for patient satisfaction (Cant and Aroni, 2008).

The four main competencies of effective communication include interpersonal communication, non-verbal communication, professional values and counselling skills (Cant and Aroni, 2008).

When effective communication is applied, patients are able to make appropriate choices, express their thoughts, opinions, feelings, feel heard and understood, have their values respected and supported all of which enhances their experience. Interpersonal skills and the presentation of dietitians played a role in the satisfaction of patients (Ferguson *et al*., 2001; Vivanti *et al*., 2007). The perceptions of patients are regarded as highly important. The dietitians need to display empathy and understanding attitudes in order to enhance patient experiences (Cant and Aroni, 2008). Patients perceive care through verbal and non-verbal communication methods, for example, the tone of voice, physical appearance and credibility. Patients will react positively if these interpersonal skills are enhanced through a smile, eye contact and gestures as part of nutrition care services (Cant and Aroni, 2008).

Knowledge translation is an important component of the dietetic practice strategy needed to help develop decision-making pathways, improve effective health services, and strengthen the health care system (Golley, 2017). Dietitians should be able to translate knowledge into practice to ensure key messages or counselling concepts are conveyed and exchanged appropriately to improve patient satisfaction (Golley, 2017). Dietitians can change beliefs, attitudes and influence patients to strive for improved health outcomes (Golley, 2017).

2.11. Patient satisfaction

Patient satisfaction is defined as a reaction to several aspects of the service experience. It is a vital indicator of success in any form of service delivery and is a key component for quality of care (Schoenfelder, Klewer and Kugler, 2011). There is limited research that examines patient satisfaction with health care provision in South Africa and, more specifically, healthcare providers' perceived quality care (Myburgh *et al*., 2005). Internationally, studies done over the past years prove that patient satisfaction remains difficult to determine and evaluate (Schoenfelder *et al*., 2011).

Over the past 20 years, there has been heightened attention accorded to patient satisfaction since such information is regarded as useful for identifying gaps and developing action plans for quality improvement in health care establishments and clinical staff training (Al-Abri and Al-Balushi, 2014). Patient satisfaction can be used as a quality improvement tool which can change how dietitians perform within the Western Cape.

2.12. Conclusion

In South Africa, there is a need to evaluate the quality nutrition care services in PHC due to a scarcity of literature. Dietitians working in PHC rendering quality nutrition care services are able to improve patient health outcomes and in return make positive investments to save and reduce costs. Emphasis is placed on increasing the dietitian workforce, as well as increasing the total number of dietitians in PHC to address the BOD.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

In this chapter, the researcher provides a detailed description of the methods employed to answer the research question:

- What are the perceptions of patients and dietitians regarding the quality of nutrition care service delivery?

3.2. Methodology

3.2.1. Study design

A mixed methods approach was used to guide this cross-sectional descriptive study which sought to determine, measure and explore the perceptions of patients and dietitians with regard to quality of nutrition care service delivery. Mixed methods use both qualitative and quantitative methods during data collection, analysis and discussion (Wisdom and Creswell, 2013). The qualitative method will allow participant voices to be heard and their opinions to be explored as opposed to the quantitative survey, which forces participants to select from researcher-determined responses. Mixed methods can triangulate quantitative and qualitative data to understand possible contradictions between quantitative results and qualitative findings. This provides an opportunity for study participants' findings and experiences to be accurate and can be adapted to cross-sectional studies to collect valuable and comprehensive data (Wisdom and Creswell, 2013).

The study also explored and measured various aspects of general patient satisfaction. With this type of study, no follow-up is required as all the information is gathered at a single time point (Levin, 2006). Cross-sectional studies are generally quicker and cheaper than longitudinal studies, usually allow much bigger samples and can be used to assess associations. These are useful for deciding which exposures to explore further and which do not permit further exploration (Schoenbach and Rosamond, 1999). They also allow a study if multiple outcomes and exposures and these studies are commonly used for public health planning to improve health services (Levin, 2006).

3.2.2. Study setting and population

The study population for this research was in the Klipfontein and Mitchells Plain Sub-Structure (KMPSS). The KMPSS consists of two sub-districts namely Klipfontein and Mitchells Plain that

form one substructure and are part of the MHS in Cape Town (Figure 3.1). The Klipfontein sub-district has a servicing population of 380 389, whereas Mitchell's Plain sub-district services 544 318 people (Western Cape Government: Health Circular H11/2017). In Klipfontein sub-district, a total of 306 641 people are dependent on health care services, whereas in Mitchells Plain sub-district, 336 480 people are dependent on health care services (Chinhoyi, Zunza and von Pressentin, 2018).

In these sub-districts, there are a total of eight PHC health facilities namely; Hanover Park Community Health Centre (CHC), Gugulethu CHC, Nyanga Community Day Centre (CDC), Heideveld CDC, Dr Abduraghman CDC, Mitchells Plain CHC, Inzame Zabantu CDC and Crossroads CDC. Common problems and causes of deaths in these sub-districts are HIV/AIDS, tuberculosis, interpersonal violence, diabetes mellitus, lower respiratory infections, cerebrovascal disease, diarrhoea and road injuries (Morden, Groenewald, Zinyakatira, Neethling, Msemburi, Daniels, Visme, Coetzee, Bradshaw and Evans, 2016).

The nutrition services are in line with the INP in these sub-districts and aimed at specific target groups, combining direct and indirect nutrition interventions to address malnutrition. The nutrition services are focused on the specific health needs of individuals. Currently there are four dietitians rendering nutrition care services to this population. It is estimated that one dietitian services 260 000 patients, with each facility servicing about 25 000-35 000 patients per month (Western Cape Government: Health Circular H11/2017).

3.2.3. Sampling

Sampling was done via two processes:

3.2.3.1. For the quantitative survey (objectives 1-3), three PHC facilities which offer comprehensive nutrition services within the KMPSS were purposely selected. These facilities are Hanover Park CHC, Mitchells Plain CHC and Heideveld CDC. All booked patients at these three health facilities were conveniently sampled to participate in the study (Figure 3.1). It was difficult to determine the sample size, as patients reporting for dietetic care are counted as general headcounts at facility level. It was also not required from the KMPSS: INP to submit nutrition statistics to the Western Cape Provincial Department of Health; hence there was no statistics to determine the sample size.

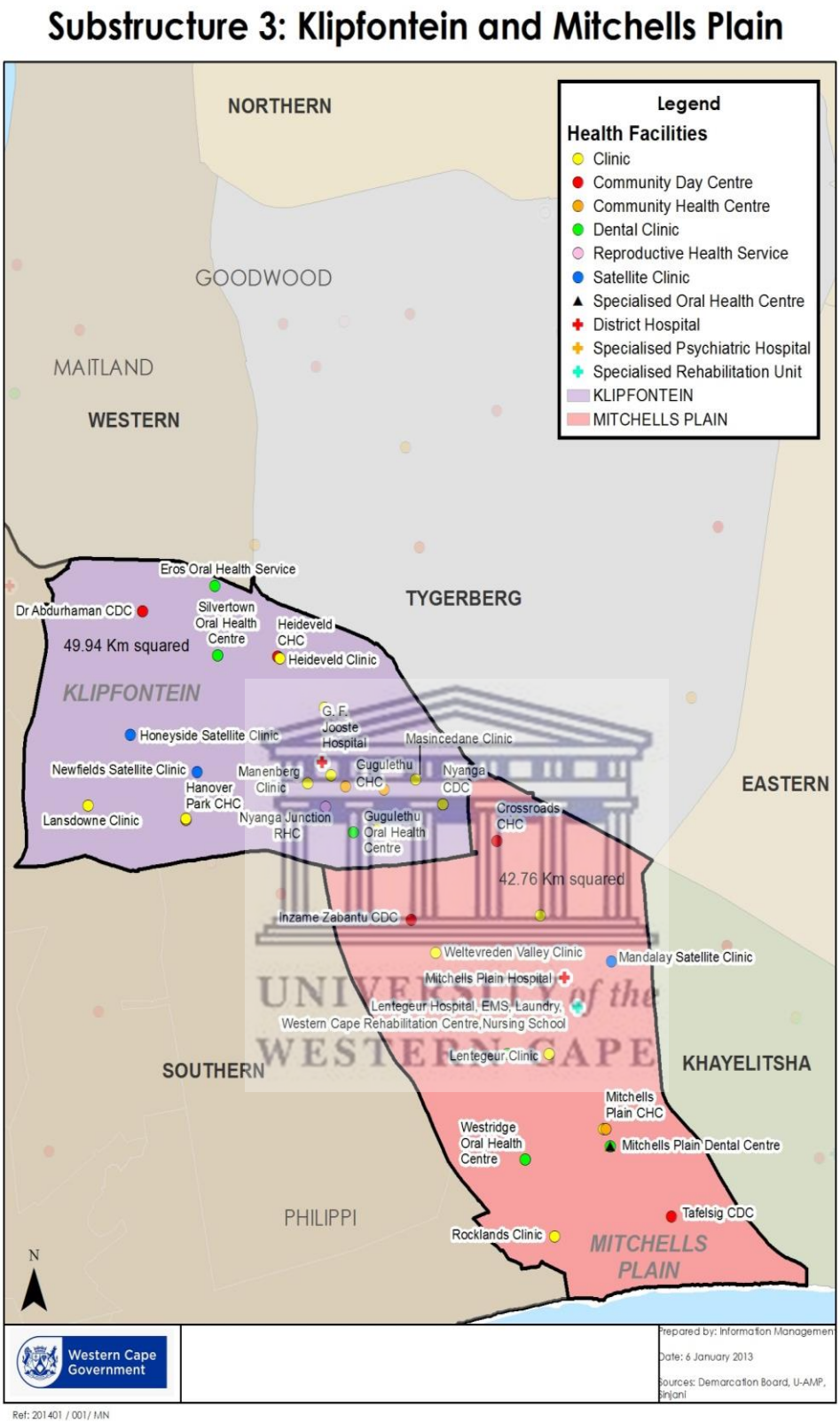

Figure 3.1: Map of the Klipfontein Mitchells Plain sub-districts (Source: Klipfontein Mitchells Plain Sub-Structure Orientation Manual, undated)

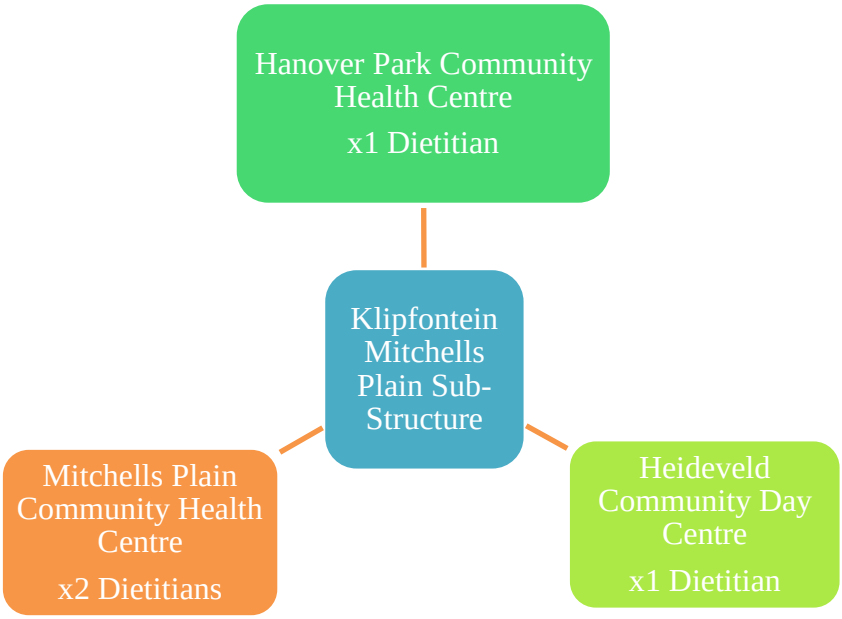

Figure 3.2: Breakdown of the health facility and servicing dietitian(s)

The estimated sample size was based on average daily dietetic consultations of 15-20 patients per day (Table 3.1). Data was collected over a period of three months and on average two days were spent at Mitchells Plain CHC, four days at HP CHC and six days at Heideveld CDC dependent on the number of referred patients. On certain days, only one patient was referred and subsequently the researcher had to go back on numerous occasions until the full sample size of 120 participants was achieved. These patients were aged 18 years and over, proficient in English and Afrikaans and were referred by a Medical Officer, Clinical Nurse Practitioner, Health Promoting Officers, referring hospitals, allied health workers and stepdown facilities to see the dietitians for various nutrition related conditions.

Table 3.1: Sampling strategy

Facility Name	Number of Patients (For survey)	Number of Dietitians (For FGD)
Mitchells Plain CHC	40	2
Hanover Park CHC	40	1
Heideveld CDC	40	1
Total	**n=120**	**n=4**

3.2.3.2. For the qualitative component, an all-inclusive sample of the four dietitians employed in

the KMPSS participated in the Focus Group Discussion (FGD) (Table 3.1). There are two dietitians based at Mitchell's Plain CHC, one at Hanover Park CHC and one at Heideveld CDC (Figure 3.2).

3.2.4. Data Collection Process

Data collection was undertaken via two processes namely:

3.2.4.1. Patient Questionnaire

A self-developed survey tool (Appendix 2), adapted from instruments used by others (Sladdin *et al*., 2018; Whitehead *et al*., 2009) was used, as there was no current tool or instrument available to measure the nutrition care services. The tool was designed to collect socio-demographic information and patient perceptions and experiences of the quality of nutrition care service delivery and patient satisfaction. This included variables such as access to nutrition care services, waiting times and practitioner interpersonal skills. The questionnaires were interviewer-administered by the researcher. This type of questionnaires has been known to be the most common tool for conducting patient satisfaction studies (Al-Abri and Al-Balushi, 2014). The questionnaire consisted of close-ended questions and incorporated a Likert scale to indicate levels of agreement with statements (strongly disagree, disagree, neutral, agree and strongly agree). All patients were recruited via the booking system on the day of their appointment after they completed their dietetic consultation. The researcher informed the patients of the purpose of the study and provided the consent forms. After patients gave voluntary consent, the researcher continued to ask the questions. Data collection took place in a designated space or consulting room as determined by the facility manager of the health care facility to ensure confidentiality was maintained. As the questionnaire was a survey, it took between 5-10 minutes to complete. The questionnaire was piloted three days before the actual research started at Mitchell's Plain CHC with two random patients. The researcher found no problems regarding the layout, format and content of the questionnaire. The two random patients understood the content of all the questions and could answer them appropriately. The questionnaire was not amended nor changed based on feedback received from the pilot test.

3.2.4.2. Focus group discussion

A semi-structured FGD guide (Appendix 3) consisting of open-ended questions was used to facilitate the FGD with the participants. These questions allowed the researcher to explore the perceptions of participants on the quality of nutrition care service delivery. The FGD took 60

minutes to complete and the research supervisor and researcher co-convened the FGD. The questions for the FGD with the participants were on their perceptions of the nutrition care service delivery and what they thought the barriers and facilitators of the nutrition care service delivery are within KMPSS. The participants could express and provide their opinions and thoughts on the challenges they have within KMPSS to deliver quality nutrition care services and how the ideal actual setting for nutrition can be used to improve the services. A conducive venue was sought in close proximity to where the participants are situated and permission was granted from the PHC manager to release the participants from work in order to ensure service delivery was not interrupted. A voice recorder was used to record the FGD. The purpose of the study was explained and each participant provided consent and signed a confidentiality binding form. The researcher transcribed the FGD verbatim and key themes and findings were recorded.

3.2.5. Analysis

3.2.5.1. Patient Surveys

The data from the patient questionnaire was recorded on a Microsoft Excel Software 2010 program spreadsheet on a daily basis after completion of each questionnaire. A template was developed in Excel to align the questionnaire to improve and enhance data capturing as well as ensure quality control was maintained as the data was received. The researcher ensured that data cleaning took place within Excel Software program and imported the information into the Statistical Package for Social Sciences (SPSS) version 25 (IBM SPSS Statistics) for variable frequency analyses to ensure that all study samples were equal to 120. Data was explored using frequencies and tables for categorical data and measures of central tendencies and measures of dispersion or variability for continuous data.

3.2.5.2. Focus group discussion

For the FGD with the participants, analysis started from the onset of data collection. The researcher transcribed the voice-recordings to textual data the day after the actual FGD took place. The content was analysed and summarized to present key findings. Thematic analysis applied for the FGD to identify pertinent issues, themes, concepts and insights from the participants (Fereday and Muir-Cochrane, 2006). These themes were based on objective four to explore the perceptions of the dietitians. The researcher used the six steps prescribed by the framework of Braun and Clark (2006) to carry out thematic analysis. These steps are outlined below:

3.2.5.2.1. Familiarising with the data

The researcher was fully immersed and actively engaging with the data by transcribing the interactions and then reading the transcripts and listening to the voice-recordings. The researcher noted initial ideas, concepts and had a comprehensive understanding of the content as it formed the foundation for the analysis.

3.2.5.2.2. Generating initial codes

The researcher became familiar with the data, preliminary codes were identified which would be features of the data that appeared to be significant and meaningful to the study.

3.2.5.2.3. Searching for themes

The process of starting interpretation of the analysis was based on the collated codes. Relevant information was sorted according to overarching themes. The researcher made use of visual representations to help sort the different codes into themes and used tables writing down the name of each code and sub-categories.

3.2.5.2.4. Reviewing themes

A deeper review and understanding of the identified themes was applied to determine if themes needed to be combined, refined, separated or deleted. Data within the themes were joined together that are meaningful, however, clear distinctions among the themes were noted. The process followed over two phases where the themes needed to be checked in relation to the coded extract and then for the overall data set. The researcher generated a thematic map of the analysis.

3.2.5.2.5. Defining and naming themes

Themes were refined and defined as well as potential sub-themes within the data. The researcher continued with ongoing analysis to further enhance the identified themes.

3.2.5.2.6. Producing the report

Analysis of the information was transformed into an interpretable report by using extract examples that relate to the themes, research question and literature. The report conveyed the results of the analysis in such a manner that it would convince the reader of the merit and validity of the analysis.

3.2.6. Validity (patient questionnaires)

Validity was used to accurately describe the instruments used to measure the expected outcome or

what it intended to achieve (Bush, 2007). The questionnaires for the patients were administered in English. Before implementing the survey questionnaire, it was piloted at Mitchells Plain CHC, instead of Dr. Abduraghman CDC as initially planned due to unforeseen circumstances. The piloting ensured the instrument measures the expected outcome and determined if changes or amendments were needed to the current tool. In this study sample, to minimize selection bias, all patients booked on the system on the days of data collection were conveniently selected. To minimize measurement bias in the study, the researcher double checked the questionnaires for accuracy and completion. The questionnaires were completed under controlled conditions and in a neutral quiet space without any distractions from other patients and removing influences such as family members and caregivers.

Piloting was done to determine face and content validity. Face validity is the degree to which a measure appears to be related to a specific construct (Taherdoost, 2016). To ensure face validity, its content should look relevant to the person completing the measuring tool. The researcher ensured that the appearance of the measuring tool was feasible, readable, unambiguous and clear, had a consistent style and formatting and the language used was clear to ensure it was easy to understand and answer by the patients (Taherdoost, 2016).

Content validity can be defined as the degree to which items in an instrument reflect the content construct (Straub, Boudreau and Gefen, 2004). It was essential that the researcher evaluated the measuring tool to ensure that it includes all the items that are important and remove unfavourable items to ensure content validity (Straub *et al*., 2004). In order to ensure content validity, an exhaustive literature review was performed as there are scarcities of information with regard to the quality of nutrition services. The literature that was extracted was adapted to develop a new measuring tool.

3.2.7. Reliability

Reliability is defined as the probability of repeating research procedures to produce the same result by replicating the process to ensure consistency (Bush, 2007). Reliability was strengthened through comparing findings with other sources, by cross checking findings with the pilot study to ensure that the tool was appropriate, and by directly questioning patients and ensuring that answers were accurately recorded (Bush, 2007). It was essential that the questionnaires did not have ambiguous meanings to be interpreted in different ways. This could be done by ensuring consistency of the interpretations of the meaning of items within the questionnaire.

3.2.8. Rigour

In this study, the researcher ensured the trustworthiness of the research at all times. Trustworthiness refers to the validity and reliability in qualitative studies (Anney, 2014). It is about establishing four aspects namely; credibility, transferability, confirmability and dependability.

3.2.8.1. Credibility

Credibility is defined as how confident the researcher was about the truthfulness of the findings of the study (Anney, 2014). The researcher ensured internal validity and quality at all stages that the findings represent adequate information from the dietitians' original data and was correctly interpreted based on the views and perceptions. Credibility strategies were adopted to ensure prolonged and varied field experience through the researcher submerging into the world of the dietitians to obtain a better understanding and insight into the context of the study to minimize distortions of information. To implement quality measures during sampling, the researcher used clear criteria for selection of the participants in the KMPSS to participate in the FDG. The researcher had debriefing sessions with the research supervisors after data collection events to strengthen the trustworthiness. The researcher allowed for member checking when key emerging themes are reflected and summarized with regards to views, perceptions and quality of nutrition care service delivery to ensure credibility that the research is as accurate as possible. This ensured that the researcher was able to verify the responses from the participants.

3.2.8.2. Transferability

Refers to an extent to which the research findings are applicable to other contexts (Anney, 2014). Transferability judgement was done through thick description to ensure that the researcher was able to provide an in-depth description of the details concerning methodology and context in the research processes, from data collection, context of the study to production of the final report (Anney, 2014). To implement rigour during the interpretation of the research findings, the researcher declared the limitations and assumptions of the study and recommended that further research is needed (SOPH, 2013).

3.2.8.3. Confirmability

Confirmability is the degree of neutrality in the research findings (Anney, 2014). Therefore, the findings are based on the participant responses and not on any potential bias or personal motivations of the researcher. The researcher ensured that the information was clearly derived from the data. The researcher ensured confirmability and kept a reflective journal to reflect,

interpret and plan data collection. Reflexivity was implemented to increase self-awareness by keeping a research diary that was only accessible to the researcher. The journal would include all events that happened in the field and on any personal reflections.

3.2.8.4. Dependability

Dependability is the extent that the study could be replicated by others and that findings would be consistent (Anney, 2014). To ensure dependability, audit trails were developed by the researcher to account for all activities to show where data was collected, recorded and analysed. The researcher ensured cross-checking for raw data, interviews and observational notes to improve dependability. The researcher applied a code-recode strategy to code-recode the same data twice over a period of two weeks between coding. Results of the coding would be compared to determine if findings are similar or different. If the findings are similar, it enhances dependability (Anney, 2014).

3.2.9. Generalizability

The results of this study can only be applied to the patients in the KMPSS and the four dietitians based at the health care facilities. Findings of this study will differ from area to area based on perceptions of patients and the interpersonal skills of dietitians and where they are based to perform nutrition care services. The findings might have relevance more broadly in the field of nutrition, as the self-developed questionnaires can be used as frameworks to evaluate patient's perceptions on other multi-disciplinary services.

3.2.10. Limitations

The findings of this study are limited to quality nutrition care services as rendered by dietitians in the KMPSS. Sample size was a limitation as the researcher was dependent on the number of patients booked for the dietitians. Selection bias could have been introduced if patients and dietitians refused to participate in the study and electing the researcher to identify and explore other avenues to continue with the study.

3.2.11. Ethics considerations

An application for ethics approval was submitted to the University of the Western Cape's (UWC) Bio-Medical Research Ethics Committee (BMREC) (Appendix 4). After ethics clearance was granted from the BMREC with reference number: BM19/1/7 (Appendix 5), the ethics letter was submitted to the Western Cape Department of Health's Research Ethics division for approval to

commence with the research at the KMPSS PHC facilities. The ethics was approved from the Western Cape Department of Health's Research Ethics division (Appendix 6) and submitted to the KMPSS management, asking permission to proceed with the research. (Appendix 7 and 13). The facility managers of the health facilities and the pilot health facility were timeously informed as to when the researcher would conduct the research and on what days pending availability of the servicing dietitians and patients.

Participation in this study was completely voluntary for the patients and dietitians. The participants were provided with an information sheet (Appendix 8 and 10) explaining the research purpose and what it was intended for. Upon agreeing to participate, consent forms were made available for the participants to sign (Appendix 11 and 12). The participants could withdraw at any stage of the research. The letter requested their participation in the study and ensured that confidentiality was maintained at all times. Participants were informed of their right to confidentiality.

The researcher and study supervisors are the only persons who had access to the completed questionnaires, and the hard copies are kept in a locked cabinet which would be correctly disposed of after five years. Digital or electronic data are stored in password protected files to which the primary researcher has access. To ensure anonymity, each participant was assigned an alphanumerical code and captured by the researcher only. The researcher was the only one that had administrator rights to the data. The information was not shared with any other external parties. The voice-recordings of the FGD were saved and encrypted in an electronic file to which the researcher has access. The recordings of the FGD are not made available to anyone, other than transcribing the information for the key points and themes based on perceptions of quality nutrition care service delivery.

It was made evident that findings of this study would be disseminated and presented to the KMPSS management, including the facility managers, Provincial Health Department nutrition sub-directorate and Cape Metro INP forum. The identities of the patients and dietitians are protected even when the findings are published.

CHAPTER 4: RESULTS AND FINDINGS OF THE STUDY

4.1. Introduction

The aim of the study was to determine the perceptions of patients and dietitians on the quality of nutrition care service delivery in Klipfontein Mitchells Plain Sub-Structure (KMPSS). In this chapter, the presentation and interpretation of the quantitative results and qualitative findings is done in two sections. Section one presents the quantitative data – this includes the demographic and socio-economic characteristics of the participants along with quantitative measures of their experiences, perceptions and satisfaction outcomes as recipients of nutrition care services. Section two presents the qualitative findings of the Focus Group Discussion (FGD) with dietitians responsible for delivering nutrition care services. The theme and sub-theme findings of the FGD are presented regarding the perceptions of the dietitians on the quality of nutrition care service delivery within KMPSS. Findings regarding the theme and sub-themes are supported and substantiated by means of quotations. The results and findings are represented according to an adapted version of Cant and Aroni's framework for the appraisal of the quality of nutrition care services (Cant and Aroni, 2008). Figure 4.1 illustrates the alignment of the study variables to research objectives.

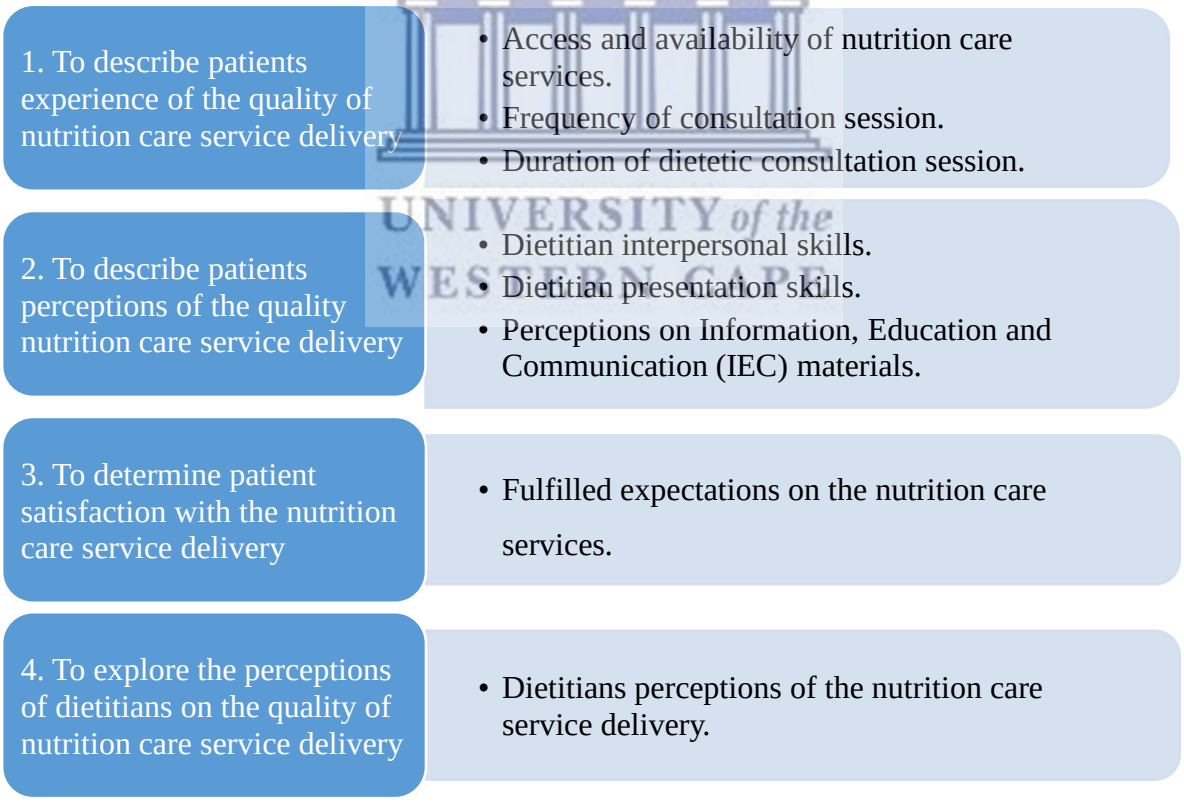

Figure 4.1: Alignment of study variables to research objectives

4.2. Section One: Quantitative results

The study had a 100% response rate as all 120 participants completed the questionnaires without refusal to participate.

4.2.1. Demographic and socio-economic characteristics of the participants

The demographic and socio-economic characteristics of the participants are indicated in Table 4.1.

Table 4.1: Socio-demographic characteristics of the participants (n=120)

Demographic characteristics	Gender				Total	
	Male		Female			
	n	%	n	%	n	%
	41	**34.2**	79	**65.8**	120	**100**
Age Groups						
18-35	12	**10**	26	**21.7**	38	**31.7**
36-59	16	**13.3**	39	**32.5**	55	**45.8**
>60	13	**10.8**	14	**11.7**	27	**22.5**
Employment status						
Employed	8	**6.7**	12	**10**	20	**16.7**
Unemployed	33	**27.5**	67	**55.8**	100	**83.3**
Income range						
R0-1000	18	**15**	30	**25**	48	**40**
R1000-3000	16	**13.3**	39	**32.5**	55	**45.8**
>R3000	7	**5.8**	10	**8.3**	17	**14.2**
Education levels						
Primary education	6	**5**	6	**5**	12	**10**
Secondary education	34	**28.3**	70	**58.3**	104	**86.7**
Tertiary education	1	**0.8**	3	**2.5**	4	**3.3**

Out of the 120 participants, 79 (65.8%) were female, while 41 (34.2%) were males. Most of the participants (45.8%) were aged between 36-59 years. The mean age being 46 years with a Standard Deviation (SD) of 16.4. One hundred (83.3%) of the participants reported that they were unemployed with the majority (55.8%) being unemployed females. Fifty-five (45.8%) participants had an average income between R1000-3000. Most of the participants (86.7%) had secondary education levels, with 58.3% of these being females.

4.2.2. Referral route to nutrition services

The referral route and reasons for referral to nutrition services are presented in Table 4.2.

Table 4.2: Route of and reason for referral to nutrition services (n=120)

Referred from	**n**	**%**
Health care workers within the facility	93	**77.5**
Tertiary level health care facilities	23	**19.2**
Intermediate level health care facilities	2	**1.7**
Secondary level health care facilities	2	**1.7**
Clinical Conditions		
Supplementation required	53	**44.2**
Non-communicable diseases	27	**22.5**
Unintentional weight loss	15	**12.5**
Tube feeds	10	**8.3**
Underweight	7	**5.8**
Feeding difficulties	6	**5**
Communicable diseases	2	**1.7**

Many of the referrals (77.5%) were from health care workers within the PHC facilities that included doctors, nurses and allied health workers. Forty-four-point two percent (44.2%) of the participants indicated that they were referred for supplementation. Twenty-seven (22.5%) participants who were referred, had NCD such as diabetes, hypertension and cholesterol.

4.2.3. Patient experience of the quality of nutrition care services

4.2.3.1. Access to nutrition care service

The access to the nutrition care services are presented in Table 4.3.

Table 4.3: Access to nutrition care service (n=120)

Statements	**Yes**		**No**	
	n	**%**	**n**	**%**
Informed to access the nutrition services	60	**50**	60	**50**
First time visit to access nutrition care service	47	**39.2**	73	**60.8**
Need to travel far to access nutrition care service	25	**20.8**	95	**79.2**

Fifty percent (50%) of the participants reported that they were informed to access the nutrition services prior to their dietetic consultation. Thirty-nine-point two percent (39.2%) of the participants accessed the nutrition care services for the first time. Many of the participants (79.2%) did not need to travel far to access the nutrition services.

4.2.3.2. Nutrition service administration

The nutrition service administration is presented in Table 4.4.

Table 4.4: Nutrition service administration (n=120)

Nutrition service administration	Yes		No	
	n	%	n	%
Availability of appointment system	120	**100**	0	**0**
Appointment in a reasonable time	120	**100**	0	**0**
Acceptability of appointment time	120	**100**	0	**0**
Availability of bench or chair	119	**99.2**	1	**0.8**
Availability of a consulting room	111	**92.5**	9	**7.5**
Waiting long periods for the dietitian (waiting times)	12	**10**	108	**90**

All the participants (100%) reported the availability of appointment systems and that their appointment was in reasonable and acceptable time. One-hundred and nineteen (99.2%) of the participants indicated that there was a bench or chair available. One-hundred and eleven (92.5%) of the participants reported there was a consulting room available. One hundred and eight participants (90%) reported that they did not have to wait long to see the dietitians upon entering the PHC facility.

4.2.3.3. Frequency of exposure to dietetic consultation sessions

Frequency of exposure to dietetic consultation sessions varied amongst participants as reported in Table 4.5 below.

Table 4.5: Frequency of exposure to dietetic consultation sessions (n=120)

Number of times consulted	n	%
First consultation	47	**39.2**
10 or less visits	57	**47.5**
11-20 visits	13	**10.8**
>20 visits	3	**2.5**

Forty-seven (39.2%) of the participants reported that it was their first consultation and 57 (47.5%) had 10 or fewer visits as follow up sessions.

4.2.3.4. Duration of the dietetic consultation session

In table 4.6, the durations (in minutes) of the dietetic consultation are presented.

Table 4.6: Duration of nutrition consultation session (n=120)

Duration time	n	%
0-15 minutes	41	**34.2**
15-20 minutes	41	**34.2**
20-30 minutes	25	**20.8**
30-60 minutes	13	**10.8**

Most of the participants (68.4%) reported the duration of consultation sessions to be 20 minutes long or less. Only 13 (10.8%) of the participants reported being consulted for more than 30 minutes.

4.2.4. Participant perceptions on the quality of nutrition care services

4.2.4.1. Participant perceptions of dietitian's interpersonal skills

In Table 4.7, the findings of the participant perceptions of the dietitians' interpersonal skills are presented.

Table 4.7: Participant perceptions of dietitian's interpersonal skills (n=120)

Statements	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Interpersonal skills	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
The dietitian listened attentively to what I had to say	0	**0**	0	**0**	0	**0**	27	**22.5**	93	**77.5**
The dietitian was attentive to my needs	0	**0**	0	**0**	0	**0**	30	**25**	90	**75**
The dietitian understood me	0	**0**	0	**0**	0	**0**	25	**20.8**	95	**79.2**
The dietitian created a plan to	0	**0**	1	**0.8**	6	**5**	24	**20**	89	**74.2**

help me with my medical condition										
The dietitian explained my medical condition and how nutrition counselling will help me	0	**0**	1	**0.8**	3	**2.5**	28	**23.3**	88	**73.3**
The care I received from the dietitian improved my health	0	**0**	1	**0.8**	1	**0.8**	39	**32.5**	79	**65.8**
The care I received from the dietitian improved the management of my medical condition	0	**0**	1	**0.8**	3	**2.5**	38	**31.7**	78	**65**
The nutrition care I received was helpful	1	**0.8**	0	**0**	0	**0**	26	**21.7**	93	**77.5**
The dietitian encouraged me to participate and make me feel part of the decision-making process	0	**0**	1	**0.8**	1	**0.8**	31	**25.8**	87	**72.5**
The dietitian summarized key points for me	0	**0**	2	**1.7**	2	**1.7**	27	**22.5**	89	**74.2**

The findings tabulated above in Table 4.7 indicate that many of the participants (>70% per item) had positive perceptions (strongly agreed) about the interpersonal skills of dietitians consulted.

4.2.4.2. Participants' perceptions of dietitian presentation skills

The findings of the participant perceptions of dietitians' presentation skills are indicated in Table 4.8.

Table 4.8: Participants perceptions of dietitian's presentation skills (n=120)

Statements	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**	
Presentation skills	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**N**	**%**
The dietitian came across as well presented	0	**0**	0	**0**	0	**0**	28	**23.3**	92	**76.7**

The dietitian was courteous	0	**0**	0	**0**	0	**0**	25	**20.8**	95	**79.2**
The dietitian was friendly	0	**0**	0	**0**	0	**0**	24	**20**	96	**80**
The dietitian was polite	0	**0**	0	**0**	0	**0**	23	**19.2**	97	**80.8**
The dietitian made me feel comfortable	0	**0**	0	**0**	0	**0**	25	**20.8**	95	**79.2**
The dietitian was on time for my appointment	0	**0**	0	**0**	0	**0**	24	**20**	96	**80**

Echoing the findings regarding interpersonal skills shown in Table 4.7, the participants also had positive (strongly agreed) about the manner in which dietitians presented themselves during consultations. Close to 80% of participants perceived dietitians as being well presented, courteous, friendly and polite, creating a comfortable environment and being on time for their appointments.

4.2.4.3. Participant perceptions on written Information, Education and Communication (IEC) materials

Table 4.9 depicts the number of participants who received written IEC materials during the dietetic consultation session. Seventy-three (61%) of participants received written IEC materials during the dietetic consultations. Their perceptions of these materials are reported in Table 4.9 below:

Table 4.9: Participant perceptions of written IEC materials (n=73)

Statements	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**	
Written information and education materials	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
I found the information supplied by the dietitian very useful	0	**0**	0	**0**	9	**12.3**	28	**38.4**	36	**49.3**
The information was of a high standard	0	**0**	0	**0**	0	**0**	39	**53.4**	34	**46.6**
The dietitian could explain the information to me	0	**0**	0	**0**	1	**1.4**	36	**49.3**	36	**49.3**
The information gave me helpful hints and ideas	0	**0**	0	**0**	0	**0**	38	**52.1**	35	**47.9**
I found the information to easy to	0	**0**	0	**0**	1	**1.4**	38	**52.1**	34	**46.6**

understand										
The information was easy to read	0	**0**	0	**0**	3	**4.1**	36	**49.3**	34	**46.6**
The information made sense	0	**0**	0	**0**	0	**0**	37	**50.7**	36	**49.3**
The information was well presented	0	**0**	0	**0**	2	**2.7**	36	**49.3**	35	**47.9**

The findings in Table 4.9 show that the majority of the participants (>45% per item) who received written IEC materials had positive perceptions (strongly agreed) about these materials. Most of the participants found them to be useful, of a high standard, easy to follow, contained ideas and concepts that made sense and was well presented.

4.2.4.4. Overall participant satisfaction by the nutrition care service

The participant satisfaction with the nutrition care services is depicted in Table 4.10.

Table 4.10: Participant satisfaction with nutrition care service (n=120)

Statements	**Strongly Disagree**		**Disagree**		**Neutral**		**Agree**		**Strongly Agree**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
The nutrition care I received met my expectations	1	**0.8**	1	**0.8**	3	**2.5**	20	**16.7**	95	**79.2**
I would recommend the nutrition services to other members of the community	0	**0**	1	**0.8**	0	**0**	21	**17.5**	98	**81.7**
The consulting room met my expectations	1	**0.8**	4	**3.3**	14	**11.7**	59	**49.2**	42	**35**
I am overall satisfied with the nutrition service	1	**0.8**	3	**2.5**	8	**6.7**	12	**10**	96	**80**

In Table 4.10, approximately 80% of the participants were satisfied (i.e. strongly agreed) with three out of four items used to measure satisfaction with nutrition care service. Only 35% of the participants strongly agreed that the consulting room met their expectations.

4.2.5. Conclusion

The nutrition care services were accessible to all participants at the health facilities. The health care workers within the health facilities were responsible for the majority of the referrals to the dietitians. Most of these referred participants were in need of supplementation during the period of data collection. More women who were within the ages of 36-59 years accessed the nutrition care services compared to men. The results further indicated that participants had positive experiences based on the nutrition administration processes. More than half of the participants had follow up sessions (>10 visits) and the average dietetic consultation duration was 20 minutes long. Overall, majority of the participants had positive perceptions and were satisfied with the nutrition care service delivery in KMPSS. In this case, majority strongly agreed with the dietitians' interpersonal skills, the manner in which they presented the health information, as well as the IEC materials provided.

4.3. Section Two: Qualitative Findings

In this section, the findings of the FGD with the dietitians on their perception of the quality of nutrition care service delivery are presented. The common themes of the perceptions are grouped into seven themes and 21 sub-themes with supporting quotations.

4.3.1. Participant information

The participants were aged between 29-38 years. The participants had 2-12 years of service within the Western Cape Department of Health. As the dietetics community is relatively small within the Western Cape Metro Health Services, their gender, race and where they were based are not disclosed in the presentation of the findings to ensure participant anonymity.

4.3.2. Thematic framework of the themes and sub-themes

The thematic framework outlined in Table 14.11 shows the themes and subthemes that emerged from the qualitative analysis of the FGD.

Table 4.11: Thematic framework

4.3.2.1. Dietitians perceptions of the nutrition services delivery within KMPSS
4.3.2.1.1. Lack of resources in the work environment
4.3.2.2. Challenges to delivering nutrition care services
4.3.2.2.1. Patient frustrations due to stock outs 4.3.2.2.2. Demand for the service

4.3.2.2.3. Misconception of other health professionals
4.3.2.2.4. Visibility of dietitians
4.3.2.2.5. Advocating nutrition services
4.3.2.2.6. Space for dietitians
4.3.2.2.7. Confidentiality
4.3.2.3. Facilitators to delivering nutrition care services
4.3.2.3.1. Supportive management
4.3.2.3.2. Supportive colleagues
4.3.2.3.3. Availability of government vehicles
4.3.2.3.4. Newly appointed nutrition coordinator
4.3.2.4. The ideal setting to deliver nutrition services
4.3.2.4.1. Dietitians appointed at all health facilities with resources
4.3.2.4.2. Exclusivity of IEC materials
4.3.2.4.3. Platform to raise concerns
4.3.2.5. Role of communication in nutrition care service delivery
4.3.2.5.1. Applying communication skills
4.3.2.5.2. Applying communication skills with limited time
4.3.2.5.3. Applying communication skills in group education
4.3.2.6. Values expected of the nutrition care services
4.3.2.6.1. Value of the dietitians
4.3.2.7. Work satisfaction
4.3.2.7.1. Fulfilment in the workplace
4.3.2.7.2. Career development to improve work satisfaction

4.3.2.1. Dietitians perceptions of the nutrition services delivery within KMPSS

4.3.2.1.1. Lack of resources in the work environment

The participants discussed what their perceptions are regarding the nutrition care services delivery within KMPSS. All four participants felt that the absence of resources hindered their ability to deliver a service of high quality. The absence of a dedicated office space in which to consult patients along with poor access to stationery and electronic equipment such as computers and printers to compile and complete reports were daily challenges. Despite all these constraints, the participants reported trying their best with the limited resources they have. According to one participant, preference is given to other cadres of health care providers based on the priorities of

the Department of Health in terms of resources and funding. Two of the participants felt that budget and finances are lacking to procure nutrition promotional items and materials in order to have successful events within the sub-structure. As resources are a limitation, the participants need to rely on other colleagues within the metro to assist with printing and other administrative activities to ensure services are adequately rendered.

"We can't give everything that we can give, because we lack what we need in order to deliver what we want to. We don't have the space, the equipment. So, the service we are delivering is not what we want to deliver, if we had everything at our disposal." [P1]

"To make magic to have a successful event, we have no resources". [P2]

4.3.2.2. Challenges to delivering nutrition care services

The goal with this question was to understand some of the challenges the participants experience in order to deliver nutrition care services within the health facility.

4.3.2.2.1. Frustration of patients due to stock outs

During the discussion, it was identified that patients are frustrated or acting out when their expectations are not met if dietitians cannot provide supplementation due to shortage of nutrition products as a result of supply chain procedures and processes. This has led to patients being verbal and physically aggressive towards these practitioners. Patients have the perception that they will receive something from the dietitian and if they do not meet the entry criteria for nutrition, they are not willing to accept any other help and will complain and get angry.

"Yes, and complain up to management level. Up to QA (Quality Assurance) *level, even at sub-structure we had complaints."* [P3]

"When we don't have stock and the patients come in and they use the last of their taxi fare to come and collect NTP (nutrition supplementation) *or enteral stock when we don't have it. Kind of frustrating on them and they get angry cause we are not delivering the service that they need. We give them dates to come and then we don't have the stuff they need; they have to go empty handed. So, for them it is also frustrating and not getting what they came for."* [P1]

"It has happened that they acted out physically or grabbing stock out of your hands." [P2]

4.3.2.2.2. Demand for services

There is a demand for the nutrition care services within the KMPSS. The participants felt that they are a specialized field and that they are spread thinly throughout KMPSS. The participants reported that they are responsible to cover and support more than one health facility within KMPSS and require ample time to ensure all communities receive the same level of nutrition care services. The participants perceived their role as community dietitians, rather than facility dietitians and that they are more needed in the community.

"Also, because you have more than one health facility, where you are based, you do most of the advocating and stuff. So, the other facilities where we are not based will only see you when you come and see patients" "There won't be time for you to do the same what you do at the other facility. Can't go and do the same thing three times." [P1]

"There is also a demand for the service mentioned that we are a specialized service and a lot of times we get patients or social workers thinking we do this SASSA" (South African Social Security Agency providing social relief in terms of food parcels and hampers for the under privilege that are in need of food). [P4]

"We are community dietitians. The value of us sitting in the facility and that's where most of our frustration come from, it's not worth it" [P2]

4.3.2.2.3. Misconception of other health professionals

The four participants felt that other health professionals (doctors, nurses and allied health workers) do not really understand or know what the roles of the dietitian are within PHC. The participants are providing nutrition and technical support once a month to the health facilities. The health professionals perceive that dietitians are only managing underweight patients that need supplementation. One of the participants stated that they received many inappropriate referrals from doctors and social workers. It is the misconception that the dietitians are only supposed to do social relief for people in need of food and supplementation. Patients are set up with the expectation that they will receive something, therefore leading to other issues of complaints and frustrations on behalf of the patient. The participants felt that health professionals regard their contribution in PHC with a low priority and that dietitians are not adding real value to the health system.

"*For social grants, go to the dietitian. That's basically the big misconception of what it is currently. They know our role and how the NTP works. It is very frustrating, and we get a lot of patients who are frustrated outside waiting for you, just to come and collect stuff due to inappropriate referrals."* [P4]

"We are just there to give out milk and porridge." [P3]

"We don't actually add real value, cause we hardly in one place at a time." [P2].

4.3.2.2.4. Visibility of the dietitians

Three participants expressed that patients would rather miss their dietitian appointment than a doctor's appointment due to the level of respect for doctors in the health system. All participants felt that the nutrition care service can increase if dietitians are visible at each health facility in order to consult and attend to patients and therefore reduce appointment and waiting times for patients.

"To increase the visibility and people to value us and say: "Oh we have a dietitian every day and send the patients immediately to the dietitians." [P3]

"There are other allied like X-rays (radiographers) *and physios every day, why can't there be a dietitian every day? Every facility has a Physio and X-rays and OT* [Occupational Therapist]*."* [P1]

4.3.2.2.5. Advocating for nutrition services

Two of the participants stated that nutrition care services should be advocated at a higher level to make their voices heard on PHC level regarding the challenges, nutrition services and resources required. One participant felt that advocating should be done by all involved working in nutrition.

"I think the advocating should be done by ourselves and the Nutrition Programme Manager." [P1]

4.3.2.2.6. Space for dietitians

Three of the participants reiterated that they do not have their own office space to consult their patients in private. The available office space allocated at times is being shared among other health professionals and the participants cannot perform certain administrative duties. One of the

participants felt that the office space was not conducive due to security limitations and challenges.

"I share with another health professional but work my way around it." [P4]

"So, when we do consultations, three or four more people are in the room." [P3]

"There is no security, no panic button." [P2]

4.3.2.2.7. Confidentiality

Confidentiality is a challenge when it comes to delivering quality nutrition care services. Most of the participants share their consulting rooms with other health professionals. Patients would simply enter and inquire about other information without knocking. Ethical standards and professionalism are the foundation of confidentiality according to the participants. The participants were aware of these values and want to maintain patient-centredness and politely address patients when they are disrupted during their consultation sessions.

"There is no confidentiality in our consulting room, and they will wait until you look at them." [P3]

"And then the patients would say, I Just want to ask you something? Yes, you have to wait! It's not fair on the patients sitting in front of you." [P1]

4.3.2.3. Facilitators to delivery of nutrition care services

During this part of the FGD, the participants were asked what the facilitators are to deliver nutrition care services in the health facilities.

4.3.2.3.1. Supportive management

Two of the participants discussed that management of the facility has a significant role to play in the way they render their service. The support of the management goes a long way and they feel this is positive towards their working environment. The participants stated that their facility managers are helpful and that they can discuss any matters or issues in need of attention.

"I suppose having a very supportive facility manager, that is a positive for us." [P1]

"My manager is very helpful and approachable." [P3]

4.3.2.3.2. Supportive colleagues

All participants agreed that having supportive colleagues in the workplace create a pleasant and bearable working environment. The few health professionals that really understand and know what dietitians do, can arrange their patient appointments, plan and implement programs together with activities for the communities in order to work efficiently.

"Every now and then you will find that one staff member who does understand kind of what your role is." [P2]

"We basically do stuff together (with the Health Promoters) *and we organize things together for the facility. Would have been a total not coming to work everyday type of thing if we didn't have the support of the staff."* (if the participants and Health Promoters weren't working together, it would result in low morale and motivation, as they are support structures to each other to facilitate the flow their combined work efforts). [P1]

"We have good relations with all the staff at our facilities." [P3]

"The health promoter books the patients and will vacate the office so that I can see the patients." [P4]

4.3.2.3.3. Availability of government vehicles

Three of the participants discussed that having a government vehicle at their disposal greatly improves the delivery of nutrition care services. The participants are dependent on these vehicles to move around to their other clustered facilities in the various communities and to be able to provide offsite training and attend meetings in the KMPSS.

"We have a car available if we need to go to our facilities or do whatever." [P1]

"There is always a car, or they will make one available if you need it." [P4]

4.3.2.3.4. Newly appointed nutrition coordinator

The new nutrition coordinator at KMPSS was appointed to coordinate the nutrition programme and all other nutrition projects across the service delivery platforms based on the substructure strategy and context to align with all national and provincial prescripts. The participants worked

for nearly 10 months without a nutrition coordinator. The participants had to act and take on the responsibility for the nutrition care services in KMPSS amongst themselves during the absence of the nutrition coordinator. All participants felt that this was a positive to have someone appointed to lead and provide technical support on nutrition care service delivery. According to the participants, the nutrition coordinator worked as a community dietitian before and had first-hand experience of their challenges. One participant felt that the nutrition coordinator has a role to play in advocating for the services and to meet with the facility managers to explain the work description of the dietitians. The participants were expecting the nutrition coordinator to promote and support what they do and to advocate for resources such as computers, stationery and email access.

"He should really know what we need and want and would like, better make it happen." [P1]

"Somebody that need to stand up for us to do our jobs, when, and also like to facilitate the acquisition of our resources because we can't do much on our own." [P2]

4.3.2.4. Ideal setting to deliver nutrition services

The participants were asked to describe the ideal setting in which to deliver nutrition care services. They had the opportunity to further discuss how the actual service compared to the ideal work setting.

4.3.2.4.1. Dietitians appointed at all health facilities with adequate resources

The participants felt that for the ideal setting, there should be a dietitian stationed and appointed at each health facility in order to render effective nutrition care. The basics should be available namely an office to call their own, space for a working computer, network cable, internet access, colour printer and telephone. All the materials and equipment for training such as data projector and laptop should be readily accessible. The ideal setting will result in patient-centredness where the participants can consult patients with all the resources and software programs available to improve nutrition service delivery.

"I mean it would be really nice if we could sit with a patient and explain exactly what their condition and what guidelines they should follow, things like that and check on our little computer and the sheet we made. Summary and print it out for them with their name on it and the little glucose monitoring chart, and they can bring it with the next time and that's something physical

they can take." [P2]

"Yes, we need one dietitian per facility, ideally yes!" [P1]

"If you have nice programs on the computer that you can just punch in and people like that you must give them something." [P3]

4.3.2.4.2. Exclusivity of Information Education and Communications (IEC) materials

All participants asserted that the IEC materials they had were no longer exclusive to dietetics. These materials were designed and created to be used by the dietitians only during consultation sessions. The purpose of these materials was to educate and capacitate patients with the necessary knowledge and skills to improve health outcomes. However, over the years, the materials got used by other health professionals namely; nurses and doctors who provide patients with random nutrition information.

"Even the pamphlets we have that's something they can go and get from the health promoters or the sister's desk. They don't need to come to us the dietitians!" [P2]

"So, if we had the program, that only we could work that makes us stand out, because anybody can just give the pamphlet. Because we developed the pamphlet, but now they stole it and made photocopies, and everybody has access to it. They then don't need us to do it. It says on the pamphlets for dietitians." [P3]

4.3.2.4.3. Platform to raise concerns

All participants felt that there should be a platform to raise their concerns to ensure their needs are addressed and that their voices are heard to strengthen the nutrition care services.

"We had a meeting last year: a service delivery workshop and then another one schedule for all the allied and everybody that's a doctor or nurse, talking about our issues and what we are not happy about." [P1]

4.3.2.5. Role of communication in nutrition care service delivery

The participants had to think about how communication (verbal and non-verbal) impact on the delivery of nutrition care service delivery in their actual work setting with interpersonal skills.

4.3.2.5.1. Applying communication skills

All participants discussed that in order to apply communication skills, they must be approachable, friendly and polite. Participants expressed the importance of empathy as the patients they encountered faced daily hardships related to poverty and crime. As a skill, the participants must be assertive to prevent patients from taking advantage and misusing the nutrition services for their own benefit to obtain free nutrition supplementation. Two of the participants said that they enforce patient-centredness and provide information that is scientifically correct, adequate and sufficient for their comprehension. Patients can read and find information on the internet and confusion can arise. The participants stated that they need to correct all this misinformation. Patients have the opportunity to voice their opinions and concerns, however they have to be guided and it can become time consuming. The participants felt that they need visual aids and materials as they almost exclusively rely on verbal communication to apply effective communication and negotiation skills.

"*I have a lot of people coming in with their google pages and things like that and sometimes takes a long time to sit with that kind of patients". "Because they have an answer for everything."* [P2]

"As dietitians you can't just sit there and talk and talk or just stand there talk and talk with the patients." "You should actually have visuals or something that they can see like a plate model, so they themselves can visualize, otherwise no one listens to someone that just talks and talks." [P1]

4.3.2.5.2. Applying communication skills with limited time

All participants were in agreement that communication skills should be applied, however with the number of patients they see per day it is impossible to consult patients for too long with the limited time they have. The participants discussed that they need to explain and make sure patients understand the content of their counselling session. The participants rely on verbal communication and it is frustrating to repeat the same information over during the day to patients with similar health conditions. Certain consultations might exceed more than one-hour dependent on the situation and what must be discussed.

"It is ideally to keep your consultation to 10 to 15 minutes. I sometimes find myself sitting for an hour with one patient and because I personally feel I want the diabetic to make a difference." "You now know what's going to happen and you want to see improvement. So, they come to me and ask what must they eat? So, then you first need to speak, explain what diabetes is, once they

understand and it takes a lot of time and it does get frustrating, sitting with a lot of patients and repeating yourself over and over again". "It's the same things and then the other thing I find frustrating is the other half of patients are just collecting stock. [P4]

"With the amount of patients you have, that's the only time you have with them between 10-15minutes." [P1]

4.3.2.5.3 Applying communication skills in group education

The participants discussed that they cluster their patients into groups with similar health conditions to save time from having to repeat the same education over and still maintain communication skills. According to one participant, this is an effective method to consult more patients and increase nutrition service coverage. The benefits of group education, according to the participants, are reducing patient waiting times, working efficiently and smarter and at the end of the day the patients are happy with the group education.

"There was a diabetic on insulin, diabetic on oral meds (medication) *and hypertension groups and then I could sit with each group for 45 minutes to an hour and they could ask all the questions, and I don't have to repeat the same thing a 1000 times. Then the other group of patients that that were there for other things; renal patients, 2 kids and a CP* (Cerebral Palsy) *those could then get the actual individual attention that they needed". "Five minutes of quickly writing up and then collect stock'. "That works very well."* [P2]

4.3.2.6. Values expected of the nutrition care services

All participants had to discuss their values expected as a professional in order to render quality nutrition care services and how it is perceived by others.

4.3.2.6.1. Value of the dietitians

The participants discussed the core values they need to have in order to ensure patients are satisfied with the services they provide. The participants feel that all patients should always be treated with respect and dignity and to maintain confidentiality. One participant said that they need to apply the values of the Department of Health in their profession to care, being competent in the workplace, accountable for their actions and demonstrate integrity.

"Treating everyone with respect, treating everyone the same." [P4]

"Fairness, definitely quality, what you do for the one patient, must do for the other patient. Like for some that's poor and someone's that rich, you would give the same. You wouldn't treat the one that has money/affluent person better than the person that has nothing, because they both coming for the same information". "Professionalism!" [P1]

"The information that you give must be sound!" [P3]

"Self-control is a big thing. Do not lose your temper at people when they don't understand or are arguing with you or they have an answer for everything." [P2]

4.3.2.7. Work satisfaction

4.3.2.7.1. Fulfilment in the workplace

The participants discussed that their satisfactions are based on the happiness of their patients who are able to adhere to the nutrition advice given and are able to improve their health outcomes. The participants felt that their contributions does not impact on or make a difference in the nutrition care services. Three of the participants discussed that they are content, eager and excited to be working in the community setting focusing on prevention and promotion, compared to being based at a health facility consulting individual patients.

"No, for me it's that odd patient that takes everything to heart and they do better. The kids especially the ones that do recover and get the help they need. That's where my satisfaction is. Those that do listen and follow through. I mean there's not a lot of them, but there is that odd patient that makes it worth it." [P2]

"I would say our events and stuff, also what we do outside the facility what makes us excited about work. This new or not so new, but the trainings and workshops we do with our ECD (Early Childhood Development) *people and CBS* (Community Based Service) *people, with our breastfeeding people. That is also what I personally prefer to do than counselling the diabetic patients for the 5th time and still have sugar reading of 25. So, you are not going to listen and waste my time. So, I would rather be in the community where you can actually make a difference. Give them Vitamin A in the ECD centre, stuff like that is more than sitting in a facility waiting for that 1 patient to come that doesn't come."* [P1]

"We can play better role in preventative care than curative!" [P3]

4.3.2.7.2 Career development to improve satisfaction

In order to be satisfied within the workplace, the participants felt that they need to be upskilled with the necessary competency and leadership skills to enhance and improve performance in order to render the best quality nutrition care services. Three of the participants felt that it is senseless to study further, as it will not add any value to the service. A strong motivation is required as the preference is given to those who do not have undergraduate qualifications.

"So, there isn't really anything that can help us advance in our career path. We have colleagues that have to go study something else and take unpaid leave, cause there is no progression. There's nothing we can take with us if we would leave and go and say "Oh, I've actually studied this, and I can add in this way. Having your masters as a community dietitian doesn't guarantee you are going to be offering more value to the service. So, you first have to motivate why they need to consider you for a bursary!" [P2]

"Our choices for bursaries are less!" [P1]

"Even if you do your masters, stuff like that, if you ask for a bursary, you will be the last in the que. Because they first offer people who only have matric and then nurses." [P3]

4.3.3. Conclusion

The FGD revealed that the participants had both negative and positive perceptions regarding different aspects of the nutrition care service delivery within KMPSS. The misconceptions of other health care workers on their role as dietitians and resource limitations were described as major challenges. The participants felt undervalued and that their role as an integral part of the health system is undermined. The participants also reported that patient satisfaction and well-being provided them with a sense of fulfillment in their work despite the obstacles to nutrition care service delivery.

4.4. Summary

In summary, the results and findings, from the quantitative and qualitative sections revealed that patients had positive experience and perceptions based on the nutrition care received from the dietitians. However, patients are not aware of the various challenges and barriers to the delivery

of nutrition services within the health system. Notwithstanding the dietitians' negative perceptions related to barriers that impact their ability to render appropriate nutrition care services, they continue to provide these services, whilst maintaining professionalism and upholding the values true to their profession.

CHAPTER 5: DISCUSSION

5.1. Introduction

In this chapter, the results of the study are interpreted and discussed in relation to the aim and objectives. The presentation and interpretation of the quantitative results and qualitative findings are discussed jointly. The main aim of the current study was to determine the perceptions of patients and dietitians on the quality of nutrition care service delivery in Klipfontein Mitchells Plain Sub-Structure (KMPSS) using a mixed methods research methodology. The study objectives were;

- To describe patients' experience of the quality of nutrition care service delivery;
- To determine patients' perceptions of the quality of nutrition care service delivery;
- To determine patient satisfaction with the nutrition care service delivery and;
- To explore the perceptions of dietitians' on the quality of nutrition care service delivery.

In South Africa, the current literature indicates that the country is facing a double burden of undernutrition and over nutrition with the quadruple burden of HIV/AIDS, TB, maternity and child mortality and NCD (Delisle *et al*., 2017; WHO, 2018a). The health care system in Sub-Saharan Africa remains under-resourced with inadequate staff, infrastructure challenges and are incapacitated to manage the BOD (Dookie and Singh, 2012; Gouda Charlson, Sorsdahl, Ahmadzada, Ferrari, Erskine, Leung, Santamauro, Lund, Arminde and Mayosi, 2019; Sharman and Bachmann, 2019;). As indicated in Chapter 2, NCD account for an estimated two thirds of all deaths in the Western Cape (Morden *et al*., 2016; Nojilana, Bradshaw, Pillay-van Wyk, Msemburi, Laubscher, Somdyala, Joubert, Groenewald and Dorrington, 2016; Western Cape Department of Health Annual Performance Plan, 2019).

The morbidity and mortality of NCD are on the rise with the population increasing in number and age (Gouda *et al*., 2019; Mayosi, Flisher, Lalloo, Sitas, Tollman and Bradshaw, 2009). NCD are one of the common BOD in KMPSS (Morden *et al*., 2016). Delisle *et al*. (2017) found that the double burden of undernutrition and over-nutrition are becoming difficult to manage and that public health interventions are needed. Patients who do not have health insurance are dependent on accessing the public health system (Abera Abaerei, Ncayiyana and Levin, 2017). Almost 91.5% of patients in Klipfontein and 92.6% in Mitchells Plain are dependent on health care and with a low income (Provincial Circular H11 of 2018). More than half of the patients in this study had an income range between R1000-R3000. A study done by Jacobsen and Hasumi (2014) revealed that

86.3% of the households in South Africa had a monthly income less than R2500 and below the minimum wage of R3500 as set out by the National Department of Labour (National Department of Labour: Annual Performance Plan, 2019). The dietitians are considered the only members of the health workforce to render nutrition care services to improve patient health outcomes and dietary behaviours of individuals and populations (McClinchy *et al*., 2011; Mitchell *et al*., 2017).

Currently, there is a scarcity of evidence regarding patient and dietitian perceptions on the quality of nutrition care service delivery (Vivanti *et al*., 2007). The dietitians make up 10% of the nutrition workforce in the Western Cape with approximately 66 000 patients per dietitian (Goeiman *et al*., 2011). Bednarczuk and Czekajlo-Kozlowska (2019) stated that the core function of dietitians should be to educate and counsel patients on specific dietary requirements to improve their behaviours and ensure optimal health. Incorrect dietary behaviours and patterns are the main reason for the increased NCD and nutrition interventions with Multi-Disciplinary Team (MDT) approaches are needed (Bednarczuk and Czekajlo-Kozlowska, 2019).

5.2. The scope of the profession of Dietetics

The dietetics profession is ever evolving through constant learning of skills and application of knowledge to establish and implement guidelines for maintaining healthy nutritional practices for all individuals (HPCSA, 2020). For many years, dietitians have been trying to effect improvements for nutrition care to create awareness across many settings of health care (Brotherton, 2010). Qualified dietitians who are competent, adequately skilled and well prepared should be able to improve the health outcomes of patients.

The Health Professions Council of South Africa is dedicated to ensuring healthy population outcomes and that all standards of professional development including education and training are implemented. The competencies including the knowledge and skills can be used to understand patient experiences and perceptions of the nutrition care services in accordance with the regulations of the scope of the professions of dietetics. The HPCSA is committed to the regulation and maintenance of standards of ethical and professional practices (HPCSA, 2020). The regulations defining the scope of the profession of dietetics (Government Gazette 4684, 1991), state that dietitians should apply their knowledge and skills by:

i. *Establishing and applying of guidelines for the maintenance of healthy nutritional practices for individuals;*
ii. *Applying of dietary principles as part of the treatment of an individual, relative to a specific disease and following prescription by a medical doctor;*

iii. *Establishing and applying of guidelines for adequate food and nutrition in the community in institutions for healthy and or ill persons;*

iv. *Participation in formal and informal education in the field of dietetics;*

v. *The promotion of community nutrition by the accurate interpretation of the science of normal and therapeutic nutrition. The professional communication of scientifically based nutrition knowledge, according to need, to individuals and groups within the community in order to motivate them to maintain or change nutritional behaviour in order to improve quality of life and to prevent nutrition-related diseases.*

5.3. Patient experiences based on nutrition administration processes

The Beryl Institute (2020) defined patient experience as: *"the sum of all interactions, shaped by an organization's culture that influence patient perceptions across the continuum of care"*. The Agency for Health care Research and Quality (2020) found that patient experience includes numerous aspects of health care delivery when patients *"seek and receive care, obtaining appointments in reasonable time and have access to basic information with good communications skills from health care providers"*. Patient experience is associated with age as it determines how well patients perceive or experience nutrition care services and ability to rationalize information influencing patient satisfaction (Sandager, Freil, and Knudsen, 2016). Health care providers should have the ability to engage with their patients and keep them up to date and informed with relevant information to enhance positive patient experiences (Hancock *et al*., 2012; Wolf, Niederhauser, Marshburn and Lavela, 2014). Sladdin *et al*. (2018) argued that dietitians need to involve and acknowledge patient inputs during dietetic consultations. Attitudes of dietitians greatly influence patient experiences and perceptions during the consultation session, and they are motivated to change (MacLellan and Berenbaum, 2007; Sladdin *et al*., 2018). Wolf *et al*. (2014) posit the view that patient experience affects perceptions of care and can ensure that patients are aware of processes and are actively involved and informed on the consultation duration and waiting times.

In KMPSS, the dietitians are custodians for ensuring maintenance of the nutrition service administration at facility level with the technical support from the Integrated Nutrition Program (INP) coordinator. The FGD revealed that the dietitians had to assume the role of the INP coordinator whilst the position was vacant for approximately 10 months. The dietitians had to ensure that the nutrition services are implemented and continued throughout. The dietitians had to perform additional activities in conjunction with their current roles such as attending and planning community health events, meetings, conducting health talks and coordinating campaigns.

The patients in the study had positive experiences based on the nutrition administration processes. All patients (100%) had access to the nutrition services. Sixty-eight-point eight percent (68.8%) of the patients stated that it was not their first time to access the service whilst 39.2% said it was their first. More than 50% of the patients stated that they were informed to access nutrition services prior to being referred to the dietitian. Slightly more than twenty percent (20.8%) of the patients stated that they had to travel far to access the nutrition services. The FGD revealed that the dietitians feel guilty if patients must use the last of their finances to travel far to the health facility and they are unable to provide nutrition service assistance. A significant proportion (44%) of patients were referred from within the health facility to the dietitians for supplementation. The nutrition supplementation referrals are indicative of the underweight status of patients. The SADHS (2019) found that 3% of women and 10% of men are underweight. Nutrition supplementation, one of the focus areas of the INP, is needed to improve the nutritional and immune status of adults and children by ensuring treatment adherence and success and delay progression of the diseases (NDOH, 2003).

The dietitians expressed that health professionals make inappropriate referrals and that patients may mistreat the nutrition supplementation program. According to Goeiman *et al*. (2011), poor referrals to the dietitians was identified as a key challenge to the nutrition workforce. Dietitians in this study highlighted the challenge of misconceptions of other health care professionals with regards to their role in the PHC workforce. The challenges of inappropriate referrals could be indicative of the need to identify opportunities for interprofessional practice.

The WHO (2010:13) defined interprofessional education and collaborative practice in health care when "multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, careers and communities to deliver the highest quality of care across settings". Eggenberg, Millender, Drowas and France (2019) stated that communication is important to foster and establish interprofessional collaboration in health care settings. Interprofessional collaboration will assist with teamwork, mutual relationships being formed and cohesion to improve patient experiences, population health and reduce health costs as resources are shared (Eggenberg *et al*., 2019; Green and Johnson, 2015). Green and Johnson (2015) postulate that more can be achieved when health professionals are working together with desired health outcomes to the benefit of patients.

The dietitians expressed feeling undervalued and isolated from the rest of the MDT. Beckingsale, Fairbairn and Morris (2016) found that dietitians at times feel they are not part of the MDT, as they are absent from meetings and excluded from important decision-making processes. Goeiman

et al. (2011) found that a lack of acknowledgement of nutrition and dietetics was identified as key challenge in the Western Cape. Beckingsale *et al*. (2016) proffer the view that dietitians need to be well integrated into the MDT to avoid misconceptions. Gingras, de Jongh and Purdy (2010) asserted that many times the working environment is emotional and tiresome when dietitians are disconnected from the rest of other health professionals.

During the FGD, the dietitians detailed that patient appointments are arranged with supporting staff and establishing good working relationships to ensure better collaboration and teamwork. All patients in this study (100%) could obtain appointments in reasonable and acceptable times notwithstanding the inappropriate referrals as echoed in the FGD. Jones, Mitchell, O'Connor, Rollo, Slater, Williams and Ball (2018) stated that information technology like online appointment systems are beneficial to enhance patient experiences through managing their appointments. One hundred percent (100%) of the patients agreed that the dietitians were on time for their appointments. The FGD revealed that the dietitians do not have time to waste as they are responsible for providing nutrition services at multiple facilities within their geographical area. The dietitians expressed the need to have a dietitian and be visible at each health facility within KMPSS. Limited workforce capacity hinders delivery of nutrition care service (Beckingsale *et al*., 2016). Moreover, Goeiman *et al*. (2011) found that an inadequate number of dietetic posts leads to poor service delivery.

In this study, dietitians expressed concerns about poor attendance of some patients with NCD appointments hindering service delivery. This led to non-compliance with nutrition management of conditions such as diabetes which was revealed by uncontrolled blood glucose readings at follow up consultations. These dietitians noted that patients would prioritize medical appointments over nutrition appointments. Similarly, others have found that a lack of attendance indicated poor adherence to nutrition therapy and, that patients did not see the need to attend follow up sessions, mistakenly considering nutrition therapy to be a short-term modality (Endevelt and Gesser-Edelsburg, 2014). Researchers have found that doctors with a positive attitude toward nutrition are more likely both to refer patients for nutrition therapy as well as to encourage these patients to attend regular follow up visit appointments with a nutrition professional (Endevelt and Gesser-Edelsburg, 2014).

Ninety percent (90%) of the patients stated that they do not need to wait too long to see the dietitian for their scheduled appointments. The NDoH defines patient waiting time as the amount of time the patient spends at the PHC facility waiting on a service provider (NDoH, 2019). Long waiting times is a problem in the South African PHC system. Waiting times are also a contributing factor

to dissatisfaction among patients utilizing PHC facilities in South Africa (Egbujie, Grimwood, Mothibi-Wabafor, Fatti, Tshabalala, Allie and Ovebanji, 2018; Eilers, 2004). The FGD revealed that dietitians cluster and categorize their patients with similar conditions to reduce waiting times and to facilitate rendering efficient dietetic consultations.

More than 80% of patients reported that the dietetic consultation duration was not longer than 20 minutes. This could be ascribed to the fact that most (60%) study participants were attending follow up visits at the time of data collection. Endevelt and Gesser-Edelsburg (2014) found that the first nutrition counselling visit was 30 minutes and follow up about 15 minutes long. Vaillancourt, Légaré, Lapointe, Deschênes and Desroches, (2014) found in their study that the average dietetic consultation was 26 minutes long. According to Shemseldin, Mohammed and Fadl (2017) consulting time is dependent on the situation of the condition and what type of advice or information is given at that particular time that may prolong the nutrition counselling session. Shemseldin *et al*. (2017) found that the longer the nutrition sessions are, the more the dietitians can implement and enhance their counselling skills to ensure favourable patient outcomes. Sandager *et al*. (2016) found that the length of the consultation time also has an impact on patient satisfaction and improved results to change behaviours and leading to satisfactory outcomes. Hancock *et al*. (2012) found that there is little evidence exploring patient experiences of dietetic consultation time and the impact thereof.

The dietitians indicated that they do not have sufficient time to consult their patients based on the referred appointments and that ideally the consultation be kept between 10-15 minutes. Hence, they must keep their counselling concise and short. The dietitians revealed that they spend most of their time counselling NCD apart from seeing patients for nutrition supplementation. Goeiman *et al*. (2011) indicate that between 10-80% of the time is spent on disease-specific, nutrition support, treatment and counselling.

During the FGD, one dietitian expressed that more time is spent on counselling a patient with diabetes. Endevelt and Gesser-Edelsburg (2014) stated that NCD require longer counselling sessions to ensure the education and information is given. Dietitians who are competent and comfortable with their counselling skills on a constant basis can complete their nutrition within a 10-30-minute session (Shemseldin *et al*., 2017). Shemseldin *et al*. (2017) stated that while dietitians or nutritionists spend their time counselling and educating patients with up to date scientific information, patients are reluctant to accept and implement the supplied information.

The dietitians expressed that patients come with their own ideas and concepts and that the dietitians need to spend their time to correct the information. Patients prefer health care providers to spend more time on the consultation session and appropriate communication leads to mutual trust (Papp *et al*., 2014). The dietitians need to function as facilitators in the patient-centred approach during their dietetic nutrition consultation and apply robust and effective communication skills. The dietitians need to build rapport with their patients, determine their readiness for change and what type of information should be given. Patients are loyal to the health care professionals and generally reluctant to criticize and evaluate treatment efficiently (Sandager *et al*., 2016).

The dietitians discussed that repetition as part of their counselling with the same health information is a contributing factor to their frustrations. Work fatigue, frustrations and burnout have been noted in the FGD due to the increased referred patients. Koinis, Giannou, Drantaki, Angelaina, Stratou and Saridi, (2015) found that health care professionals are exposed to many stress factors as they are expected to increase their productivity to deliver measurable outcomes in the workplace. Health professionals such as dietitians are exposed to stress for longer periods of time and this may hinder and reduce their capabilities to perform in the workplace resulting in decreased job satisfaction and their quality of care affecting the experiences of patients accessing the nutrition care services.

Regarding patient satisfaction with nutrition care services, patients rated most items quite positively. One of the only aspects of care which received a slightly negative rating was that of the suitability of the consultation room. Only 35% of the patients strongly agreed that the consultation room met their expectations while around 7.5% of patients said that there was not a consulting room available and nearly 4% patients were in strong disagreement that the consulting room met their expectations. The dissatisfaction with consultation spaces was echoed in the FGD with dietitians.

The dietitians highlighted the challenges created by poorly resourced consultation spaces. These spaces were often shared with other health care workers which hindered efforts to maintain patient confidentiality and privacy during consultation. They expressed the need for consultation spaces equipped with a computer, desk, telephone and stationery in order to facilitate an efficient service. This would also allow them to uphold patient privacy and confidentiality. There is a strong need to eradicate paper trail and focus on the consultation to promote education, goal setting and building patient-dietitian relationships (Jones *et al*., 2018). Information technology are useful tools for dietitians to track progress and empower patients to ensure improved health outcomes during the consultation process. Dietitians are dependent on information technology to record

patient findings, calculate dietary requirements, conduct assessment calculations and make entries into the system as discussed during the FGD to be the ideal dietetics services. These factors will assist with efficiency, improved collaboration amongst health professionals and to measure health outcomes (Jones *et al*., 2018).

The issue of poorly resourced consultation spaces for dietitians has been raised by Goeiman *et al*. (2011) who identified a lack of space for nutrition consultation as a key challenge to delivering nutrition services in the Western Cape. All patients in South Africa have the right to confidentiality and privacy according to the National Health Act 61 of 2003 (Government Gazette 26595, 2004). The dietitians stated that random patients caused interruptions during their consultation sessions and entered without permission, as the consulting room is inadequate to counsel patients in private. The lack of consulting rooms is a violation in terms of the patients' rights to confidentiality (HPCSA, 2016a). Patients should be consulted in private to maintain and uphold confidence levels of health care providers (Beltran-Aroca, Girela-Lopez, Collazo-Chao, Montero-Pérez-Barquero, and Muñoz-Villanueva, 2016; Hartigan, Cussen, Meaney and O'Donoghue, 2018; HPCSA, 2016a; Sladdin *et al*., 2018). Confidentiality is important to protect the individual's private information to ensure that patient-dietitian relationships are established in line with patient-centred care (Beltran-Aroca *et al*., 2016; Hartigan *et al*., 2018). Endevelt and Gesser-Edelsburg (2014) stated that trust is essential in this patient-dietitian relationship during the counselling process to ensure healthy outcomes for the individuals. Osland (2015) asserted that dietitians need to provide compassionate care to their referred patients with numerous medical conditions. The HPCSA (2016a) states that all health professions should maintain the ethical standards of professionalism and confidentiality. Patients may omit and neglect to divulge information if confidentiality cannot be maintained and this affects the ability of the dietitians to provide good quality care (HPCSA, 2016b).

5.4. Perceptions based on interpersonal skills

Interpersonal skills are important for dietitians to have in nutrition services (Notaras, Mak and Wilson, 2018). Cant and Aroni (2008) maintain that interpersonal skills are a competency by which patients can judge dietitians on the nutrition care services they render as competent and efficient through their specialized knowledge and capabilities. The dietetics profession is evolving into patient-centred care (Notaras *et al*., 2018). Gable and Herrmann (2015) state that dietitians need to adapt their communication skills in order to meet the patient needs in the patient-centred care approach. Dietitians need to use interpersonal skills to engage effectively with their patients. Interpersonal skills are dependent on a health care provider's ability to be empathetic, friendly,

attentive and mindful of privacy and confidentiality (Papp *et al*., 2014). Patients perceive openness, honesty and trust as important to improve their health outcomes (Sladdin *et al*., 2018).

Whitehead *et al*. (2009) and Cant and Aroni (2008) interviewed dietitians about their interpersonal skills, whilst this study interviewed patients on their perceptions on the dietitian interpersonal skills. By comparing the results of Whitehead *et al*. (2009) and Cant and Aroni (2008), the findings suggest that interpersonal skills are an important component in patient perceptions and experiences. Ferguson *et al*. (2001) found in their study that patients placed more emphasis on interpersonal skills and asserted that dietitians should be more focused on interpersonal and communication skills. In this study, more than 90% of the patients were in strong agreement that the dietitian could explain their medical condition and how nutrition counselling was of benefit to their health as well as being encouraged to participate during the consultation session.

The dietitians revealed that they allowed for opportunities to engage as part of their patient-centred care approach for active participation. Nearly 90% of the patients were also in strong agreement that the dietitian summarized information. The FGD found that dietitians need to make sure their patients understand the content of their counselling session. The National Health Act 61 of 2003 states that health care providers should provide patients with information on the condition of their diseases, the benefits, treatment plan and that the information presented in a way that is easy to follow (Government Gazette 26595, 2004; HPCSA, 2016b). Nearly 7% of the patients reported that they disagreed that the dietitians created a plan to help with their medical condition. The FGD revealed that if the dietitians had the necessary electronic resources in the ideal nutrition setting, they would be able to produce information with a nutrition care plan and provide patients with summaries and Information Education Communication (IEC) materials.

Nearly 40% of patients reported not receiving or being supplied with printed IEC materials. The lack of this resource was highlighted in the FGD with the dietitians expressing the need for user-friendly visual aids to complement verbal communication. They felt that these materials would assist patients' retention of pertinent information shared during consultation. Dietitians also raised concerns about the way existing IEC materials were issued by other health care professionals. McClinchy, Dickinson, Barron and Thomas, (2011) found that there is limited research on how IEC materials are being used by health care professionals other than the dietitians and that more research is required. Delisle *et al*. (2017) found in their study that there are shortages of nutrition workers and that the bulk of the work is performed by nurses or community health workers. These professionals might lack the necessary skills to provide quality nutrition care services and the availability of resources including IEC materials. McClinchy *et al*. (2011) assert that IEC materials

can be used to communicate health information and provide dietary advice to patients. These IEC materials should be used to strengthen the counselling process and form part of the treatment plan of patients. Patients are more likely to gain knowledge and understanding of their conditions when provided with IEC materials (McClinchy *et al*., 2011).

Most patients (77.5%) in this study agreed that dietitians listened attentively to their needs. Dietitians themselves described the time and effort they took to respond to their client's nutrition-related questions. Shemseldin *et al*. (2017) suggest that listening as a skill should be used to understand the needs of the patients. The HPCSA (2016a) states that health care providers should listen to their patients and respect their opinions in a dignified manner. Cant and Aroni (2008) found in their study that 98% of the dietitians listened to their patients and Whitehead *et al*. (2009) also found that 85.7% of the dietitians listened attentively to their patients. The results of this study and the findings of Cant and Aroni (2008) and Whitehead *et al*. (2009) indicate that listening attentively is an important interpersonal skill to enhance and improve patient experiences. Sladdin *et al*. (2018) state that patients want dietitians to understand and listen to their background stories as part of the patient-centred care and experience approaches, which lends credence to the view that patients are happy if the dietitians are attentive to their needs.

5.5. Perceptions based on presentation skills

Presentation skills are a form of non-verbal communication and the way in which dietitians conduct themselves in a professional manner in the health care setting (Cant and Aroni, 2008). Cant and Aroni (2008) found that 86% of dietitians in their study said that positive communication styles are important, 75% felt that personal presentation should be maintained and 100% stated that they need to understand their patients. Whitehead *et al*. (2009) found that 67.5% dietitians stated that appropriate non-verbal communication is important, 80.7% greeted their clients, 36.3% provided information, 71.6% responded to patient concerns, 60.2% summarized information and 28.8% of them kept to the allocated time slot.

In this study, more than 80% of the patients reported that there was strong agreement with positive statements about the way in which dietitians presented themselves during the dietetic consultation. Sladdin *et al*. (2018) found similar results that more than 80% of the patients said the presentation skills of the dietitians are important. The FGD found that dietitians need to be approachable, friendly and polite. The dietitians shared their views of the guiding values to be adopted in order to ensure satisfaction with the nutrition care services. These included treating all patients with care, respect, dignity and integrity regardless of their socio-economic backgrounds. This is in

keeping with the HPCSA's guideline that a health care provider's personal beliefs should not hinder their ability to render health care based on patients race, culture, ethnicity, social status, lifestyle, perceived economic worth, age, gender, disability, communicable disease status, sexual orientation, religious or spiritual beliefs, or any condition of vulnerability.

Around 80% of the participants were unemployed, with 86.7% having secondary education and with an income between R1000-3000. These demographics are in keeping with those of many others who are dependent on state subsidised health care services. The conceptual framework of malnutrition identified the basic causes to be formal and non-formal institutions, political and ideological superstructure, economic structure and potential resources such as land, education, employment, income and technology (UNICEF, 2013). Dietitians are trained to understand the multi-factorial nature of malnutrition and have an appreciation of the social determinants of health faced by the public they serve. The underlying causes of malnutrition are predominantly household food insecurity, inadequate care and feeding practices (UNICEF, 2013). While dietitians faced a huge demand for nutrition services at facility level, they expressed their passion for community-based nutrition as this is where they feel they can better contribute their expertise in order to make a difference in the lives of people.

5.6. Ethics of dietetics care

The HPCSA (2016b) states that all health care providers should continuously be updated with the highest level of knowledge and skills within their scope of practice to ensure quality health outcomes for their patients through provisioning of their health services. The dietitians indicated during the FGD that they need to ensure ethical decision making in line with their values to uphold the quality of nutrition care services. A similar study done by Fornari (2015) suggested that dietitians are striving for improved knowledge, education and skills to perform their competencies in the workplace. Care is seen as a competency and dietitians should understand their roles in the health system as well as the patient dynamics through changes in the culture and the environment. The characteristics of dietitians should be honesty, integrity and fairness in the ethical decision-making process (Fornari, 2015). Dietitians are also careful in their decision-making to avoid harm to their patients as an identified trait to maintain ethical standards and professionalism. These values or characteristics will support and maintain quality standards and should form part of their everyday professional conduct (Ball, Leveritt, Cass and Chaboyer, 2015).

Dietitians need to further understand the ethical theory in their practice according to the four principles namely; autonomy, non-maleficence, beneficence and justice (Beauchamp and

Childress, as cited by Fornari, 2015). Autonomy is the process whereby dietitians should ensure patients have the ability to self-decide. Patients should be involved in the key decision-making process of their own health. Results of the study found that 87 (72.5%) patients strongly agreed that the dietitians made them feel part of the consultation and decision-making process. Non-maleficence demands that health care providers avoid imparting any harm or danger unto their patients or clients. During the FGD, the dietitians indicated that they take their patients well-being seriously and strive to ensure that their needs are met. Beneficence is the positive steps taken by dietitians to the benefits of others and outweighing the risk and cost when rendering effective nutrition services. Justice is the assurance that dietitians provide fair and equitable nutrition services to all the patients in the PHC setting.

Part of the values and ethics of a dietitian is to have leadership competencies. The dietitians discussed that leadership and upskilling is needed to deliver optimal nutrition care services. The HPCSA (2016a) states that health care providers should regularly partake in educational activities that would enhance their provision of health services. No other studies to date have been published in clinical leadership in dietitians (Patten and Sauer, 2018). Dietitians need to be leaders and pioneers in the field of the dietetic profession. All dietitians need to be empowered to lead in nutrition and food science (Patten and Sauer, 2018). The FGD revealed that the dietitians had to take the lead in coordinating the nutrition services in the absence of the nutrition coordinator. Dietitians should be challenged in the way they perform their work activities, create opportunities to lead in their work environment, develop leadership competencies and understand that they are the leaders to improve the health outcomes of their patients (Patten and Sauer, 2018). Patten and Sauer (2018) asserted that dietitians are the custodians of nutrition care and can determine nutrition needs, have the clinical expertise and background to contribute to effective nutrition planning for long term service delivery. They have an understanding with their patients, and this creates an appropriate platform to improve patient care and increase life expectancy through adequate nutrition. Patten and Sauer (2018) found that 76% of dietitians in their study stated that they have job satisfaction when they demonstrate leadership as part of their job. The author's further make mention that leadership should be expected as part of the goals of dietitians and that the work organization should encourage dietitians to be leaders (Patten and Sauer, 2018). Patten and Sauer (2018) found that a lack of mentorship was one of the barriers to leadership in the dietetic profession. The FGD revealed that the dietitians are positive that the newly appointed nutrition coordinator will provide leadership, promote and support what they do in delivering quality nutrition care services in KMPSS.

In order to have leadership skills, it is important to understand the qualities and personality traits of dietitians in order to understand their job satisfaction, retention and career pathway (Ball *et al*., 2015). According to Ball *et al*. (2015) personality traits influence career decision, development and professional growth in the workplace. This will determine the work performance as it is essential in the health services within the public health sector. There is a greater need for dietitians due to increasing nutrition related health care needs (Ball *et al*., 2015). Understanding these factors will ensure that the strengths and weaknesses of dietitians are addressed and assist with strategies to support dietitians in the workplace. The author puts forward that there are two types of traits namely; "temperament to determine automatic emotional responses to experience and character traits showing own goals, values and beliefs" (Ball *et al*., 2015:503). When these levels of traits are combined, dietitians are eager, willing, ambitious, reliable, tolerant and empathetic in their work. This will ensure that they are competent and effective in their roles to render quality nutrition care services.

5.7. Perceptions of nutrition care service satisfaction

Almost 19 years ago, Ferguson *et al*. (2001) found in their study that 83% of the patients were satisfied with the clinical nutrition services as determined by presentation skills, interpersonal skills, nutrition supplementation and perceived health benefits. In this study, 80% of the patients were in strong agreement that they were overall satisfied with the nutrition care services as received from the dietitians. The satisfaction level of patients was dependent on the ability of the dietitians to listen attentively, show interest, reflect, summarize key information and implement patient centred approaches to their individual needs. According to Ferguson *et al*. (2001) satisfaction can be used to measure the effectiveness of nutrition services and be beneficial from patient perspectives. Patients can be used to promote dietetic services if their expectations are met based on the quality of care received (Ferguson *et al*., 2001). In the FGD, dietitians expressed that their work satisfaction is dependent on their patients, working with other health professionals and in the community setting. The dietitians find satisfaction in the positive outcomes of their patients with improved health status and the ability to implement changes in dietary behaviours. Working with other health professionals creates a sense of duty, teamwork and a supportive environment to mentor and motivate one another. The dietitians shared that their true happiness is in the community where they can make a difference and change the lives of people. Dietitians who show empathy to patients have a direct influence on patient satisfaction (Notaras *et al*., 2018). Plint *et al*. (2016) assert that career satisfaction will occur when dietitians are acknowledged for the work done and for their professional expertise in their scope of practice.

5.8. Study limitations

As discussed in Chapter 3, the findings of this study were limited to the quality nutrition care services as rendered by the dietitians in the KMPSS. The sample size was dependent on the number of patients booked for the dietitians on the day of data collection; no selection of patients based on any category of referred patients as per the appointment system were done. On numerous occasions the researcher had to go back to the health facilities to complete data collection until the study sample of 120 was reached. The FGD revealed that dietitians consulted more patients with chronic disease of lifestyle (CDL), however the results in the quantitative section suggest that more patients were referred for supplementation. However, the researcher might have missed out on specific days when the dietitians may have possibly consulted more CDL patients.

The researcher did not identify any inappropriate referred patients on the days of data collection, nor if any patient was turned away from the nutrition services. No provision was made on the patient interview questionnaire to indicate inappropriate referrals. All patients who were booked for the day were interviewed during the data collection period. The researcher excluded adults/caregivers who came to collect nutrition supplementation on behalf of adults and children. Patients should have been probed for their yes/no answers in the quantitative aspect of the questionnaire to understand the reasons and gain deeper meaning into their perception of the nutrition service. Causal associations in this study could not be determined as it was based on perceptions of the patients and dietitians, since data were collected from participants within a specific area based on the method of convenience. While the sample was also relatively small (n=120), the findings need to be interpreted with caution since they cannot be generalised from one setting to another.

5.9. Conclusion

The key results and findings of this study agree with other research that has been done within the dietetics profession. The results indicated that patients had generally positive experiences and perceptions regarding the quality of nutrition care service delivery. The regulations defining the scope of the profession of dietetics state that dietitians should apply their knowledge and skills. Findings of the FGD revealed that the dietitians had both positive and negative perceptions of different aspects of the nutrition care service they provide. The negative perceptions are a result of the challenges and facilities to deliver nutrition care services within KMPSS. The dietitians' negative perceptions of the nutrition care service did not influence their satisfaction with the work

they do. The dietitians' satisfaction was based on the well-being and health outcomes of their patients and being able to serve the communities.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

There is a paucity of research exploring the quality of nutrition care service delivery within the Western Cape Metro and in South Africa. This study supports existing research by highlighting the need for quality nutrition care in dietetics by utilizing perceptions and experiences of patients and dietitians to provide information on the services for future quality improvement strategies.

A dietitian will optimize the nutritional well-being of patients and groups and work within the regulations defining the scope of the profession of dietetics (Government Gazette 4684, 1991). As per the scope of the profession of dietetics, dietitians who are competent and knowledgeable should apply robust scientific evidence. The evidence-based practices from the dietitians should ensure that they are capable of transferring their knowledge through effective communication skills.

Patient-centred care approaches should be followed and enhanced to allow for trust relationships between the health service provider(s) and their patients to improve health outcomes. Patients will have greater satisfaction when their needs are met, and they have positive health outcomes. The perceptions of patients and dietitians can be used for reflective learning and opportunities to improve the quality of nutrition care service delivery in KMPSS. It is imperative that continuous quality improvement in nutrition care is maintained to combat the BOD and reduce under- and overnutrition in South Africa.

6.2. Conclusion

The inability of dietitians to spend enough time with the patients came forward as a barrier, as noted by the patients, as well as by the dietitians. This might be due to inadequate cognizance among health care workers and in the PHC system of the role that dietitians play. Dietitians are uniquely trained as nutrition counsellors to help patients change deeply embedded habits using individualized approaches through recommendations and nutrition guidelines. This requires time to build rapport and to truly listen and apply motivational counselling techniques. The quality of nutrition care service delivery is depended on increasing the nutrition workforce, proper consulting rooms with basic infrastructure and ways that the knowledge and perceptions of what a dietitian does and how he/she needs to do it in order to be effective.

6.2.1. Patient experience on nutrition care

The first objective of this study was to describe patients' experience of the quality of nutrition care service delivery. All patients interviewed had access to nutrition care services as it was fully implemented within the PHC facilities. Patients had positive experiences based on the availability and access to the nutrition care services, namely appointment system, waiting times and consultation contact session time.

6.2.2. Patient perceptions on nutrition care

The second objective of this study was to describe patients' perceptions of the quality of nutrition care service delivery. The patients had positive perceptions on the quality of nutrition care displayed by the dietitians. Patients perceived interpersonal skills, presentation skills followed by written IEC materials as important in the provisioning of quality nutrition care services.

6.2.3. Patient satisfaction on the nutrition care

The third objective of this study was to determine patient satisfaction with the nutrition care service delivery. Eighty percent (80%) of the patients are satisfied overall with the nutrition care services as received from the dietitians.

6.2.4. Dietitian perceptions on the nutrition care service delivery

The fourth objective of this study was to explore the perceptions of dietitians on the quality of the nutrition care service that they were able to deliver withing the setting of the research. The FGD findings indicated that the dietitians had both positive and negative perceptions regarding different aspects of the nutrition care service delivery within KMPSS, which were due to their various challenges and barriers. The negative perceptions of the dietitians did not, in their own opinion, hinder their ability to render quality nutrition care service delivery. When dietitians are satisfied in the workplace, there is a direct impact on the nutrition service. There is commitment from the dietitians to render effective and efficient quality nutrition care services to achieve positive patient experience during the dietetic consultation. The dietitians can only achieve quality nutrition care service delivery when management structures and adequate resources are in place to support and motivate the work they do within the workplace.

6.3. Recommendations

The results and findings of this study will be forwarded and presented to the management of the KMPSS and Provincial Nutrition Sub-Directorate.

The following recommendations are proposed:

6.3.1. The facility management of the dietitians in conjunction with the PHC Manager at KMPSS needs to review and ascertain whether the dietitians can be supplied with the resources to facilitate nutrition care service delivery namely, computers/laptops, stationery and adequate office space. The latter is of cardinal importance since patients have a right to be treated and consulted in privacy (Beltran-Aroca et al., 2016; Hartigan et al., 2018; HPCSA, 2016a; Sladdin *et al*., 2018). Moreover, the utilisation of an appropriate computerised diary management system could allow for better management of time allocated per patient, improve efficiencies in that it would reduce some paperwork, allow for tracking of patients and thereby enhance the experiences and perceptions of patients in order to render an effective service to them (Jones *et al*., 2018).

6.3.2. The nutrition care services should be advocated on a higher level (District and Provincial levels) in order to address the common challenges and barriers in rendering quality nutrition care services in PHC. The District and Provincial Health levels should advocate for the nutrition workforce to be expanded in order to allow each health facility to have a dietitian. The quality of nutrition care services will be strengthened as more dietitians are employed (Delisle *et al*., 2017).

6.3.3. Facility management where the dietitians are based, should strengthen supportive systems to eradicate nutrition care misconceptions of the dietitians and MDT. It is imperative that dietitians and the MDT work holistically and not in isolation to ensure healthy patient outcomes (Eggenberg *et al*., 2019; Green and Johnson, 2015). Referral pathways amongst the dietitians and the MDT should be strengthened at facility level in order to ensure patients receive the best quality of care. Policies and standard operating procedure guidelines within the workplace should enable the dietitians to work in a MDT setup. Dietitians need to ensure they attend MDT meetings to promote quality nutrition care services and to feel part of the MDT. Support from management will ensure dietitians are able to function and work well together with other health professionals. This type of support will rectify misconceptions and ensure a working-trust relationship is established (Beckingsale *et al*., 2016).

6.3.4 A provincial nutrition task team is needed to redesign IEC materials and specifically brand to the dietetics profession to assure exclusivity. The possibility of designing electronic IEC materials should be considered as it will allow dietitians to print and provide patients with

these materials as part of the ideal nutrition setting. Dietitians are to ensure that all health personnel at health facilities are to be trained to use general nutrition IEC materials rather than disease specific information only to the scope of dietetics.

6.3.5. Facility management to provide psychosocial support and wellness programmes to the dietitians working in stressful environments. Burnout and fatigue in dietitians should be monitored. There is limited research in this field to determine if burnout has a correlation to patient satisfaction and health outcomes (Koinis et al., 2015). Preventative burnout measures and referral pathways should be implemented to provide dietitians with emotional and mental support services. Opportunities should be explored to study dietitians working in stressful and toxic environments and how well they can handle under pressure.

6.3.6. Facility management should ensure that dietitians are upskilled in leadership skills to improve and enhance further professional growth and development within the workplace (HPCSA, 2016b; Fornari, 2015).

6.3.7. Future research is needed to conduct FGD with patients on the patient-centred care approach to ascertain a deeper understanding and meaning of their understanding of quality nutrition care within the Department of Health.

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APPENDICES

Appendix 1: Question numbers in the questionnaire to address the objectives

Objectives	Question numbers in the questionnaire to address the objectives
To describe patients' perceptions of the quality of nutrition care service delivery	4- Interpersonal skills 5-Perceived Health Benefits 6-Dietitian Presentation Skills
To describe patients' experiences of the quality of nutrition care service delivery	2-Access to Nutrition services 3- Waiting Times 7-Written Information and Education Material
To determine patients satisfaction with the nutrition care service delivery	8- Fulfilled Expectations

Appendix 2: Quality of Nutrition Service Delivery Questionnaire

Quality of Nutrition Service Delivery Questionnaire					
Patient Questionnaire				Code number	
Health Establishment Details					
Name of Facility					
Type of Facility		CHC		CDC	
Sub-District				Date:	
1. Biographical Data					
1.1. Gender	Male		Female		Other
1.2. What is your age					
1.3. Please tick the condition(s) you have been referred to see the Dietitian	Diabetes	HIV	Hypertension	Feeding difficulties	
	Cholesterol	Tubefeeds	Supplementation	Other:	
1.4. Are you working?		Yes		No	
1.5. What is your estimated income per month	R0-1000	R1000-3000		R3000+	
1.6. What is your highest education level?	Primary School	Secondary School		Tertiary Education	
2. Access to Nutrition Services					
2.1. Are you aware of the nutrition service?		Yes	No		
2.2. Is this your first visit to the Dietitian?		Yes	No		
2.3. If no, how many times?					
2.4. Who referred you to the Dietitian	Doctor	Nurse	Health Promoter	Other:	
2.5. Was there an appointment system for you to make a booking?	Yes	No	Specify:		
2.6. Did you get a booking for the Dietitian in a reasonable time?	Yes	No	Specify:		
2.7. Was the appointment time acceptable to you?	Yes	No	Specify:		
2.8. Was there a bench or chair for you to sit on?	Yes	No	Specify:		
2.9. Did you have to travel far to see to the Dietitian?	Yes	No	Specify:		
2.10. Was there a consulting room for you?	Yes	No	Specify		
3. Waiting Times					
3.1. Did you have to wait long for the Dietitian	Yes	No	Specify:		
3.2. How long was your consulting session with the Dietitian	0-15min	15-20min	20-30min	30-60min	

4. Interpersonal Skills						
For the following statements, please indicate by a tick	**Strongly Disagree**	**Disagree**	**Neutral**	**Strongly Agree**	**Agree**	**Specify**
4.1. The Dietitian listened attentively to what I had to say						
4.2. The Dietitian was attentive to my needs						
For the following statements, please indicate by a tick	**Strongly Disagree**	**Disagree**	**Neutral**	**Strongly Agree**	**Agree**	**Specify**
4.3. The Dietitian understood me						
4.4. The Dietitian created a plan to help me with my medical condition						
4.5. The Dietitian explained my medical condition and how nutrition counselling will help me						
4.6. The Dietitian summarized key points for me						
5. Perceived Health Benefits						
5.1. The care I received from the Dietitian improved my health						
5.2. The care I received from the Dietitian improved the management of my medical condition						
5.3. The Dietitian encouraged me to participate during the consultation and make me feel part of the decision						
6. Dietitian presentation skills						
6.1. The Dietitian came across as well presented						
6.2. The Dietitian was courteous						
6.3. The Dietitian was friendly						
6.4. The Dietitian was polite						
6.5. The Dietitian made me feel comfortable						
6.6. The Dietitian was on time for my appointment						
7. Written Information and Education Material						
7.1. I found the information supplied by the Dietitian very useful						

7.2. The information was of a high standard						
7.3. The Dietitian could explain the information to me						
7.4. The information gave me helpful hints and ideas						
7.5. I found the information to be easy to understand						
7.6. The information was easy to read						
7.7. The information made sense						
7.8. The information was well presented						
7.9. The consulting room met my expectations						
8. Fulfilled expectations						
8.1. The nutrition care I received was helpful						
For the following statements, please indicate by a tick	**Strongly Disagree**	**Disagree**	**Neutral**	**Strongly Agree**	**Agree**	**Specify**
8.2. The nutrition care I received met my expectations						
8.3. I would recommend the nutrition services to other members of the community						
8.4. I am overall satisfied with the nutrition service						

Appendix 3: Focus Group Discussion Guide

The following might be possible questions to ask during the FGD

1. What do you think of the nutrition care/services delivered in the substructure?
2. What are some of the challenges to delivering nutrition care services in your facility?
3. What are the facilitators to delivering nutrition care services in the facility?
4. How would you describe the ideal setting in which to deliver nutrition care services? How does the actual setting in which you work compare to the "ideal"? How do you think this affects the delivery of nutrition care?
5. What role do you think; communication style (verbal and non-verbal) has on the delivery of nutrition care in your setting? Can you use interpersonal communication such as non-verbal communication to enhance your service?
6. What is the values expected as a professional to render quality nutrition services?
7. Do you form relationships with your patients as part of your quality control?
8. Are you satisfied with your work and your working environment?

Appendix 4: Application for Ethics Approval

UNIVERSITY OF THE WESTERN CAPE

(HEALTH) BIOMEDICAL RESEARCH ETHICS COMMITTEE

APPLICATION FOR ETHICS APPROVAL
For research with human participants

APPLICATION FORM

ADMINISTRATIVE DETAILS

NAME of Primary Researcher	Eugene Engle
Professional status (year of study?)	2018
NAME of Co-investigator	Dr. Ernesta Kunneke and Mrs Jill Wilkenson
UWC Faculty:	Community Health Sciences
UWC Department	Dietetics Department
Place of employment	Western Cape Department of Health
Full Postal address	
Contact telephone number	021 7051549
Email Address	Eugene.Engle@westerncape.gov.za or 2601855@myuwc.ac.za
Current HPCSA Number (or equivalent)	DT0036110
Title of Study	Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

1. What kind of study design is proposed?

This cross-sectional descriptive study design will employ a mixed method approach to describe the perceptions of nutrition care service delivery from the perspectives of both clients and Dietitians in the context of Primary Health Care (PHC) in the Metro Health Services, Western Cape.

2. Who or what are the proposed research subjects in your sample?

Patients (n =120) who access nutrition care services in selected PHC facilities will be invited to participate in the quantitative survey. Dietitians (n=4) who provide the nutrition care services will be invited to participate in a Focus Group Discussion.

3. Where will the Research be carried out?

This research will be carried out in the Klipfontein/Mitchells Plain Sub-structure (Sub-districts) across 3 primary health care facilities (Hanover Park

Community Health Centre (CHC), Mitchells Plain CHC and Heideveld Community Day Centre) where the 4 Dietitians are employed.

4. How will you collect your data?

For the quantitative component, an interview-administered survey will be used to gather information about patients' perceptions and experiences of nutrition care services. For the qualitative component, an all-inclusive sample of the 4 Dietitians employed in the Substructure will participate in a Focus Group Discussion (FGD). The FGD interview schedule will include open-ended questions developed to explore their perceptions of the quality of nutrition care service delivery

5. How will you address the ethical issues of consent and confidentiality etc?

Ethics clearance will be sought from UWC's BMREC committee. Upon receipt thereof, approval will be sought from the Western Cape Department's Research Ethics committee and permission to conduct the study within the facilities will be requested from individual facility managers. Written informed consent will be obtained from each participant before participation. The researcher will protect the identity of the participants and their nature to the contribution of the study. The survey will be anonymous and will not contain information that may personally identify the participants. Confidentiality of all participants will be maintained at all times and the information will be locked under secure methods.

6. If the subject needs any kind of health care what will be arranged?

For the patients, the researcher will arrange with the Facility Manager to ensure that the patients have access to the emergency counselling services within the health facility if required. For the Dietitians, the researcher will arrange with the Integrated Nutrition Program to have the Western Cape Department of Health employee wellness or counselling service contact details on standby should the need arise.

7. I certify that all information provided above is correct and that it will apply throughout the performance of the proposed research and that I shall be responsible for the safeguarding of the confidentiality of human subjects information involved.

I agree to comply with the UWC Biomedical Research Ethics Committee's Terms of reference and the SA Department of Health (2004) *Ethics in health research: Principles. Structures and processes,* and, if applicable, the SA Department of Health (2006) *South African good clinical practice guidelines.*

	Signatures	**Dates**
Researcher		

Co-investigators		

Head of Department		

If research is for Degree purposes:

Degree:	MPHN	Student No	2601855
Supervisor Name	Mrs Jill Wilkenson		
Signature		Date	

For Official Use

APPROVED	NOT APPROVED

Comment

Signature		Date	

Appendix 5: Ethics approval letter

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535
South Africa
T: +27 21 959 4111/2948
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E: research-ethics@uwc.ac.za
www.uwc.ac.za

01 March 2019

Mr E Engle
Human Ecology and Dietetics
Faculty of Community and Health Science

Ethics Reference Number: BM19/1/7

Project Title: Perceptions of patients and dietitians on the quality of nutrition care service delivery in primary health care facilities of the Western Cape Metro.

Approval Period: 15 February 2019 – 15 February 2020

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

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

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

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

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

BMREC REGISTRATION NUMBER -130416-050

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Appendix 6: Western Cape Government Health approval letter to conduct research

Western Cape Government
Health

HEALTH IMPACT ASSESSMENT
HEALTH RESEARCH SUB-DIRECTORATE
Health.Research@westerncape.gov.za
tel: +27 21 483 0866: fax: +27 21 483 9895
5th Floor, Norton Rose House,, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za)

REFERENCE: WC_201903_002
ENQUIRIES: Dr Sabela Petros

University of Western Cape

Robert Sobukwe Road

Bellville

Cape Town

7305

For attention: Mr Eugene Engle

Re: **Perceptions of patients and dietitians on the quality of nutrition care service delivery in primary health care facilities of the Western Cape Metro**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact following people to assist you with any further enquiries in accessing the following sites:

Dr Abdurahman CDC	**Florence Burger**	**021 637 9071**
Hanover Park CHC	**Loretta Abrahams**	**021 692 1240**
Heideveld CDC	**Heidi A Blaauw**	**021 637 8054**
Mitchells Plain CHC	**Amanda Hansen**	**021 391 5899**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within

six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).

3. In the event where the research project goes beyond the *estimated completion* date which was submitted, researchers are expected to complete and submit a progress report (**Annexure 8**) to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).

4. The reference number above should be quoted in all future correspondence.

Yours sincerely

DR M MOODLEY

DIRECTOR: HEALTH IMPACT ASSESSMENT

DATE: 28-03-2019

Appendix 7: Permission letter to conduct research

Permission to conduct Research at a Health Facility:

Research Summary Form

Facility: Hanover Park Community Health Centre, Mitchells Plain Health Centre, Heideveld Community Day Centre and Dr Abdurahman Community Day Centre (Pilot site)

Research Title: Perceptions of patients and dietitians on the quality of nutrition care service delivery in primary health care facilities of the Western Cape Metro.

NHRD Number:

Researcher contact number: 021 7051549

Summary of Research (please make this easy to read)

I am Eugene Engle, a third year Masters student enrolled in the Postgraduate degree in Public Health Nutrition at the University of the Western Cape. I am employed by the Western Cape Department of Health in Quality Assurance at Provincial level and was a Senior Dietitian in the Klipfontein Sub-district, based at Hanover Park CHC for 6 years.

My research will focus on patients and Dietitians perceptions and experience of nutrition care service delivery within the Klipfontein Mitchells Plain Substructure. The purpose of this study is to produce some evidence of the perceptions of nutrition service delivery from the perspectives of both patients and Dietitians to have a potential benefit of improving the quality of the nutrition services, increasing patient satisfaction and compliance to the nutrition care provided. There is scarcity of information regarding nutrition care service delivery and the study significance is to identify shortcomings and improving the quality of nutrition care service delivery within the PHC facilities.

My objectives for the research study:

1. To describe patients perceptions of the quality of nutrition care service delivery.
2. To describe patients experience of the quality of nutrition care service delivery.
3. To determine patient satisfaction with the nutrition care service delivery.
4. To explore the perceptions of Dietitians on the quality of nutrition care service delivery.

All patients consulted by the Dietitians on the dates of data collection will be conveniently sampled (n=120) across 3 Primary Health Care facilities in the substructure (Hanover Park Community Health Centre (CHC), Mitchells Plain CHC and Heideveld Community Day Centre (CDC) and Dr Abdurahman CDC for the pilot study) for participation in the quantitative component of the study. Thus it will be 40 patients per facility and referred to the Dietitians. Patients will be interviewed after their dietetic/nutrition consultation and there will be no interruption to the service. Data collection per facility should not take more than 2 days to complete and is dependent on the number of referred patients to the Dietitians. An interview-administered survey will be used to gather information about patients' perceptions and experiences of nutrition care services. The researcher requires only a small counselling or consulting room to interview patients which should not take more than 10 minutes to complete.

For the qualitative component, an all-inclusive sample of the 4 Dietitians employed in the Klipfontein Mitchells Plain Substructure will participate in a Focus Group Discussion. The Focus Group Discussion interview schedule will include open-ended questions developed to explore their perceptions of the quality of nutrition care service delivery. The researcher will arrange a venue at Lentegeur Psychiatric Hospital for a classroom in the afternoon in order to conduct the Focus Group Discussion and to ensure that the Dietitians still perform their operational requirements in the morning, hence to avoid service interruptions. The researcher requires permission from the Klipfontein Mitchells Plain Substructure to release the Dietitians to participate in the research during the afternoon session.

Ethics clearance was approved from UWC's BMREC committee with the reference number: BM19/1/17 for the time approval of 15 February 2019 to 15 February 2020. Participation in this study will be voluntary for the patients and Dietitians. The participants will be provided with an information sheet explaining the research purpose and what it is intended for. The consent forms will be made available for the participants to sign, should they voluntary participate in the research study. The participants can withdraw at any stage of the research. The letter will also request their participation in the study and ensure that confidentiality is maintained at all times. Participants will be informed of their right to confidentiality. All interviews and the Focus Group Discussion with the Dietitians will take place in a private room, boardroom or office. The researcher and study supervisors will be the only persons who will have access to completed questionnaires and that hard copies will be kept in a locked cabinet and this will be correctly disposed of after 5 years. Digital or electronic data will be stored in password protected files in which the primary researcher will have access to. To ensure anonymity, each participant will be assigned an alphanumerical code and captured by the researcher only. The researcher will be the only one that will have administrator rights to the data. The information will not be shared with any other external parties. The audio-recordings of the Focus Group Discussion will be saved and encrypted in an electronic file to which the researcher will have access to. The recording of the Focus Group Discussion will not be made available to anyone, other than transcribing the information for the key points and themes based on perceptions of quality nutrition care service delivery. Findings of this study will be disseminated and presented to the Klipfontein/Mitchells Plain substructure management, including the facility managers and Provincial Health Department nutrition sub-directorate. The identities of the patients and Dietitians will be protected even when the findings are published.

As the researcher, I intend to start between April and May with the Data Collection in order to comply with the timelines as stipulated by the University of the Western Cape to complete my Postgraduate Degree by the end of December 2019

Impact on Facility

Benefits*:*

The potential benefit of improving the quality of the nutrition services at facility level within the Klipfontein Mitchells Plain Substructure and for the entire Western Cape Health Department Districts. It can also result in increasing patient satisfaction and compliance to the nutrition care provided and improve the overall nutrition status of communities.

Staff involvement: **(please be detailed, and include categories of staff)**

The researcher does not require staff involvement at facility level. The Dietitians will have a different focus group discussion in the afternoon after they met their operation requirements in the morning.

Effect on Service Provision:

Improved patient satisfaction and adherence to nutrition counselling based on the quality of the nutrition services rendered.

Impact on patients

Improved holistic patient-centred care from the Dietitians and improved patient health status outcome.

Use of space, equipment, consumables, Lab test, x-rays, etc

The researcher only requires a small consulting or counselling room at the facility. A venue will be arranged for the Focus Group Discussion.

Appendix 8: Information Sheet for Patients

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2232 Fax: +27 21 959 3686

E-mail: ekunneke@uwc.ac.za

INFORMATION SHEET FOR PATIENTS

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

What is this study about?
This is a research project being conducted by Mr Eugene Engle at the University of the Western Cape. We are inviting you to participate in this research project because you will be able to provide the researcher with valuable information with regard to the quality of nutrition care service delivery. The purpose of this research project is to produce some evidence of the perceptions of nutrition care service delivery from the perspectives of both patients and Dietitians.

What will I be asked to do if I agree to participate?
You will be asked to complete a questionnaire with 8 key headings. This includes your basic information, if you have access to nutrition services, waiting times, how the Dietitian treats you and how you feel about the Dietitian in general. The study will be conducted in your Community Health/Day Centre in a designated office/consulting room as determined by the Facility Manager. The questionnaire should take about 10 minutes to complete.

Would my participation in this study be kept confidential?
The researcher(s) undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the survey will be anonymous and will not contain information that may personally identify you. Your name will not be included on the surveys and other collected data; a code will be placed on the survey and other collected data. To ensure your confidentiality, the information will be locked in filing cabinets and the digital or electronic data will be stored in password protected files to whom only the primary researcher will have access to. If we write a report or article about this research project, your identity will be protected at all times.

What are the risks of this research?
There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this

study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?
This research is not designed to help you personally, but the results may help the investigator learn more about perceived perceptions and experience of quality nutrition care service delivery in the Klipfontein/Mitchells Plain Substructure. We hope that, in the future, other people might benefit from this study through improved understanding of perceived perceptions and experience of quality nutrition service delivery.

Do I have to be in this research and may I stop participating at any time?
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?
This research is being conducted by Mr. Eugene Engle a Masters Student at the Dietetics Department of the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. Eugene Engle at: 021 7051549 or email address at 2601855@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

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INFORMATION SHEET FOR PATIENTS DURING THE PILOTING PROCESS

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

What is this study about?
This is a research project piloting process being conducted by Mr Eugene Engle at the University of the Western Cape. We are inviting you to participate in this piloting research process because you will be able to provide the researcher with valuable information with regard to the quality of nutrition care service delivery on the instrument measuring tool, in order for the researcher to amend as necessary.

What will I be asked to do if I agree to participate?
You will be asked to complete a pilot questionnaire with 8 key headings. This includes your basic information, if you have access to nutrition services, waiting times, how the Dietitian treats you and how you feel about the Dietitian in general. The study will be conducted in your Community Health/Day Centre in a designated office/consulting room as determined by the Facility Manager. The questionnaire should take about 10 minutes to complete.

Would my participation in this study be kept confidential?
The researcher(s) undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the survey will be anonymous and will not contain information that may personally identify you. Your name will not be included on the surveys and other collected data; a code will be placed on the survey and other collected data. To ensure your confidentiality, the information will be locked in filing cabinets and the digital or electronic data will be stored in password protected files to whom only the primary researcher will have access to. If we write a report or article about this research project, your identity will be protected at all times.

What are the risks of this research?
There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?
This research piloting process is not designed to help you personally, but the results may help the investigator to improve and amend the current research tool on the perceived perceptions and experience of quality nutrition care service delivery in the Klipfontein/Mitchells Plain Substructure.

Do I have to be in this research and may I stop participating at any time?
Your participation in this research piloting process is completely voluntary. You may choose not to take part at all. If you decide to participate in this research piloting process, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?
This research piloting process is being conducted by Mr. Eugene Engle a Masters Student at the Dietetics Department of the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. Eugene Engle at: 021 7051549 or email address at 2601855@myuwc.ac.za

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INFORMATION SHEET FOR DIETITIANS

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

What is this study about?

This is a research project being conducted by Mr Eugene Engle at the University of the Western Cape. We are inviting you to participate in this research project because you will be able to provide the researcher with valuable information with regard to the quality of nutrition care service delivery. The purpose of this research project is to produce some evidence of the perceptions of nutrition care service delivery from the perspectives of both patients and Dietitians.

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

You will be asked to participate in a Focus Group Discussion to explore your perceived perceptions on the quality of nutrition care service delivery within your Substructure. The Focus Group Discussion will take place within your Substructure boardroom or part of your existing nutrition meeting as determined by the Director. The Focus Group Discussion should take approximately one hour dependent on your responses and feedback from the questions.

Would my participation in this study be kept confidential?

The researcher(s) undertake to protect your identity and the nature of your contribution. To ensure your anonymity, the Focus Group Discussions will be anonymous and will not contain information that may personally identify you. Your name will not be included on the transcribed information and other collected data. This research will be making audio-recordings of you and to ensure your confidentiality, all audio-recordings will be saved and encrypted in an electronic file to which the researcher will have access to. The recording of the Focus Group Discussions will not be made available to anyone.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this

study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?
This research is not designed to help you personally, but the results may help the investigator learn more about perceived perceptions and experience of quality nutrition care service delivery in the Klipfontein/Mitchells Plain Substructure. We hope that, in the future, other people might benefit from this study through improved understanding of perceived perceptions and experience of quality nutrition service delivery.

Do I have to be in this research and may I stop participating at any time?
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?
This research is being conducted by Mr. Eugene Engle a Masters Student at the Dietetics Department of the University of the Western Cape. If you have any questions about the research study itself, please contact Mr. Eugene Engle at: 021 7051549 or email address at 2601855@myuwc.ac.za

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Appendix 11: Patient Consent Form

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CONSENT FORM

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

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

Participant's name……

Participant's signature…….

Date……

Appendix 12: Focus Group Confidentiality Binding Form

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FOCUS GROUP CONFIDENTIALITY BINDING FORM

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone by the researchers. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits. I understand that confidentiality is dependent on participants' in the Focus Group maintaining confidentiality and that the discussions will be audiotaped. I hereby agree to uphold the confidentiality of the discussions in the focus group by not disclosing the identity of other participants or any aspects of their contributions to members outside of the group and to be audiotaped during my participation in this study.

Participant's name……..

Participant's signature……..

Date……

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Appendix 13: Facility Manager Permission Form to Conduct Research

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FACILITY PERMISSION FORM TO CONDUCT THE RESEARCH

Project Title: Perceptions of Patients and Dietitians on the Quality of Nutrition Care Service Delivery in Primary Health Care Facilities of the Western Cape Metro

Dear Facility Manager

I would hereby request your permission to conduct my research on the above mentioned title at your facility. It would be appreciated if you could provide me with consulting room or office where I can interview the patients that are referred to the Dietitians in order to understand their perceived perceptions and experience of the quality nutrition care service delivery within your health facility.

If you have any questions about the research study itself, please contact Mr. Eugene Engle at: 021 7051549 or email address at 2601855@myuwc.ac.za. Should you have any questions regarding this study or if you wish to report any problems you have experienced related to the study, please contact:

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