

Developing a human resource profile for the nutrition workforce in the public health sector in the Western Cape province, South Africa

Hilary Goeiman

Thesis presented in partial fulfilment of the requirements for the degree of
Master of Nutrition at Stellenbosch University



Study Leader	:	Prof D Labadarios
Study Co-leader	:	Mr S A Titus
Statistician	:	Prof D G Nel

December 2008

DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

Background

The crisis and study of health workforce has become more important in developed and developing countries. The relationship between human resource issues and health system effectiveness has been acknowledged. Human resources are seen to be one of the main constraints in achieving the millennium development goals. A number of changes have taken place within health services since 2003, including the promulgation of the new health Act 63 of 2003, restructuring processes in the Western Cape province and the development of a Comprehensive Service Plan (CSP) to implement Health Care 2010. Nationally and provincially nutrition is declared a priority, due to the documented beneficial impact of nutrition support on preventable diseases, disease of life-style, as well as the treatment of high priority disease groups, namely TB and HIV/AIDS. For appropriate planning of nutrition services, the Integrated Nutrition Programme (INP) in the Western Cape needed to review the status of the nutrition workforce in the province, towards developing a human resource plan to meet the nutrition service needs, in the provincial context, its service platforms and approved service implementation plan for public health sector.

Objectives

The study aimed to describe the current status of the nutrition workforce (staffing profile) in the Western Cape province in terms of staffing levels, personnel categories, location, placement, qualifications, skills, and personnel expenditure at all levels of the public health sector. Provincial maps were developed to indicate the density of personnel per category pictorially.

Methods

In this descriptive observational study, a targeted sampling approach was applied by developing master lists of the respective nutrition/dietetic/food service units and personnel within the geographical districts and hospitals at all levels of care. All nutrition personnel employed by the Western Cape Department of Health were included in the study. Quantitative data collection methods including coding sheets (per facility), self administered questionnaires and the official personnel database (Persal) of the Department of Health was used. Questionnaires were constructed according to the variability of services, settings, and job outputs. The respective personnel were grouped into 5 categories. Descriptive statistical methods were used to analyse data. Comparisons in terms of urban and rural distributions were also completed.

Results

A response rate of 86% was achieved ($N = 647$) with food service workers being the largest proportion of staff ($N = 509$), followed by dietitians ($N = 64$), managers ($N = 31$), auxiliary workers ($N = 28$) and administrative personnel ($N = 15$). Significant differences ($p=0.0001-0.05$) were found amongst the respective personnel categories in terms of demographics, qualifications, training, experience, skills, competencies, time spent on the INP, and general human resource management areas. Training needs and areas of low skills were identified for the respective categories and key challenges and solutions in the nutrition workforce were highlighted.

Conclusion

The study indicates that the processes used to develop the workforce need to receive the same intensity as all other interventions. The results can be applied in providing evidence based information for the development of the Department of Health, Western Cape human resource plan and the integration of nutrition therein.

OPSOMMING

Agtergrond

Die krisis en studie van die gesondheidkorps word al hoe meer belangrik in ontwikkelde en ontwikkelende lande. Die verhouding tussen menslike hulpbron aangeleenthede en gesondheidsstelsel doeltreffendheid word al meer erken. Menslike hulpbronne word gesien as een van die hoof bydraende faktore om nie die millennium doelwitte te bereik nie. Heelwat veranderinge het plaasgevind in die gesondheidsdienste sedert 2003, insluitend die promulgering van die nuwe gesondheidswet 63 van 2003, wat ten doel het die herstrukturering van prosesse in die Wes-Kaap en die ontwikkeling van 'n Omvattende Diensplan om Gesondheidsorg 2010 te implimenter. Voeding is huidiglik verklaar as nasionale en provinsiale prioriteit as gevolg van die gedokumenteerde voordelige impak van voeding ondersteuning op voorkombare siektes, siektes van lewenstyl sowel as die behandeling van die hoë prioriteit siekte groepe, naamlik TB en MIV/VIGS. Ten einde effektief vir voeding dienste te beplan, moes die Geïntegreerde Voeding Program (GVP) in die Wes-Kaap die status van hul menslike hulpbronne evalueer as 'n stap in die rigting om 'n menslike hulpbronplan te ontwikkel wat die voedingdiensbehoefte aanspreek in die provinsiale konteks, die diensteplatforms en goedgekeurde dienste implementeringsplan vir die publieke gesondheidssektor.

Doelwitte

Die doel van die studie was om die huidige personeel status van voeding werkerskorps (personeel profiel) in die Wes-Kaap Provinsie te beskryf in terme van: personeelvlakke; lokasie; plasing; kwalifikasies; vaardighede en personeeluitgawes op alle vlakke van die publieke gesondheidsdienste. Provinsiale kaarte was ontwikkel om die densiteit van personeel per kategorieë grafies voor te stel.

Metodes

In hierdie observasie, beskrywende studie was die steekproef geteiken deur meester lyste van die voeding/dieetkunde/voedseldienseenhede en personeel binne geografiese distrikte en hospitale by die verskillende vlakke van sorg te ontwikkel. Al die voedingpersoneel in diens van die Wes-Kaap Departement van Gesondheid was ingesluit in die studie. Kwantitatiewe data invorderingsmetodes, insluitende gekodeerde lyste (per fasiliteit), selfgeadministreerde vraelyste en die amptelike personeel databasis (Persal) van Departement Gesondheid, was gebruik. As gevolg van die veranderlikheid van dienste, toestande en uitsette, was die vraelyste dienooreenkomstig saamgestel. Die personeel kategorie was verdeel in 5 personeel kategorieë. Beskrywende statistiese metodes was gebruik om die

data te analiseer. Vergelykings ten opsigte van landelike en stedelike verspreiding was ook gedoen.

Resultate

Die persentasie van respondente was 86% (N = 647) met voedseldiens werkers die grootste proporsie van die personeel (N = 509), gevolg deur dieetkundiges (N = 64), bestuurders (N = 31), aanvullende personeel (N = 28) en administratiewe personeel (N = 15). Beduidende verskille ($p=0.0001-0.05$) was gevind tussen die verskillende personeel kategorieë in terme van: demografie; kwalifikasies; opleiding; ondervinding; vaardighede, bevoegdheid; tyd aan GVP) spandeer; en algemene menslike hulpbron aangeleenthede. Behoeftes vir opleiding en areas van lae vaardigheidsvlakke was geïdentifiseer vir die verskillende kategorieë en uitdagings en oplossings was uitgelig.

Gevolgtrekking

Die studie dui aan dat die proses wat gevolg moet word om die wekerskorps saam te stel dieselfde intensiteit as ander intervensies behoort te geniet. Die resultate kan toegepas word in die ontwikkeling van 'n menslike hulpbronplan vir die Departement Gesondheid in die Wes-Kaap, asook die integrasie van voeding in die plan.

ACKNOWLEDGEMENTS

I would like to acknowledge and thank:

- My Heavenly Father, who determines my destiny in life.
- My loving family, husband - Peter and children (Chrismé and John – Charles) for their ongoing support in everything I do, who allows me to put my needs first and never gives up loving and supporting me.
- My parents in their old age, continuing to instil the values of striving for more, doing your best and moving further forward in life.
- My family for their support and best wished and a special dedication to my late brother Mervyn who always reminded me that I need to aim for more.
- My study leader, Prof D Labadarios, who never gave up on motivating me, believing in my abilities and providing expert guidance and support in this developmental process.
- My colleagues(Luzette and Lulama) in the Department of Health, Director, Mr S Titus and senior management who created the working environment for me to study and motivated me to complete this process.
- Prof D Nel for his professional work ethics and patience with the statistical analysis and interpretation of the data.
- Leonie Mottie - Jaars and Barbara Williams for their administrative support.
- My colleague in the national office, Jan Booyesen and his wife Ingrid Booyesen, (geographers) for their ongoing support, guidance and assisting me to develop provincial maps of the nutrition workforce.
- My friends and acquaintances for supporting me in the background, praying and sending text messages of support.
- The Nutrition workforce in the Western Cape province, who participated in the study and who believes in the development of workers.

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LIST OF ABBREVIATIONS

ABET	Adult based education and training
BFHI	Baby Friendly Hospital Initiative
BO	Boland Overberg
BOD	Burden of Disease
CHC	Community health centre
CSP	Comprehensive service plan
DAYLs	Disability adjusted life years
DHS	District Health System
EMS	Emergency Medical Services
HC	Health Care
HIV	Human Immunodeficiency virus
HR	Human resources
HRH	Human Resource for Health
HRM	Human Resource Management
ICD	International classification of disease
INP	Integrated Nutrition Programme
IPDP	Individual personnel development plan
LBW	Low birth weight
MDHS	Metropole district health services
NCD	Non communicable diseases
PHC	Primary Health Care
RDP	Reconstruction and development plan
SCK	Southern Cape Karoo
SPMS	Staff performance management system
TB	Tuberculosis
WHO	World Health Organisation
WW	West Coast Winelands
YLD	Years of life lived with disabilities

LIST OF DEFINITIONS

Malnutrition¹

A condition caused by inadequate or excess intake of nutrients.

Undernutrition¹

A condition in which the body contains lower than normal amounts of one or more nutrients.

Stunting¹

The anthropometric index height for age reflects linear growth achieved pre and post - nately. Deficits indicate long term, cumulative effects of inadequacies of nutrition and or health. Shortness is a result of the interaction of poor diet and disease at a proximal level. Stunting (low height for age) i.e. more than 2 standard deviations (2 Z scores) below the median of the National Centre for health Statistics/World health Organisation(NCHS/WHO) international growth reference for length or height for age.

Wasting¹

A recent and severe process that has produced a substantial weight loss, usually as a consequence of acute starvation and or severe disease. Chronic dietary deficit or disease can also lead to wasting. The anthropometric index weight for height reflects body weight relative to height. Wasting refers to thinness that is a deficit, defined as low weight for height i.e. more than 2 standard deviations (2 Z scores) below the NCHS/WHO International growth reference weight for height median.

Underweight¹

The anthropometric index weight for age represents body mass relative to age. Weight for age is influenced by height and weight and is thus a composite of stunting and wasting. In the absence of wasting, both weight for age and height for age reflect the long term nutrition and health experience of the individual and population. General lightness refers to a low weight for age. Underweight usually refers to lightness as defined as low weight for age i.e. more than 2 standard deviations (2 Z scores) below the NCHS/WHO International growth reference weight for age median.

Weight for age¹

An indicator of the degree of underweight defined as weight in relation to the median weight of a reference population of that age.

Weight for Height¹

An indicator of the degree of wasting of a child defined as weight in relation to the median height of a reference population of that age.

Z score¹

The deviation of an individual's value from the median value of a reference population, divided by the standard deviation of the reference population

Body Mass Index (BMI)¹

A measure of nutritional status, defined as body weight in kilograms divided by height in meters squared. (Kg/m²)

Health worker²

Means a person working in a component such as a health care system, whether a professional or non-professional, including voluntary and unpaid workers.

Mixed feeding³

Feeding both breast milk and other foods or liquids.

Food security⁴

This definition has three distinct but inter-related components i.e. Food availability, Reliability of food and Food distribution.

Food availability: effective or continuous supply of food at both national and household level. It is affected by input and output market condition, as well as production capabilities of the agricultural sector. Food access or effective demand: ability of nation and its household to acquire sufficient food on sustainable basis. It addresses issues of purchasing power and consumption behaviour.

Reliability of food: utilisation and consumption of safe and nutritious food.

Food distribution: Equitable provision of food to points of demand at the right time and place. This spatial/time aspect of food security relates to the fact that a country might be food secure at the national level, but still have regional pockets of food insecurity, at various periods of the agricultural cycle.

Globalisation⁵

The increasing inter - connectedness of countries and the openness of borders, ideas, people, commerce and financial capital.

Burden of disease⁶

The burden of disease measures the gap between the current health of a population and an ideal situation where everyone in the population lives into old age in full health, in a unit of disability adjusted life years (DAYLs).

Human resources for health (HRH)^{7,8,9}

HRH (synonyms are health manpower, health personnel, or health workforce) refer to persons engaged in any capacity in the production and delivery of health services. These persons may be paid or volunteer, with or without formal training for their functions, and in the public or private sector. HRH encompass "all individuals engaged in the promotion, protection, or improvement of population health, including clinical and non-clinical workers".

Human resources planning (HRP)^{7,8,9}

"...is the process of estimating the number of persons and the kinds of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives." (WHO, 1978) Over the years this function has been broadened to include that of formulating human resources policy, in which the word '*policy*' refers to statements made by relevant authorities that are intended to guide the allocation of resources and effort. Health services and human resources policies are key instruments for implementing decisions affecting the delivery of health care.

Human resources management (HRM)^{7,8,9}

HRM has been defined as the "mobilization, motivation, development, and fulfilment of human beings in and through work" (WHO, 1978). It "...covers all matters related to the employment, use, deployment and motivation of all categories of health workers, and largely determines the productivity, and therefore the coverage, of the health services system and its capacity to retain staff." Management also encompasses programmes for in-service and continuing professional education, as well as evaluation.

Occupations and occupational categories^{7,8,9}

Refer to a set of functions, requiring a specific combination of knowledge and abilities, and associated with a specific title, for example, doctor, nurse, laboratory technician, sanitarian.

Integrated Nutrition Programme (INP)¹⁰

A programme of the South African Department of Health aimed at specific target groups which combines direct nutrition interventions with indirect nutrition interventions to address malnutrition and which is implemented at different points of delivery.¹⁰

Dietitians

Hospital, community and community service dietitians^{11,12} – in the South African context means a person who is qualified in dietetics and registered with the Health Professions Council of South Africa (HPCSA) as a dietitian.

Nutritionists^{11,12}

Means a person responsible for the promotion of nutritional health and well-being and prevention of nutrition-related disorders in communities or populations via sustainable and equitable improvements in the food and nutrition system.

Mid level workers (Assistant Nutritionists - Nutrition advisors, Community liaison officers, specialised auxiliary service workers)^{11,12}

Means any person who is involved in the promotion and prevention of health with emphasis on nutrition programmes.

Food service managers¹³

Means persons responsible to management of the food service unit within an institution.

Food service supervisors¹³

Means persons responsible to supervise and administer the food service Unit within an institution.

Food service aids¹³

Means persons who receive, store, pre-prepare, cook and serve food within the food service unit in an institution.

Nutrition Managers/Coordinators

Officials responsible to manage and coordinate nutrition/dietetic services in a specified geographical area/facility.

Utilisation variables¹⁴

Refers to the number of times the average person visits a PHC facility and is derived from utilisation per capita (total headcounts/total population) and utilisation per uninsured (total headcount/uninsured population).

Workload variables¹⁴

Refers to direct patient care per category of staff, minutes per consultation per category of staff and the number of contacts of a patient with health workers at different service points during one visit per facility.

Patient contact¹⁴

A patient contact refers to a consultation or treatment event between the patient and a health worker. It is recognised that a patient may consult with or receive treatment by more than one health worker during a visit.

Efficiency indicators¹⁴

Refers to unit costs per contact, per patient and per capita.

Level 1 Care¹⁴

Care delivered by general practitioners, medical officers or PHC nurses in the absence of any specialist other than a family medicine specialist. Primary care clinics, community health centres and district hospitals operate at this level.

Level 2 Care¹⁴

Care that requires the expertise of general specialist led teams. Includes General surgery, Orthopaedics, General medicine, Paediatrics, Obstetrics, Gynaecology, Psychiatry, Emergency medicine, Radiology and Anaesthetics.

Level 3 Care¹⁴

Care that requires the expertise of a specialist working in a registered sub speciality.

Level 4 care¹⁴

Care provided by sub specialities and includes services very new, scarce expertise, highly expensive technology, found in one or two centres in the country.

Norms and standards¹⁵

The terms norms and standards are defined to set the criteria for assessment or parameters of quality.

Norms can be defined as a statistical normative rate of provision or measurable target outcome for a specified period of time. The definition implies the quantification of an outcome, determined according to a specific method.

Standards can be defined in health care terms as a statement about a desired and acceptable level of health care. The essence of this definition is a focus on the quality of the outcome.

CHAPTER 1: INTRODUCTION

1.1 Review of Related Literature

1.1.1 Importance of nutrition in health

1.1.1.1 *Nutritional risks associated with maternal and child undernutrition*

Malnutrition is the underlying cause of half the deaths for children under 5 years of age.^{1,2,6,16} The nutrition of mothers and children is closely linked. It is estimated that more than 3.5 million mothers and children under five die unnecessarily each year due to the underlying causes of malnutrition. Malnutrition is thought to begin at conception and most of the damage from malnutrition is already done by the second year of the child's life.^{6,16} Malnutrition weakens the immune system, enhances the severity of illness and can lead to permanent disability because of the physical and mental effects of a poor dietary intake in the early days and months of life.^{1, 2,6,16}

Mild and moderate malnutrition has been associated with severe consequences. Children under the age of two can suffer irreversible physical and cognitive damage which impacts adversely not only their future health, but also on their economic well-being and welfare. The consequences can continue into adulthood and can be passed on to the next generation, as undernourished girls have children of their own. The risk of developing chronic diseases increases if conditions such as stunting, severe wasting and intrauterine growth restriction (IUGR), followed by rapid weight gain in the 3 - 5 year age range, are observed.^{1,2,6,16}

Undernutrition is an important determinant of maternal and child health. It includes stunting and wasting and deficiencies of micronutrients and is known as one form of malnutrition. Maternal and child undernutrition continues to place a heavy burden on countries and families, especially low and middle-income countries due to its intergenerational nature and overall disease burden.^{15,17} Obesity and over consumption of specific nutrients is another form of malnutrition.¹⁶ Lower levels of education, productivity, income, access to nutrition and quality of life are experienced by the affected individuals and communities. Countries have to manage this continuous repetitive cycle and burden as it places the future workforce at risk.^{16,17} The United Nations International Children's Fund (UNICEF) conceptual framework recognises the complexity of malnutrition (Figure 1.1) and the relationship between poverty, food security and other underlying and immediate causes of maternal and child undernutrition, and its short-term and long-term consequences.¹⁶

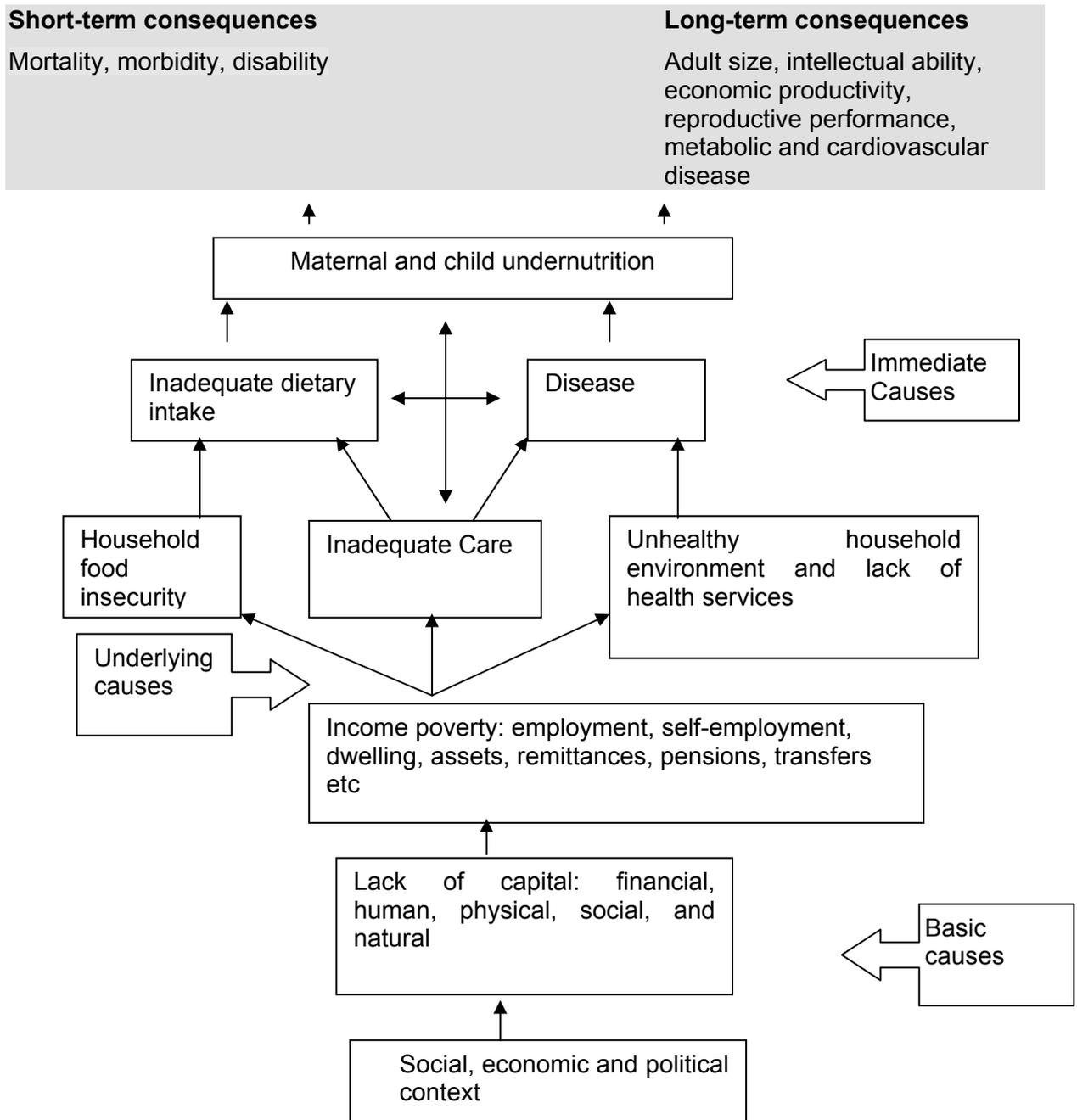


Figure 1.1: UNICEF framework of the relationship between poverty, food security, and other underlying and immediate causes of maternal and child undernutrition and its short and long term consequences¹⁶

Undernutrition has also been described as hunger, especially in the context of food insecurity where there is no access to sufficient, safe, nutritious, and culturally acceptable food to meet dietary needs.⁶ Food insecurity and nutritional vulnerability is a complex problem and can be ascribed to various factors including the following; socio-economic and political environment, food security, care practices, health and sanitation. These factors vary across countries,

regions and socio-economic groups. Not managing these factors can lead to a cycle of malnutrition and poor nutritional status. The different elements that cause malnutrition interact with one another, necessitating a broad multi-sectorial approach to address the problem of malnutrition.¹⁸

Pregnancy outcomes are influenced by the nutritional status of women before and during pregnancy. Maternal short stature is a risk factor for caesarean delivery, largely due to cephalopelvic disproportion. The inability to access affordable safe maternity services increases the risk of maternal morbidity.¹⁶ Pregnancy complications, assisted delivery and intrauterine growth are associated with the Body Mass Index (BMI) of the mother. Low BMI does not increase the risk of pregnancy complications and assisted delivery, whereas higher BMI increases this risk. There is an interaction between maternal BMI at conception, weight gain during pregnancy and birthweight.^{6,16} Women with low BMI who do not gain adequate weight are at risk of delivering low birth weight (LBW) infants. Low BMI is associated with intrauterine growth restriction (IUGR), which is a risk factor for neonatal conditions. Overweight/obesity influences physiological adaptations to energy available during pregnancy. Thinner women gain more weight during pregnancy and the fattest gain the least. The interactions between prepregnancy BMI and gestational weight gain can be explained by the fact that the resting metabolic rate of fatter women increases during pregnancy, thereby consuming more energy and leading generally to less weight gain. The overall energy cost of pregnancy is much lower in thin women and their weight gain may therefore be substantially higher. Further research is required to quantify the effects of BMI on IUGR. Poor fetal growth can indirectly contribute to neonatal deaths particularly in those resulting from asphyxia and infections, which together account for approximately 60% of neonatal deaths.^{1,16}

Good nutrition and its importance is a vital factor for economic development and should be seen as an intergenerational investment.^{6,16}

1.1.1.2 Nutritional risks associated with infant and young child feeding

Adequate nutrition during infancy and childhood is imperative for health, development and the prevention of morbidity and mortality in children.⁶ This includes exclusive breastfeeding for the first 6 months of life, followed by sustained breastfeeding for two years and beyond with the introduction of appropriate complementary foods at six months. Lack of optimal breastfeeding is associated with more than half of the deaths amongst children under 5 years. Exclusive breastfeeding compared with mixed breastfeeding has been associated with reduced incidence of diarrhoea, infectious diseases, allergy and child survival especially in poor resourced countries.^{16,19}

Evidence suggests that exclusive breastfeeding for the first 6 months may reduce the risk of obesity, chronic diseases - including cardiovascular disease and cancer - and improve educational levels and cognition later in life. The composition and or volume of breast milk is affected by severe maternal malnutrition as the concentration of some micronutrients (vitamin A, iodine, thiamine, riboflavin, pyridoxine and cobalamin) is dependent on maternal status and intake. The infant's status can be improved by post-natal maternal supplementation, especially Vitamin A, as the levels are low at birth.⁶

In many countries where breastfeeding is the cultural norm, the dilemma of HIV has posed a threat to optimal infant nutrition. Recognising that the human immunodeficiency virus (HIV) can be transmitted by breastfeeding, there has been concern about protecting infants from contracting HIV through breastfeeding. Mothers choosing to supplement their breast milk with formula also put the nutritional health of their infants at risk through mixed feeding. Evidence has been forthcoming and significantly indicates that exclusive breastfeeding has a lower risk of mother-to-child transmission than mixed feeding.¹⁹

Suboptimal complementary feeding is a determinant of stunting, and children who do not receive adequate quantity and quality of complementary foods after 6 months of age, can become stunted.¹⁶ Studies have shown that the lack of support for infant and young child feeding is the main contributing factor to inappropriate feeding practices globally. Health care personnel have an important role to play in providing counselling and support to mothers and caregivers and need to be empowered with evidence-based knowledge and skills.¹⁹

1.1.1.3 *Nutritional risks associated with adolescence*

Growth and height accelerate during adolescence, driven by hormonal changes, and are normally faster than in any other phase in postnatal life, except in the first year of life. Growth during this period accounts for more than 20% of total growth in stature and contributes up to 50% of adult bone mass. The "growth spurt" in girls normally occurs about 12-16 months before the onset of menstruation (menarche), some time between 10-14 years. Nutrient requirements are significantly increased when compared with early childhood years.¹

Growth in stature continues for up to 7 years after menarche. Adult height in women can be attained at 16 - 23 years of age. The pelvic bones are still growing after growth in height has ceased. Nutritionally, underweight adolescent girls grow for much longer and may still be growing at the time of the first pregnancy. Research indicates that adolescents who are still growing are likely to give birth to smaller babies due to competition for nutrients between the growing adolescent and the growing foetus, and poorer placental function which increases

the risk of LBW and neonatal mortality. Evidence suggests that there is greater weight loss during lactation and poorer breast milk production amongst adolescents. There is little evidence that growth retardation in early childhood can be corrected by the accelerated growth in adolescence. Stunted children are more likely to become stunted adults, while they remain in the same environments. Growth failure in early childhood may therefore be irreversible.¹

1.1.1.4 Nutritional risks associated with micronutrient deficiencies

Deficiencies of specific micronutrients, such as vitamin A, zinc, iron, calcium and iodine, are widespread and have significant health effects.¹

Vitamin A deficiency has been associated with increased morbidity and mortality in infants, children younger than 6 years of age and pregnant women. It is also associated with poor growth vision and cognitive development in children and contributes to anaemia by interfering with iron transport and utilisation for haemoglobin synthesis.^{1,16}

Zinc deficiency results in an increased risk of diarrhoea, pneumonia and malaria and is particularly evident in countries with increased stunting prevalence and inadequate intakes. Excessive zinc losses occur in diarrhoeal disease leading to loss of epithelial integrity and absorptive power. Zinc deficiency may contribute to infectious morbidity due to impairment of thymolymphoid integrity and reversible immune dysfunction.^{16,20}

Women and children are at risk of iron deficiency anaemia which is mainly due to low intakes of meat, fish, or poultry. Women of childbearing age are at risk for negative iron balance due to blood loss during menstruation and iron demands during pregnancy.¹⁶ Pregnancy anaemia is associated with preterm delivery and subsequent LBW in many studies. Anaemia in children is associated with poor motor development and behaviour and has long been known to impair work performance endurance and productivity. The homeostasis of iron is delicate as both deficiency and excess can negatively affect immune function.^{1,20}

Iodine deficiency has adverse effects on both pregnancy outcome and child development. Even mild, subclinical deficiency impairs motor and mental development of the fetus and increases the risk of miscarriage and fetal growth restriction.^{1,2,16} Cretinism is an adverse outcome of iodine deficiency during pregnancy, which adversely affects foetal thyroid function, and the prevalence of goitre increases with age and peaks in adolescence. Neurological cretinism, due to iodine deficiency during the first trimester is characterised by

poor cognitive ability, deaf mutism, speech defects and proximal neuromotor rigidity. Mental retardation and brain damage due to iodine deficiency can be prevented worldwide.^{1,2,16}

Calcium deficiency is recognised as one of the main causes of rickets in Africa. The calcium status of pregnant adolescent girls is of particular importance, as they require calcium for their own growth and development at a time when the needs for bone growth of the foetus is also high. Vitamin D deficiency in utero can cause poor fetal growth and skeletal mineralisation and is followed by lower concentrations of the vitamin in breast milk.

Poor folate status at conception increases the risk of neural tube and other birth defects and possibly pre-eclampsia and other adverse effects. Some studies have also identified Vitamin B₁₂ deficiency as a risk factor for neural tube defects and fetal loss. Global developmental delays, poor neurocognitive function, stunting and failure to thrive, which can be irreversible, have been observed in children who are breastfed by mothers with Vitamin B₁₂ deficiency.^{1, 16}

In both developing and developed countries, micronutrient deficiencies are common in persons with HIV infection and Aids. These deficiencies occur as a result of reduced intake due to anorexia associated with Aids, opportunistic infections, losses in stools due to diarrhoea, malabsorption and parasitic infections. Observational studies have shown a direct correlation between micronutrient intake (Vitamin A, B, zinc and selenium) and clinical outcomes of HIV infection. Recent studies have also highlighted significant multiple micronutrient deficiencies in South Africans. Due to the significant association of micronutrients and immunity, deficiencies may act as co-factors in HIV disease transmission and progression. A lack of Vitamin A, B₆, B₁₂, C, E, beta carotene, zinc, copper, selenium, magnesium and iron have been reported in association with HIV infection. Higher intakes of niacin and vitamins B₁, B₂ and B₆ in Aids patients were associated with a significantly slower progression of disease (40 – 48%) and death (40 – 60%) after 8 years of follow up. Selenium deficiency is associated with reduced immune function, faster disease progression and higher mortality in HIV.²⁰

1.1.1.5 Nutritional risks associated with overweight, obesity and chronic disease

Childhood obesity is associated with an increased chance of premature death and disability in adulthood. Globally, approximately 22 million children under the age of 5 years are obese. Obesity is a known factor for type 2 diabetes. In children and adolescents, type 2 diabetes has increased from 3% (1990) of all cases to up to 45% of new onset cases (2005). Globally in 2005, it was estimated that over 1 billion people were overweight, including 805 million

women, and over 300 million people were obese. Overweight and obesity are also prevalent now in low and middle income countries. Obesity has been reported to account for up to 5% of national health expenditure.⁵

Chronic diseases/Non communicable diseases (NCD) include heart disease, stroke, cancer, chronic respiratory diseases and diabetes. Visual impairment and blindness, hearing impairment and deafness, oral diseases and genetic disorders are other chronic conditions that account for a substantial portion of the global burden of disease.⁵

The global trends with regard to unhealthy lifestyles and diet include a high consumption of energy-dense foods which are low in micronutrients and fibre, and high in total fat, saturated fat, trans fatty acids, free sugars and salt. Evidence indicates that unhealthy behaviour associated with these diseases not only occurs in higher socio-economic and middle-income countries, but also in poor communities in developing countries.^{21,22}

South Africa has diverse living conditions, changing social, political, economic factors and urbanisation. Nutrition transition (changes in the composition of the diet, usually accompanied by changes in physical activity levels)²¹ has also been observed in South Africa. Many South Africans, who lead unhealthy lifestyles, have a high intake of energy, total fat, added sugar and a low intake of fruit and vegetables. Many are inactive, smoke cigarettes and have a high intake of alcohol. The major risk factors as leading causes of NCD in South Africa, were reported to include high blood pressure, dyslipidaemia, high serum cholesterol levels, overweight and obesity, physical inactivity, tobacco use, and inadequate intake of fruit and vegetables.^{21,22}

Chronic disease and poverty are interconnected in a vicious cycle in that there is increased exposure to risks and decreased access to health services. The poor are more vulnerable in that they experience material deprivation and psychosocial stress, higher levels of risk behaviour, unhealthy living conditions and limited access to good quality health care. Chronic diseases are likely to ruin the economic prospects in families and worsen the poverty situation. Wealth, on the other hand, does not exempt an individual from having chronic diseases, since psychosocial factors e.g. lack of social support and perceived lack of control, are strongly related to the risk of chronic diseases. Evidence reveals that as some countries develop economically, some risk factors appear to affect the wealthier populations first. They cause premature deaths and disability, affect the quality of life of affected individuals and impact the economic status of families, communities and societies in general.^{5,22}

Medical and other costs will increase tremendously with the increased prevalence of chronic disease, and in particular the direct health costs, costs of care, non medical goods and the services rendered in the treatment.^{5,21,22} Evidence suggests that reducing the prevalence of risk factors for chronic diseases can impact the economy and productivity and result in savings in direct health costs. A national government unifying framework is suggested for chronic disease prevention and control, with the aim that actions at all levels and by all sectors are mutually supported. Nutrition management as part of comprehensive integrated prevention and control strategy is important. Integrated strategies are more effective if they focus on the common risk factors, incorporating all diseases and combining interventions for the whole population and the individual. Investing in interventions to control the burden of chronic disease will benefit the health status of individuals and ultimately the economies of countries and individuals.⁵

1.1.1.6 *Nutritional risks associated with infectious diseases*

The relationship between malnutrition and infectious disease is cyclical.³ Children are at an increased risk for Tuberculosis (TB) and other infectious diseases due to their undeveloped immune systems. The synergistic effect of malnutrition and infections contributes to child deaths.³⁰ Infectious diseases are important determinants of stunting and conditions such as respiratory illness, malaria and diarrhoea can contribute to growth retardation because of their association with malabsorption of nutrients, anorexia and catabolism.¹⁶

Nutritional deficiency can contribute to the progression of disease if there are consistent inadequate intakes of essential nutrients. This leads to a weakened immune system which decreases the resistance to infection. The weakened immune system results in repeated infections which in turn lead to poor nutrition and the cycle continues (Figure 1.2).^{3,20} The evidence of the association between infectious disease and nutritional deficiency has long been known and is compounded by the synergies between immune deficiency and nutritional deficiency. The presence of the Human Immunodeficiency Virus (HIV) increases this vicious cycle on an exceptional scale in the developing world, particularly in sub-Saharan Africa.²⁰

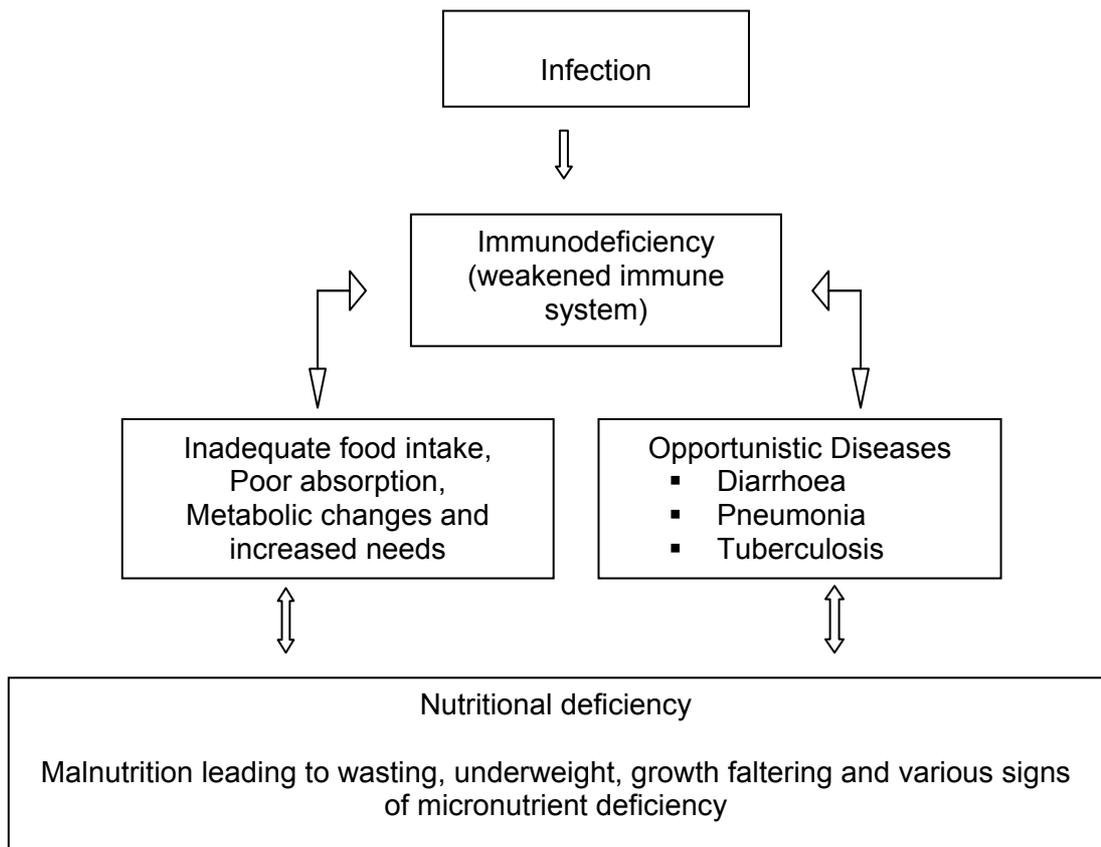


Figure 1.2 Malnutrition and infection cycle^{3,20}

HIV infection and diarrhoea over a long period results in weight loss or wasting. This acute weight loss can lead to poor health and earlier death. In Africa the acute wasting that is observed in HIV infected individuals, is often due to the HIV and TB co-infection. Weight loss usually occurs in HIV positive individuals when there is an infection e.g. pneumonia, diarrhoea and TB.

The link between TB and nutritional status has also long been recognised. Malnutrition may predispose people to the development of clinical disease and TB can contribute to malnutrition. Nutritional status is an important determinant of clinical outcome during TB in that these individuals can suffer from micronutrient deficiencies i.e. vitamin A, thiamine, vitamin B₆, folate, iron and vitamin E. The risk of developing clinical tuberculosis in immunosuppressed individuals is higher which explains the increase in the prevalence of TB in association with HIV infection. Nutritional alterations include increased energy expenditure, nutrient malabsorption, micronutrient malnutrition, and increased production of inflammatory cytokines with lipolytic and proteolytic activity.

HIV co-infection is associated with increased mortality due to TB. HIV, TB and malnutrition combined (“triple trouble”) increase the risks for affected individuals when compared to individuals who have only one of the three conditions.³

Survival of HIV infected individuals is influenced by the maintenance of lean body mass or muscle tissue. There is a strong correlation between severe loss of muscle mass and death. Fat loss and/or fat accumulation in distinct regions of the body (Lipodystrophy syndrome) have been observed in individuals on highly active antiretroviral therapies (HAART). Lipodystrophy is characterised by “lipoatrophy” i.e. loss of fat on the arms, legs, buttocks and face that may or may not be accompanied by accumulation of visceral fat on the abdomen, or fat on the breasts in women, or front and back of the neck. These changes in the body composition i.e. redistribution of fat to the mid section, may be associated with increased risk of other diseases such as heart or gallbladder disease and diabetes.^{3,20}

Health services are affected by poor nutritional status as this impacts on health care at different levels of service (community based, facility based; at tertiary level and at primary health care level)¹. Nutrition is key to the outcome of patients who are already compromised such as TB-patients struggling to take medication on an empty stomach, the HIV+ patient’s treatment and management, the growth and development of a child, the birth weight of a newborn and the prevention of extended hospital stay due to poor nutritional support.^{1,13}

1.1.2 Nutrition and burden of disease

Understanding burden of disease (BOD) is essential to the planning and decision making process within the health sector. In order to address the BOD it is important to understand that determinants of health encompass both downstream and upstream causes.²⁴ Upstream causes (societal and structural factors) are considered as “root causes” and touch on issues of development such as inequity, poverty, low income and unemployment, homelessness, social inclusion and justice. The down stream causes (biological and behavioural risk factors) are referred to as “final”, proximal, or direct causes in the causal pathway. Health status is a consequence of development with positive and negative effects e.g. globalisation brings prospects for communication, transfer of knowledge and new technologies which can benefit health, but at the same time it brings about the mass departure of health professionals from developing countries to developed countries in search of stronger currencies. This has a potential negative effect on the capacity of health services.²⁴

WHO has estimated in 2003 that more than 1 billion adults are overweight, of whom at least 300 million are obese as a result of rising income. Dietary patterns have changed to diets

high in sugar and fat. Less demanding work, automated transport and entertainment technology in the home have resulted in less active leisure activities. In spite of rising income and faster communication being attractive and evidently improving quality of life, they also impact negatively on health through a reduction of physical activity and an increase in overeating in relation to energy expenditure. Populations undergo epidemiological transition where combinations of infectious disease and chronic disease are present in the same population. For disease prevention, the positive and negative aspects of the determinants must be addressed. The conceptual model of risk factors for disease creates opportunity for collaboration between different public health sectors to address issues.²⁴

The BOD measures the gap between the current health of a population and an ideal situation where everyone in the population lives into old age in full health. Disability adjusted life years (DALYs) combine years of life lost due to premature death and years of life lived with disabilities (YLD) into an indicator allowing assessment of the total loss of health from different causes.¹⁶

The World Health Organisation (WHO) has rated underweight and obesity amongst the top ten leading risk factors for the global burden of disease. A double burden of malnutrition (both under and overnutrition) is observed in developing countries, which is brought about by a combination of risk factors, including slow implementation of water and sanitation, fragile public health systems and disjointed efforts to reduce undernutrition. Simultaneously, increasing urbanisation, changing dietary patterns and lifestyles contribute to the rise in overweight and diet-related chronic diseases.²⁷ This double burden of malnutrition is prevalent in all ethnic groups in South Africa.²¹ Historically, undernutrition has been associated with higher prevalence of infectious diseases; as populations move into epidemiologic and demographic transition, increases in overweight and obesity begin to appear and the problems of undernutrition and infectious disease become past problems. Today a modified pattern, referred to as the protracted-polarized model, is observed, where infectious and chronic disease coexist over a longer period of time.²⁷

The international classification of disease (ICD) system considers four groups of nutritional deficiencies as possible direct causes of death i.e. protein-energy malnutrition, iron deficiency anaemia, vitamin A deficiency and iodine deficiency. LBW is also included as a direct cause of death, since nearly all infant deaths in developing countries are due to preterm births.¹⁶

Undernourished children are at an increased risk of death from many infectious diseases. According to nutritional status measures in 2004, underweight was responsible for the largest

disease burden (18.7% DALYs) in children under 5 years globally. Stunting, severe wasting and intrauterine growth restriction (LBW) together were responsible for 2.1 million deaths (21% of worldwide deaths in children under 5 years) and 91.0 million DAYLs (21% of global DAYLs for children under 5; 7% of total global DAYLs). Vitamin A and Zinc deficiency contributed the largest disease burden amongst micronutrient deficiencies in children under 5 in 2004, contributing 5.3% and 3.8% respectively. The disease burden due to suboptimal breastfeeding included 1.4 million deaths (12% under 5 year deaths) and 43.5 million deaths which is 10% of global under 5 year old DAYLs and 3% of total DAYLs.¹⁶

More than three quarters of these deaths are due to non-exclusive breastfeeding in the first 6 months of life. The adverse effect of HIV transmission in breast milk was not considered in these estimations. Evidence, however, has indicated that there is a net benefit in breastfeeding in terms of HIV-free survival.¹⁶ Breastfeeding and care givers' practices have been shown worldwide as an important immediate determinant of diarrhoea, while the quality of health services and overall socioeconomic status are important underlying determinants. Evidence suggest that substantial health gains can be made if the nutritional status of children is improved.²³

NCD accounted for 56 million deaths globally and 47% of the global burden of disease in 2001 (MRC 2006). Of the deaths from all causes in 2005 (58 million), it is estimated that 35 million (60%) were related to chronic diseases, which is double the number of deaths from all infectious diseases (17million, 30%), including HIV/AIDS, TB, malaria, maternal and perinatal conditions, and nutritional deficiencies combined. An additional 9% of the total deaths is expected to be attributed to violence and injuries. Globally the poorest countries are worst affected, i.e. 80% of chronic disease deaths occur in low and middle income countries and 20% in high income countries. Chronic disease deaths are not restricted to older persons, but occur at younger ages in low and middle-income countries than in high-income countries. South Africans die before the age of 65 as a result of these diseases, which have a negative impact on the economy since skilled and experienced workers are often the victims.⁵

South Africa has been described as having a quadruple burden of disease due to:^{21,22,}

- The continuation of infectious diseases associated with underdevelopment, poverty and undernutrition;
- The emerging epidemic of chronic diseases/NCD linked to overnutrition and western types of diet and lifestyles;
- The explosive HIV/AIDS epidemic
- The continued burden of injury-related deaths

The 20 top causes of death for South Africa (2000) have been identified (Table 1.1)²⁹

Table 1.1: The causes of death and their percentages for persons, male and female, South Africa, 2000 – Revised²⁹

Rank	Cause of death	%
1	HIV/AIDS	25.5
2	Ischaemic heart disease	6.6
3	Stroke	6.5
4	Tuberculosis	5.5
5	Interpersonal violence	5.3
6	Lower respiratory infections	4.4
7	Hypertensive disease	3.2
8	Diarrhoeal diseases	3.1
9	Road traffic accidents	3.1
10	Diabetes mellitus	2.6
11	Chronic obstructive pulmonary disease	2.5
12	Low birth weight	2.2
13	Asthma	1.3
14	Trachea/ bronchi/ lung cancer	1.3
15	Nephritis/nephrosis	1.3
16	Septicaemia	1.2
17	Oesophageal cancer	1.1
16	Protein-energy malnutrition	1.1
19	Suicide	1.0
20	Cirrhosis of liver	1.0
	All causes	100

The Western Cape has the lowest under 5 mortality rate at 46 per 1000 live births compared with the national under five mortality of 95 per 1000 live births.³⁰ HIV/AIDS accounted for 16% of deaths in infants and 38% in the 1 – 5 year old age group in the Western Cape in the year 2000. Over half of the deaths in young children were due to diseases of underdevelopment and poverty.^{23,25,26,28} The leading pattern of childhood mortality and morbidity remains one of nutritional deficiency (including LBW and communicable disease). HIV/AIDS, diarrhoea, LBW, acute respiratory infections (ARI) and malnutrition are still the biggest killers of small children. Malnutrition acts synergistically with ARI and diarrhoea in

causing mortality and contributes to low birth weight. Determinants of malnutrition include immediate, proximal determinants i.e. inadequate dietary intake, household food consumption, food poverty (objective measure of food insecurity), inadequate care for women and children, maternal care practices (down stream causes). More distal determinants or upstream causes include socio-economic status and deprivation.²³

The nutrition workforce is challenged by the immense nature of the burden of disease, i.e. nutrition-related disorders ranging from undernutrition, micronutrient deficiencies to overnutrition. The groups affected are also throughout the lifecycle i.e. pregnant women, infants up to and including the elderly.³⁰

1.1.3 Human resource planning

A number of definitions have been used to define human resource planning. Two of the most recent definitions are as follows;⁸

- Human resource planning is a process through which management strives to have the right numbers (quantity) and kinds of people (quality) at the right places, at the right time, doing things that result in accomplishing the organisation's goals/mission.
- It is a systematic process for identifying the workforce characteristics and competencies required to meet an organisation's strategic goals and for developing strategies to meet these goals.

Human resource planning is the first step in a successful human resource development process. This process is an ongoing process of determining and satisfying an organisation's human resource needs as derived from its statutory mandates, strategic objectives and available financial resources. It must be dealt with as part of the department's strategic planning process. The senior management determines the strategy and goals of an organisation and directs how change should be managed. Analyses of the environment (external and internal) determine strategy and goals. The goals and objectives derived from the strategic plan of an organisation provide the basis for determining the necessary financial resources and the basis for workforce needs.⁸ Planning should involve all relevant stakeholders and past experiences should be taken into account.³²

Human resource planning highlights the people factor in achieving results and provides tools for identifying needed competencies and for building the future workforce. The entire system should match the organisation's needs for productive people whose career-related needs

and objectives will also be met. Managers who are involved in human resource planning must have a clear understanding of the overall strategic plan, vision, mission and objectives of the organisation/department. They will also have to be directly involved in the establishing of their institutions' operational (business) plans. It is thus clear that the primary drivers of human resource planning will have to be senior line managers supported by human resource, organisational development, and financial advisors. Human resource planning provides a systematic framework for organisations to consciously plan their human resource requirements in terms of external and internal supplies.^{8,32}

In general, organisations undertake human resource planning to achieve the following:⁸

- To ensure that the goals and objectives of a strategic plan are achieved;
- To cope with future staff needs;
- To cope with change;
- To ensure an adequate supply of highly skilled and qualified staff;
- To provide human resource information to other organisational functions;
- To determine human resource policies and planning practices that will attract and retain the appropriate people, and
- To ensure a fair representation of the population mix throughout the hierarchy of the organisation.

The need for human resources is derived from a thorough situation analysis of the current workforce i.e. particulars of employees in the different job grades, qualifications, level of training, service records, promotion prospects and salary scale. Capturing the information into a database is beneficial for the process of planning. Analysis will determine the workforce needs i.e. if the workforce should be expanded, and or, reduced. Human resource planning can be put into action through recruitment, selection, induction, training, performance appraisal, remuneration and promotion.³²

It is recommended that a coherent process should be used to estimate personnel needs and identify shortcomings and implementation processes. It is important to pursue the three components in human resource planning (Figure 1.3).^{31,32} A monitoring and evaluation process also needs to be established in organisations/departments to ensure that the workforce model remains valid and that it is in line with the organisation's identified strategic goals and objectives.⁸

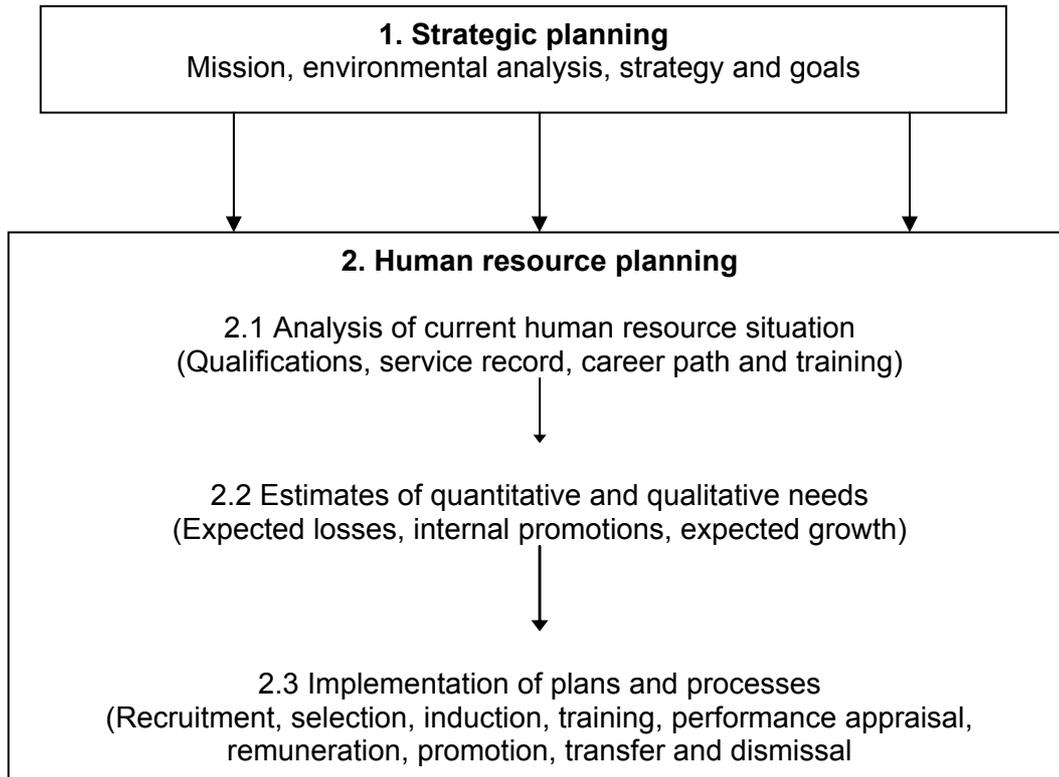


Figure 1.3 Human resource-planning processes^{31,32}

1.1.4 Background to the public health system in South Africa³³

Basic health care is a fundamental right of the South African Constitution as per Section 27 of the Constitution:^{34,35}

“(1) Everyone has the right to have access to-

- (a) Health care services, including reproductive health care;
- (b) sufficient food and water; and
- (c) social security, including, if they are unable to support themselves and their dependants, appropriate social assistance.

(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.

(3) No one may be refused emergency medical treatment.”

Post 1994, the national DOH has developed a number of policies and legislation that impacts directly and indirectly on the delivery of health services. The Reconstruction and Development Programme (RDP) was adopted by the Government of National Unity as its programme of action and was divided into five programmes:³³

- Meeting basic needs
- Developing our human resources
- Building the economy
- Democratising the state
- Implementing the RDP

Part of the programme to meet basic needs is the need for nutrition and health care. With regard to nutrition, the following was proposed: ³³

- Improving food security through land reform, job programmes and reorganisation of the community
- Short term interventions such as nutrition education with targeted transfers
- The implementation of a national nutrition surveillance system which should include weighing children under 5 to establish their levels of growth and well-being.

The RDP proposed that drawing all role players into the National Health system should help to restructure the health system. Public and private service providers should be included and organised at national, provincial, district and community levels. The health system would further be based on the district health system, which is the vehicle for the delivery of primary health care, based on the primary care approach.

The primary care approach emphasises community participation and empowerment, intersectoral collaboration and cost effective care as well as integration of preventive, promotive, curative and rehabilitation services.

A number of health services were targeted including; free health care for children under 6 and for homeless children at all public clinics and health centres and free quality antenatal, delivery and postnatal services to improve women and child health. Human resource strategy must include: provision of core teams; training and reorientation of all health workers in PHC; redistribution of personnel, programmes to attract personnel to the public sector; implementation of human resource planning and management system; a review of all training programmes and selection criteria and, shifts of budgets in favour of PHC. ³³

The white paper for the transformation of the health system for South Africa was published in 1997 (Government Gazette no 17910) and addressed the national health plan by setting a set of policy objectives and principles. It also included a series of implementation strategies designed to meet the needs of South Africans within its context and resources. Five key strategies were also outlined to transform health including the promotion of a single unified

system - a system that would focus on districts and the implementation of PHC and promote common goals in the three sectors of government. The national, provincial and district levels would play complementary roles and an essential PHC package of service would be available to the entire population at the first point of contact.^{33,36}

Chapter 7 of the 21 chapters of the white paper for the transformation of the health system for South Africa was devoted to nutrition and three key principles were listed:³⁶

- Nutrition for all South Africans should be promoted as a basic right and an integral component and outcome measure of the country's social and economic development,
- Nutrition programmes should be integrated, sustainable, environmentally sound, people and community driven and should target the most vulnerable groups, especially women and children,
- Nutritional well-being should be promoted and monitored within nationally defined goals.

A three-pronged nutrition strategy was proposed:

- Health facility-based nutrition programme
- Community-based nutrition programme
- Nutrition promotion: communication, advocacy and legislation

The Health Sector Strategic Framework 1999 – 2004 was completed on request of Dr N Dlamini Zuma as a review of activities during the first 5 years post democracy and to develop a strategic plan for the next 5 years. This framework was intended to supplement the white paper and was also called the ten-point plan.

The District Health System (DHS) Draft Policy was released in 1995 and has been used as a guide for implementation in South Africa. The DHS is established as a vehicle for delivery of primary health care services in an integrated and comprehensive manner.

The DHS is defined as per WHO definition:

- A DHS based on PHC is a more or less self-contained segment of the National Health System.
- It comprises first and foremost a well-defined population, living within a clearly delineated administrative and geographical area, whether urban or rural.
- It includes all institutions and individuals providing health care in the district, whether governmental, social security, non-governmental, private, or traditional.

- It consists of a large variety of inter-related elements that contribute to health in homes, schools, work places and communities, through the health and other related sectors.
- It includes self care and all health care workers and facilities, up to and including the hospital at the first referral level, and the appropriate laboratory, other diagnostic, and logistic support services”

The development of this system also rests upon a set of twelve principles:

- Overcoming fragmentation
- Equity
- Comprehensive service provision
- Effectiveness
- Efficiency
- Quality
- Access to services
- Local accountability
- Community participation
- Decentralization
- Developmental and intersectoral approach
- Sustainability

The specific goals for transformation and guidelines to achieve goals at district level were outlined.³³

Sound nutrition is a basic human right and is guaranteed in the South African Constitution through the Bill of Rights. It is a precondition for the attainment of people's full intellectual and physical potential. The DOH has to fulfil the right as one of its obligations, to ensure that nutrition security is respected, protected, facilitated and provided to all the people of South Africa. Nutrition programmes are also the outcome of developmental processes in society and not simply a service to be delivered. Improving nutrition is ethically important, an economic investment and a key element of health care at all levels.¹⁰

The national Integrated Nutrition Programme (INP) was developed from the recommendations of the Nutrition Committee appointed in 1995 by the former Minister of Health, Dr NC Zuma, to develop a nutrition strategy for South Africa.^{10,37} The South African

Government has adopted and implemented the INP to address the nutrition challenges in the country.^{10,37,38}

The National Health Act 2004, No 61 of 2003, outlines the regulation of health and how health services across the nation should be provided. The act addresses the establishment of the national health system, setting out the duties of health care providers, health workers, health establishments and users and protecting, promoting and fulfilling the rights of people as per the constitution. The DHS is specifically addressed.³⁵

1.1.4.1 Health care 2010

The Western Cape DOH approved its long term strategic plan in March 2003, named Health Care (HC) 2010. HC 2010 aims to ensure equal access to quality health care for all people who need it. It aims to reshape the public health services in the Western Cape concentrating on primary level services, community-based care and preventive care.^{39,42}

Primary level care services at PHC facilities are more effective as they are situated close to where people live and the treatment costs less than treatment on the secondary and tertiary levels. Primary services are supported by quality secondary and tertiary care. Secondary and tertiary hospitals are maintained in this system as centres of excellence for high level care. Appropriate care thus is provided to clients in a more cost efficient way.^{39,41,42}

The vision of health care 2010 is “Equal access to quality care”. This vision statement is consistent with the central goals of the department;³⁹

- Making health services Accessible to everyone
- Giving Appropriate care at the right level
- Making health care Affordable for everyone
- Making health care services Equitable
- Making the services delivered more Effective
- Making the services delivered more Efficient
- Commitment to core values which encompasses Batho Pele principles i.e. Integrity, Transparency and Openness, Honesty, Respect of people, Commitment to quality of care.

The Public Health System in the Western Cape is implementing a system for providing three levels of health care:

- Level 1 (Clinics, Community Health Centres and District Hospitals)

- Level 2 (Regional/Secondary Hospitals)
- Level 3 (Academic /Tertiary Hospitals)

The four pillars of HC 2010/Implementation plans are:^{39,42}

- Service Delivery Plan: appropriate care on the right level
- Infrastructure Plan: high quality facilities accessible to all people
- Human resource Plan: more effective and efficient staff
- Financial Implementation plan: affordable and equitable health services

The BOD (factors influencing wellness) are factored into this plan and the implementation of the DHS is emphasized.

1.1.4.2 *The comprehensive service plan (CSP)*

The comprehensive service plan (CSP) provides a guideline for the implementation of HC 2010 at all levels of care and was approved by the Western Cape Minister of Health on 11 May 2007.¹⁴

It sets out the kind of health services, at what level and which resources (inclusive of human resources) are needed to provide the service. It focuses further on strengthening the DHS and the development of community-based services, developing more specialised health services in the regional and central/tertiary hospitals in support of the DHS and the determination of resources/prioritization (human, infrastructural and financial).^{14,41} The main focus is to improve service delivery, improve access to services and treatment at appropriate levels. The CSP addresses service plans for the following areas:

- DHS
- Reshaping Acute Hospital Services
- Specialised Hospitals
- Emergency Medical Services
- Forensic Pathology Services

The proposed shape is a solid base i.e. PHC services that are integrated with level 2 and 3 services to ultimately provide a seamless service. The reshaping of the services must be viewed holistically, as restructuring will be coordinated to prevent disruption of services. The service platform for the DHS service has been clearly outlined with the vision of 90% of contacts being made at this level.

1.1.4.3 The district health system(DHS) and the comprehensive service plan (CSP)

The implementation and strengthening of the DHS has implications for nutrition and the delivery of services in Facility Based Services (FBS) as well as Community Based Services (CBS) (Figure1.4). The National Health Act, Act 61 of 2003 indicates that the DHS must be managed per health district.¹⁴

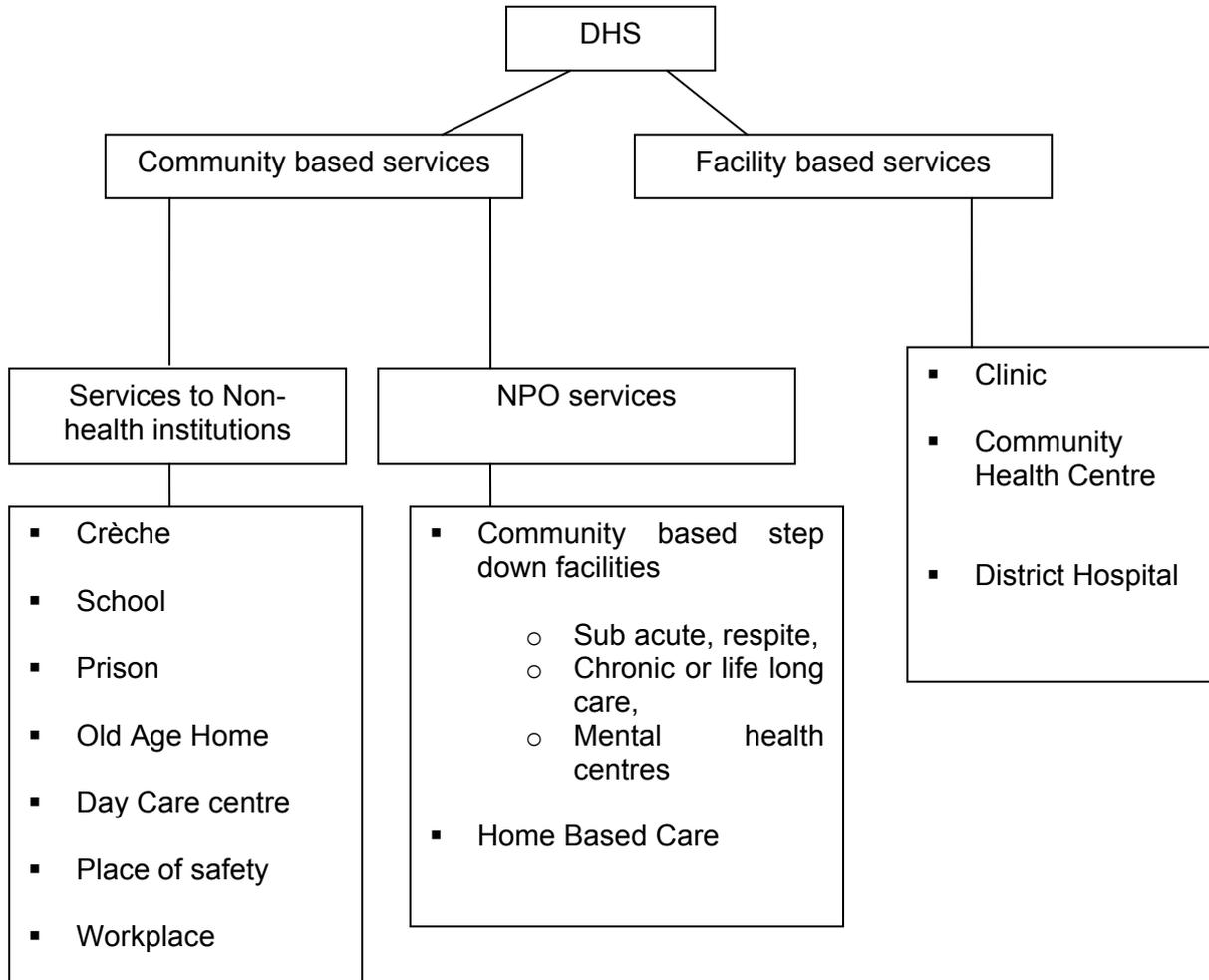


Figure 1.4: The DHS service platform in the Western Cape province

The Cape Town Metro district, one of 6 districts demarcated for the Western Cape, will replace the former Metropole region. This densely populated district will be divided into eight sub districts to facilitate an effective and efficient health service. Four substructure offices will be created (one per two sub districts) to provide management capacity. The current regional management structures; West Coast Winelands, Boland Overberg and Southern Cape Karoo have been restructured into five rural DHS ; Central Karoo, Eden, Cape Winelands, Overberg and West Coast as from 1 July 2008. These districts are divided into 24 sub districts.¹⁴

Community Based Services (CBS) will complement and enhance facility based services through services in the community and making communities responsible for their health and encouraging them to become aware of their health needs. Empowerment and participation of communities should have an impact on reducing the number of patients requiring hospitalisation. CBS is an integral part of the DHS and will be mainly managed by Non Profit Organisations (NPO) supported by outreach from FBS. NPO's will be contracted and health workers will be mainly generic community based workers. Services delivered to non-health facilities will be delivered by health personnel.¹⁴

A full package of PHC services will be provided in clinics and community health centres (CHC's), and urban and rural facility based models for clinics and CHC's. Staff establishments (number and skill mix) are determined within these models. The aim is to create a balance between the various categories of staff (skill mix) and their optimal utilisation in an integrated unit (primary health care team). CHC's will provide support to surrounding clinics and it is envisaged that the burden of non-emergencies to trauma units at hospitals will be reduced. The staffing of CHC's depends on the number of clinics attached to it and the population it will serve. Normative ratios were used to determine the allocation of specific posts. The district hospitals are an important component of the DHS. They are the link between the PHC package of service and the district hospital package of service for clinical services. District hospitals will also provide non-clinical outreach support i.e. support for financial, procurement and information systems.¹⁴

An electronic PHC workload calculator was developed to integrate PHC planning variables including; utilisation, workload variables and efficiency indicators. A mapping process was also done to ensure equitable access, allocation of resources, drainage areas and development of referral routes. The final result in applying the PHC planning models and tools determined the staff allocation per clinic, CHC and sub districts.¹⁴

Clinical governance issues have also been addressed; obstetrics care specifically will be the responsibility of the district hospital to ensure quality care. Professions allied to medicine were allocated to substructures and sub districts. PHC outreach and support will be provided by district hospitals. In the Metropole region, health therapists have been allocated to each substructure office and in rural districts to district hospitals to provide PHC outreach and support including support to mid level workers employed by NPOs. In each district a comprehensive health programme component will be established to facilitate, implement, coordinate and evaluate health programmes..¹⁴

1.1.4.4 Hospital services and the comprehensive service plan

Re-shaping the hospital services was addressed in the CSP and a provincial bed plan was determined within existing and planned infrastructure development. The levels of care were defined and gaps were identified in terms of the Health Care 2010 targets. Hospital services are delivered at all levels of care i.e. 1, 2, 3 and 4. For planning purposes levels 3 and 4 are combined.¹⁴

A planning tool was developed for hospitals to ensure that the correct skill mix and the number of staff are allocated to specific types of wards to ensure that each ward is staffed to meet the needs of the patients for which it caters. Patient classification and guidelines were applied. Other indicators factored in calculations included; number of beds and layout of ward, bed occupancy in the ward and direct patient care factor.

Medical and ancillary posts were determined taking into account input from the technical working group and application in the broader context of PHC posts, particularly at district hospitals.¹⁴

Criteria used for medical ancillary posts per district hospitals:¹⁴

- The level /s and number of beds per hospital (size and shape)
- The type of service rendered and required in a hospital
- Critical mass i.e. the type of services that requires a post but the workload does not justify it.
- Number of posts allocated to PHC in the same district.

Based on the service requirements and the size of regional and central hospitals, a normative approach was applied in the allocation of posts for medical ancillary posts. Administrative posts were allocated according to generic models that were tested in hospitals. An organogram was developed for each hospital to ensure functionality and management of service and support units.¹⁴

1.1.5 Integrated Nutrition Programme (INP)

The DOH plays a key role in developing and implementing nutrition programmes and services within its own line function. It further advocates for nutrition programmes to ensure that they are precise and monitored as an outcome of other socio-economic programmes for the public and private sector.^{37,43} The Health Sector Strategic Framework expects the INP to facilitate the prevention and management of malnutrition. Malnutrition is a major contributing

factor to morbidity and mortality. The INP is one of the key strategic health programmes created to decrease morbidity and mortality rates.³³

Malnutrition in South Africa manifests in the so called “double burden of disease”. This paradox of over and under nutrition, as well as the range of micronutrient deficiencies of public health significance, requires complementing strategies and an integrated approach to ensure optimal nutrition for all South Africans.^{10,43} The INP uses the Triple A cycle (Figure 1.5), developed by UNICEF, in its programming.

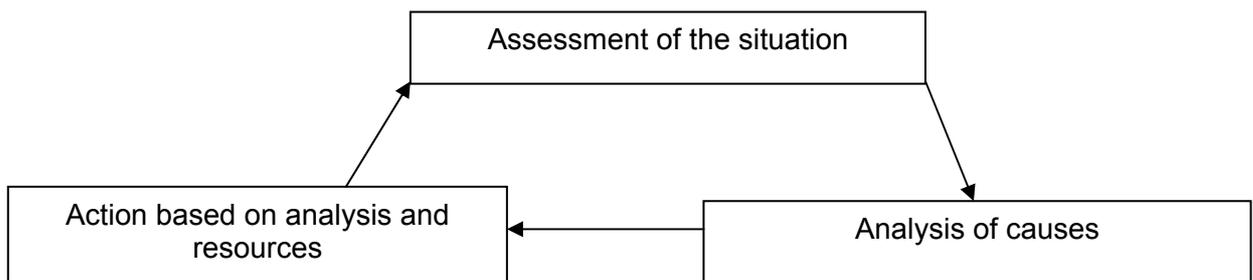


Figure 1.5: The triple A cycle^{2,10}

The triple A cycle involves assessing the problem, analysing its causes and designing and implementing actions. This approach can be used at all levels including household, community, district, provincial and national. In households, parents can use this process to recognise early signs of feeding problems and illness and take appropriate action. In communities nutrition problems observed can be used to mobilize resources for action. At provincial and national levels the cycle can be used to develop policy, monitor programmes, targets and resources. For the triple A cycle to succeed, it is essential to have good indicators that are accurately measured, correct diagnosis of causes of problems and effective follow up actions.^{2,10}

The nutrition situation is complicated by the many causes of malnutrition, which could be direct factors such as inadequate food intake, or underlying factors such as household food insecurity or even basic factors such as a lack of resources as outlined in the UNICEF conceptual framework of malnutrition (Figure 1.6)^{2,10}

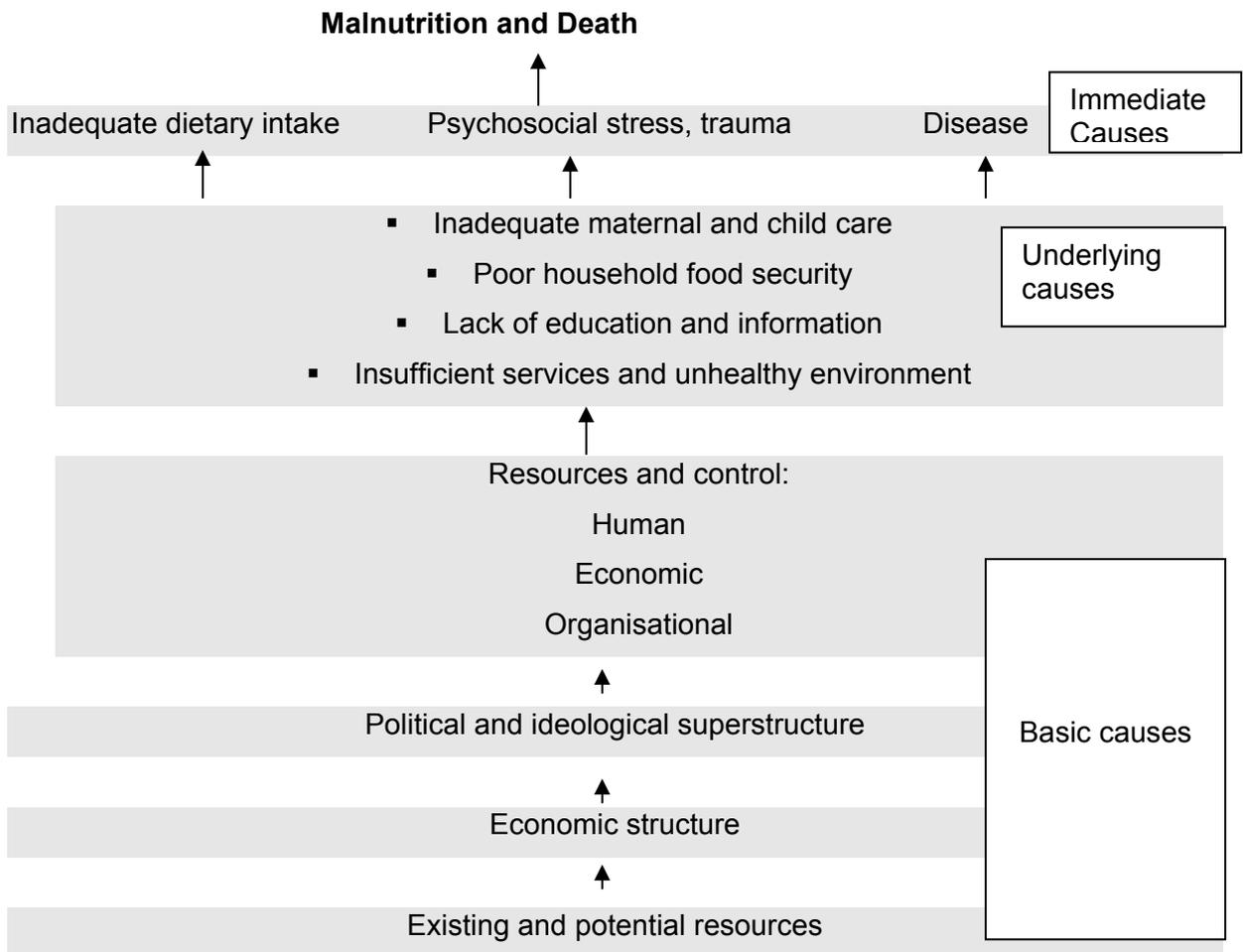


Figure 1.6: UNICEF Conceptual Framework of Malnutrition^{2,10}

The causes of malnutrition are interlinked at different levels and depths of analysis. In order to alleviate malnutrition, it is acknowledged that the causal factors at the different depths of analysis must be addressed. The INP recognizes the interrelationship between the various contributory factors and applies it in the clarification of objectives of actions selected for implementation. A number of national and provincial surveys have been done to determine the extent of nutrition problems in South Africa.

The National Food Consumption Survey (NFCS) undertaken in 1999 in children 1 – 9 years, found that stunting is one of the most common nutritional disorders in the country. The prevalence of stunting, underweight and overweight was 21.6%, 10.3% and 6% respectively. The Western Cape's figures were lower than the national average for all three indicators i.e. stunting (14.5%), underweight (8.3%) and overweight (5.2%) for the 1 – 9 year age group.⁴⁴

The Youth Risk Behaviour Survey (YRBS) that was undertaken in adolescents (grade 9,10 and 11 learners) in 2002 indicated nationally the prevalence of stunting (11%), underweight

(9%), and overweight (17%). The prevalence of stunting (9.5%) and underweight (6%) in the Western Cape was lower than the national average but higher for overweight (21.5%). The increase in the prevalence of overweight children suggests that there is an increased consumption of energy dense foods which corresponds with low levels of physical activity found.⁴⁵

The nutritional status of adults was evaluated nationally in the South African Demographic and Health Survey (SADHS) in 2003 as documented in the preliminary report (Table 1.2).⁴⁶

Table 1.2: National and Western Cape province prevalence of underweight, normal weight, overweight and obesity in men and women⁴⁶

	Underweight (BMI <16.5)		Normal weight (BMI 16 – 24.9)		Overweight (BMI 25.0 – 29.9)		Obese (BMI > 30)	
	Males	Women	Males	Women	Males	Women	Males	Women
National Prevalence(%)	12.4	6.0	57.8	41.3	21.1	29.0	8.7	23.3
Western Cape Prevalence(%)	9.3	8.9	52.2	34.4	23.6	26.1	15.0	30.6

The Western Cape in particular has a higher prevalence of obesity than the national average for the adult population. The statistics translate into a growing burden of disease - of cardiovascular disease and type 2 diabetes - when compared to other risk factors i.e. inactivity, alcohol dependency, tobacco use and hypertension.³⁰

The NFCS found that 50% of households experienced hunger, 25% were at risk of hunger while only 25% appeared food secure nationally. Forty five percent of households in South Africa were found to be food insecure through measurements of food poverty (an indication of whether the money spent by a household on food was enough to purchase a basic subsistence diet). According to the 2003 SADHS (Sample=4 700 households), 2,3% of households received care support, 39,7% received child support and 3,2% received social relief in the form of distress grants. The exclusive breastfeeding rates were also found to be very low, only 12% (1998=10%) of infants were exclusively breastfed, whereas for children 4-6 months it was only 1,5%, while the rate of bottle-feeding was 40% (1998=48.3%) nationally.⁴³ The SADHS of 1998 indicated that the median duration of breastfeeding for the Western Cape was the shortest i.e.10 months. The median in the Northern Cape province was 20 months and in other provinces 14 – 17 months.²³

Micronutrient deficiencies are prevalent in the country and are affecting particularly vulnerable groups such as women and children. The 1999 NFCS found that one out of two children aged 1-9 years have an intake of approximately less than half the recommended level of vitamin A, vitamin C, riboflavin, niacin, vitamin B6, folate, calcium, iron and zinc. Iron deficiency and anaemia are common problems among children in rural communities.

The 1994 South African Vitamin A Consultancy Group (SAVACG) survey among children 6-71 months found that 33,3% children are vitamin A deficient; a prevalence that indicates that vitamin A deficiency is a serious health problem in the country. The survey indicated that the Western Cape had a prevalence of 21.0% for this age group, thus including the Western Cape amongst the provinces with a serious public health problem for vitamin A deficiency. The SAVACG survey also found a 21,4% prevalence of anaemia, 10% prevalence of iron deficiency and 5% prevalence of iron deficiency anaemia at the national level.⁴⁷ The prevalence figures reported for Western Cape were; 28.6% for anaemia, 16% for iron deficiency and 8% for iron deficiency anaemia.

The National Iodine Deficiency Disorder (IDD) Survey, which was conducted in 1998 among primary school children, found that learners in 89,4% of primary schools surveyed have a normal iodine status. However, learners in 10,6% of the schools, mostly in rural areas, were iodine-deficient nationally with 3.8% in the Western Cape province.⁴³ The nutrition situation requires complementing strategies and an integrated approach to ensure optimal nutrition and household food security for all South Africans, thus the INP have identified different levels of focus areas and elements to address this situation (Table1.3).⁴³

Table 1.3 INP focus areas, elements and support systems⁴³

INP focus areas and support systems	Elements
Disease-specific nutrition support, treatment and counselling	<ul style="list-style-type: none"> ▪ Nutrition, HIV and AIDS. ▪ Chronic diseases of lifestyle. ▪ Clinical nutrition. ▪ Severe malnutrition.
Maternal nutrition	<ul style="list-style-type: none"> ▪ Pregnancy and lactation. ▪ Congenital abnormalities.
Infant and young child feeding	<ul style="list-style-type: none"> ▪ Code regulations. ▪ Early childhood nutrition. ▪ Promotion, protection and support for breastfeeding. ▪ Baby-friendly hospital initiative (BFHI). ▪ Prevention of mother-to-child-transmission (PMTCT). ▪ Growth monitoring and promotion (GMP).
Youth and adolescent nutrition	<ul style="list-style-type: none"> ▪ Obesity. ▪ Eating disorders.
Micronutrient malnutrition control	<ul style="list-style-type: none"> ▪ Vitamin A supplementation. ▪ Iodisation. ▪ Food fortification. ▪ Zinc supplementation.
Food service management.	
Community-based nutrition interventions	
Nutrition education, promotion and advocacy	
Support systems: Human resources, Nutrition information and Administration and Finances	

The different focus areas and elements are applicable directly to the lifecycle concept, which integrates existing consumption and production strategies in order to overcome the problem. The INP focuses throughout the stages of the human life cycle (Figure 1.7) and has formulated specific goals and objectives to improve nutrition throughout the lifecycle.⁴³

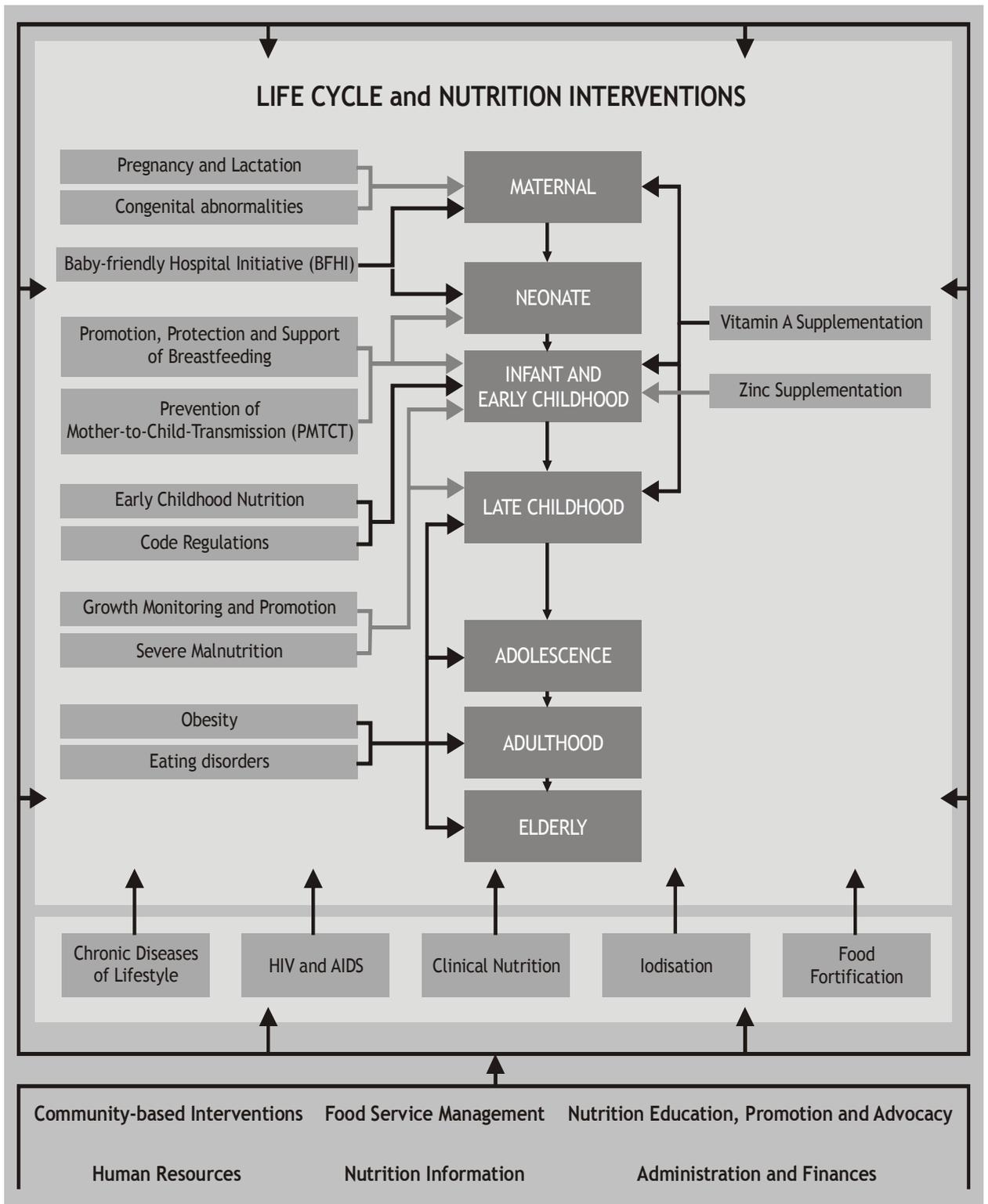


Figure 1.7: The INP - Life cycle nutrition interventions⁴³

The INP integrates its functions with other health programmes (Figure 1.8) within the DOH, with a specific emphasis on maternal and child health. Other programmes, with which the INP integrates its activities and functions within the Department of Health, include the following;⁴³

- Child Health and Youth Health
- Women's Health and Genetics
- Quality Assurance
- Health promotion
- Food Control
- HIV and AIDS
- Environmental health
- Pharmaceutical services
- Hospital and facility planning
- Health information, Evaluation and Research

The INP, placed within the Department of Health, cannot function in isolation and needs to link itself to nutrition-related programmes and activities implemented by other governmental departments and agencies. Other departments and agencies with which links must be established and services integrated through institutionalised cooperation are;⁴³

- Department of Social Development
- Department of Agriculture
- Department of Water Affairs and Forestry
- Department of Education
- Department of Public Works
- Department of Correctional Services
- Department of Defence
- National Treasury
- Industry
- Academic and Research Institutions
- International Agencies
- Non-governmental organisations and community based organisations

LIFE CYCLE and OTHER HEALTH INTERVENTIONS

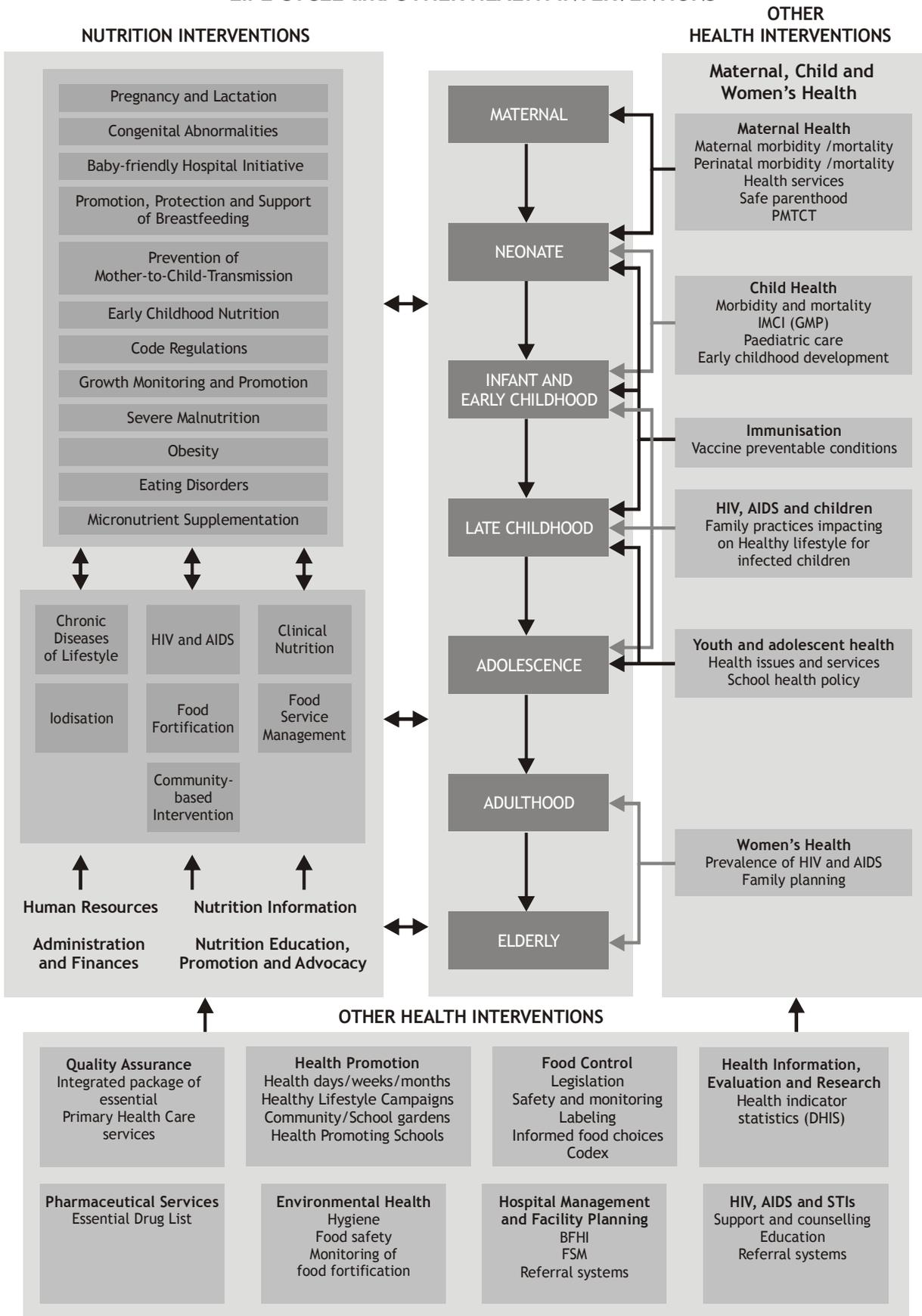


Figure 1.8: The INP - Life cycle and other health interventions⁴³

The INP focuses on the nutritionally /at risk communities, groups and individuals for nutrition interventions and provides nutrition education and promotion for all people.^{37,43}

Main target groups are:

- Children under 5, especially children under 2 years
- At risk pregnant and lactating women
- People suffering from malnutrition, nutrition related diseases of lifestyle, communicable diseases, infectious diseases and debilitating conditions
- Clients of public institutions requiring food services
- At risk households

Implementation takes place at a number of service delivery points:

- Communities
- Households
- Health facilities – clinics, CHC's, hospitals
- Non health facilities – schools, crèches, old age homes
- Care facilities and institutions

The Western Cape province's nutrition programme is based on the national INP Policy Guidelines and Strategic Framework. Key focus areas implemented are; disease specific nutrition support, treatment and counselling, maternal nutrition, infant and young child feeding, youth and adolescent nutrition, micronutrient malnutrition control, food service management, nutrition education, promotion and advocacy, community based nutrition interventions and support systems, nutrition information systems, financial and administrative systems as well as a human resource plan.¹⁰

Nutrition services, including dietetic and food services, are implemented in hospitals. Dietetic unit heads, Food service managers and supervisors are responsible for coordinating these services implemented by dietitians and food service workers at levels 2 and 3. The four regional offices that are in the process of being restructured into six district offices, coordinate nutrition services in the districts, and dietitians and nutrition advisers implement sub-district nutrition services. Sub-district dietitians, nutrition advisers and health promoters implement nutrition services at primary level of care. District Hospitals form part of the services coordinated by the regions.

Nutrition is presently a declared national and provincial priority (or at least viewed as such), due to the documented beneficial impact of nutrition support on preventable diseases,

disease of life-style, as well as the treatment of the high priority disease groups, TB and HIV/AIDS. It is generally accepted that hospital in-patients require nutrition support (whether specialised or not) throughout their hospital stay. The consensus of current literature is that optimal nutritional support of patients shortens hospital stay and thereby reduces health care expenditure. The outcome of almost every chronic disease is impacted upon by nutrition at all levels of care.^{10, 11,13,37,43}

1.1.6 Human resources for health (HRH) and the nutrition workforce

1.1.6.1 *Global health and the nutrition workforce*

The challenges and complexities facing the public health workforce, specifically, as health sector reform takes place are evident. These challenges are applicable to the nutrition workforce as they form part of the health workforce.⁴⁸ The main focus is normally on the organisational structure and finance, but neglects the staff.⁴⁸

Worldwide increased attention is now being focused on human resources management (HRM), specifically as it is one of the three main health system inputs, with the other two being physical capital and consumables. The performance and the benefits that the health system can deliver depend on the knowledge, skills and motivation of the clinical and non clinical workforce responsible for delivering the services. Human capital should be managed very differently from the physical capital and it is important to maintain an appropriate mix between the different types of caregivers and health promoters.^{49,50,51}

Evidence indicates that worker numbers and quality are positively associated with immunisation coverage, outreach of primary care and infant and maternal survival; on the other hand, malnutrition has worsened with staff cutbacks during health sector reform.⁵⁰ HRM must be developed in order to find the balance of the workforce supply and the ability of practitioners to practise efficiently and effectively. Globally, issues of relevance include size, composition and distribution of the health care workforce, workforce training issues, migration of health workers, economic development of countries and socio-demographic, geographical and cultural factors. Workers themselves are in the best position to improve quality of health care through identifying opportunities for improvement. Workers function as the gatekeepers and administrators of essential resources.^{49,50}

The variation of size, distribution and composition within a country's health care workforce is of great concern e.g. the number of health workers in a country is a key indicator of a country's capacity for service delivery and interventions. It is estimated by WHO that there is

a global workforce, total of 59.2 million full time paid health workers. Of the global health workforce, health service providers constitute about two thirds; one third health management and support personnel. Two thirds of the workers are in the public sector and one third in the private sector.⁵⁰

Workforce training is another important issue, especially in terms of skill categories and training levels amongst the categories of the workforce.⁴⁹ There is a great diversity amongst countries with regard to skills mix and staff ratios. The workforce is forced to respond to population-based health threats (demographic and epidemiological transitions) and financial policies, technology and consumer expectations create demands on the workforce in health systems. HIV/AIDS imposes additional work burden, risks and threats.⁵⁰ New options of in-service training health workers are required to ensure that the workforce is aware and prepared for present and future needs. Properly trained staff members are required to deliver essential and successful service.⁴⁹

Migration of health care workers comes to the forefront when global health care systems are examined. The movement of workers to urban areas is common in all countries, and can create additional imbalances that require better workforce planning, attention to salaries, incentives and overall management of the workforce. Developing countries also use a number of strategies to retain and recruit health professionals, i.e. housing, infrastructure and staff rotation. "Push" factors i.e. remuneration, burden of disease, non health related burdens, fear of contracting disease, work overload, staff shortages, inadequate medicine supplies, fears of personal safety, lack of educational opportunities for children are all factors that are associated with staff leaving the public health sector and decisions to migrate. Workload, staff shortages and inadequate supplies in particular are contributing to burnout, high absenteeism, stress, depression, low morale and motivation. The implication of staff leaving can result in a negative spiral as the remaining staff cannot cope and become even more overworked and overloaded.^{49,51}

Macro economic policies, aggressive recruitment by agencies, better salaries, better working conditions, safe work environments, professional development, political freedom, and better educational opportunities are all "pull" factors. Developed countries benefit from migration, since the health needs of their citizens are met and they gain financially in terms of saving on the costs of training health professionals. The developing countries suffer the "brain drain" in losing their present pool and future pool of workers. Resources in already resource strained countries are further pressured due to the high turnover of staff, re-skilling of staff and the

expense of training new staff. The monitoring and measurement of migration is an important HRM issue and a multifaceted response is required in the management of the issue.^{9,50}

Evidence of the significant positive relationship between the level of economic development and HRH exists. Countries with higher Gross Domestic Product (GDP) spend more money on health care than countries with lower GDP and they tend to have a larger health workforce.⁴⁹ Socio-demographic elements such as age and distribution of the population also play an important role in countries. An aging population increases service demands and an aging workforce population requires additional training of younger workers to fill the positions of large numbers of workers retiring. Geographic factors e.g. climate, and cultural and political values can also affect the supply and demand of HRH.⁴⁹

Traditionally four methods have been described to determine the HRH requirements. These include needs based approaches, utilization or demand based approaches, the health work force to population ratio and the target setting approach. Each of these approaches has limitations and advantages.^{52,61} More integrated approaches are proposed specifically in the context of achieving the millennium development goals. Consideration must be given to redistributing tasks between health professionals, mobilizing the community and integrating external resources into the national HRH planning.⁶¹ The availability of resources is always inadequate to address all the identified problems at the same time, thus it is of utmost importance to focus human resource planning on the main problems affecting the workforce.^{51,52}

1.1.6.2 South African health and nutrition workforce

Human resources (HR) play a crucial role in health systems. Many programmes in health care have not achieved their objectives, this being attributed to human resource constraints. The health sector requires not only adequate staff numbers, but also a workforce with the knowledge and skills to ensure patient safety and health.⁹ The Health Care System in South Africa has been undergoing a process of transformation from a curative and urban-centred health care system to a district health system and one based on PHC. The rationale of this approach is to improve the quality of health care and to provide easier access to health services for all South Africans. The availability of efficient, skilled, caring and appropriate personnel is critical to achieving this goal.^{14,39} Optimal utilisation of health workers is essential for the provision of services. Through optimal use of the workforce, departments will achieve the goals of the health care system articulated in current policies.⁹

The DOH has utilised its mandate (Chapter 7 of the National Health Act of 2003) to take steps to develop and manage HR in the national health system in 2006 and approved the National Human Resources Planning Framework. The National Human Resource for Health Plan is important as part of the transformation of South Africa and has been contextualised within the strategic priorities of the National DOH. HRH in South Africa is complex, which is also characteristic of health systems in other countries. Providing adequate staff to meet the service demands is challenging and complicated by the burden of disease.

The DOH has set out 11 core guiding principles in the HRH Health Plan to ensure that the national health system has the necessary human capital to deliver health to its population, namely:

- Stewardship for health care lies with the national DOH
- South Africans must enjoy a reliable supply of skilled and competent health professionals for self-sufficiency
- Planning and development of human resources, linked to the needs and demands of the health system, must be strengthened
- The optimal balance, equitable distribution and use of skilled professionals to promote access to health services must be developed
- Health workers must have the capacity and appropriate skills to render accessible, appropriate and high quality care at all levels
- Work environments must be conducive to good management practice in order to maximise the potential for the health workforce to deliver good quality health services
- South Africa's role in international health issues is critical, contributing to leadership, scientific advances and global health professionals
- South Africa's contribution, in the short to medium term, to the global health market must be managed in such a way that it contributes to the skills development of health professionals
- Mobilisation of funding to ensure a successful implementation plan
- The DOH must ensure that it has the technical expertise necessary to lead health workforce planning
- There must be reasonable remuneration of health professionals and attractive working conditions to enable them to regard the public sector as the employer of choice

The national HR plan serves as a reference point for provincial specific HR plans and to assist managers with HR processes of recruitment and retention of staff. A rapid appraisal was conducted as the first step in the development of the plan which included workforce

demographics, health system policies and legislation and a review of HR related achievements and trends. Areas identified in the South African context as areas of debate for further improvement are: existing skills mix and key competencies, distribution of staff, norms and standards, education, training, skills development, human resource management and migration of key health professionals.

HR production has been identified as one of the areas of priority for implementation and targets have been determined for health professionals. The targets proposed for dietitians/nutritionists show an increase from 150 currently trained to 250 by 2010.⁹ Human resource development, management and implementation of the HRH for Health Plan are the other priorities identified. Areas for immediate action identified are:

- Improving HR production, through capacity review of training institutions, promotion of health sciences as careers of choice to students, mobilising resources to fund medical assistant programmes, increasing production of community health workers and finalisation of the review of nursing qualifications.
- Improving HR supply, through strategies to address the high vacancy rates, removing obstacles to recruitment of nurses to the public service and increasing the number of health personnel.
- Improving work-life experience of health workers, through the development of a new remuneration structure for health professionals and improving the physical environment at health facilities.
- Strengthening the human resource data bank, through developing a national HR databank and implementation thereof.
- Improving management and training, through training of middle, senior managers and HR practitioners.

It is well documented that accurate information on the supply and use of health personnel is key to improving the health of the population. The HRH national plan has proposed HR indicators to monitor performance, which cannot be done outside the broader national health system, because the health system relies heavily on the number of staff and how skilled, competent, well distributed and well managed they are.^{9,54}

Registered nurses implement PHC and basic nutrition related care at facility and community levels. Nurses are in some instances the only health professionals to implement nutrition related protocols e.g. growth monitoring, promotion and support, integrated management of childhood illness, vitamin A supplementation, nutrition supplementation and breastfeeding promotion and support.³⁰

HR planning and development within the INP have gone through various phases of development between 1998 and 2006, which included assessment of training programmes, capacity building for nutrition workers, input in the process of HPCSA registration of nutritionists and assistant nutritionists, assessment of human resource capacity in terms of skills and competencies, development of draft human resource frameworks. Currently there is no final human resources strategic document for the nutrition workforce in the public health sector.^{12,55,56,57,}

The following categories of nutrition workers have been identified as the core personnel who are currently implementing the INP: dietitians (including community service dietitians), nutritionists, nutrition advisors, community liaison officers, specialized auxiliary service officers, food service managers, food service supervisors and food service aids.¹²

Given the scope and demand for implementing the INP, it has been proposed that the following categories of nutrition workers should be registered and recognized as nutrition workers: dietitian, nutritionist, nutrition assistant and food service managers.

Regulations with regard to the registration of dietitians and nutritionists are in place and the scope of practice for both are defined by the HPCSA. The registration of assistant nutritionists has been drafted and the need for this mid-level worker for nutrition was proposed and included in submissions by the National Directorate Nutrition.^{12, 55, 56}

The different nutrition personnel categories are recognized by the public service and are outlined in the Code of Remuneration (CORE) guidelines. Departments had been using the Personnel Administration Standards (PAS) which was replaced by CORE (July 1999). The main aim of CORE is to provide improved advice to enrich managerial decision making, provide more flexibility in terms of qualifications and experience and eliminate the disjunction between skilled and unskilled jobs.

It includes three parts, namely:

- A link between salary ranges and job weights derived from the personnel and salary system (Persal)
- A description of normal competencies and indicators of competency by salary level, which defines promotion requirements from level 1 – 15 in all major occupations
- An occupational code, which is included on Persal for individual employees.

CORE provides guidelines on job profiles and competency profiles. The job profile includes job content and job outputs. The competency profile includes the competencies, skills and learning indicators (qualifications, training, experience and statutory requirements) that are required for respective occupational categories. According to CORE, an overlap exists in

terms of competencies and skills of dietitians, nutritionists and food service managers.⁵⁹ Challenges in selection and recruitment of professionals are created with the overlap of skills and competencies. The INP has attempted, through its draft Human Resource Development Framework, to address these issues by outlining the scope of practice, placement, training and career path opportunities for the different categories of the nutrition workforce.^{12,59,60}

1.1.6.3 Western Cape province health and nutrition workforce

Human resource planning is an integral part of the department's strategic planning process.^{8,50} As previously stated the Western Cape Department of Health has developed its 2010 strategy for health and has subsequently drafted a Comprehensive Service Plan (CSP) as the implementation framework of the 2010 strategy. The health services are to meet the needs of the population of the Western Cape by 2010. In the Health 2010 plan it is envisaged that the department will prioritise primary level services which cater for 90% of the population at level 1 (PHC level), 8% at service level 2 (Secondary Level) and 2% at service level 3 (tertiary level).³⁹

The INP in the Western Cape province has started a process of reviewing and developing a HR plan within the context of the CSP in order to deliver nutrition services within this restructured health service plan of 2010. The roles and responsibilities in the context of the INP and at the different levels of government, as outlined in the INP Policy Implementation Guidelines, are implemented in the Western Cape (Table 1.4).¹⁰ The core staff providing nutrition services and implementing the INP are dietitians, food service managers, food service workers and nutrition advisers/auxiliary services workers.¹² Dietitians in the DHS are placed in districts and sub districts and form part of PHC outreach team who are responsible for facility based nutrition services as well as community based services. Hospital dietitians are primarily responsible for clinical nutrition services and some are placed in food services. Nutrition advisers are placed at clinics and community health centres, provide support to district dietitians and are responsible for preventive and promotive nutrition interventions within health facilities and the surrounding community. Food service managers and food service workers (food service aids and food service supervisors) provide food services to clients in hospitals. The scope of practice of dietitians according to Act No 56 of 1974 is implemented by dietitians. Job descriptions and staff performance plans indicate the required job outputs of all nutrition workers. Individual staff development plans are developed with annual staff performance plans to improve skills and competencies.

Table 1.4: INP responsibilities at different levels government¹⁰

Level	Functions
National	<ul style="list-style-type: none"> • Formulation of national nutrition policy and appropriate legislation • Facilitate and coordinate the development and implementation of the INP • Development of norms and standards for nutrition • Facilitate and coordinate strategic and operational planning for the INP at national level • Build the capacity of the provincial units responsible for the implementation of the INP • Allocate national financial resources for nutrition to the provincial departments of health in an equitable way • Provide services and interventions that cannot be cost-effectively delivered elsewhere • Develop and implement a national information system for the INP • Conduct international, national, inter-sectoral and intra-sectoral liaison on nutrition
Provincial	<ul style="list-style-type: none"> • Formulation and implementation of provincial nutrition policy, norms, standards and legislation • Facilitate and coordinate the implementation of the INP at provincial level • Facilitate and coordinate strategic and operational planning for the INP at provincial level • Build the capacity of the regional staff and agencies responsible for the implementation of the INP • Allocate provincial financial resources for nutrition to the regional level in an equitable way • Provide services and interventions that cannot be cost-effectively delivered elsewhere • Develop and implement a provincial information system for the INP • Conduct inter-provincial, inter-sectoral and intra-sectoral liaison on nutrition
Regional/ District	<p>Facilitate and coordinate the implementation of the INP at regional/district/community level</p> <ul style="list-style-type: none"> • Facilitate and coordinate strategic and operational planning for the INP at regional/district/community level • Build the capacity of the staff and agencies responsible for the implementation of the INP • Allocate regional/district financial resources for nutrition to the implementation level in an equitable way • Provide services and interventions that cannot be cost-effectively delivered elsewhere • Develop and implement a regional/district/community information system for the INP • Conduct inter-regional/inter-district, inter-sectoral and intra-sectoral liaison on nutrition

The emphasis in the Western Cape is currently developing the DHS, as the majority of the clients enter health services and are managed at this level. In order to implement HC 2010, the CSP staffing models for staff allocation and distribution have been designed to be in line with this service delivery plan.^{14,39} The nutrition workforce has been included in the CSP in the Western Cape and staff ratios for the respective categories have been included.

The CSP have acknowledged the different categories of the nutrition workforce i.e. dietitians, INP management, food service managers, food service supervisors, food service workers and food service aids, auxiliary services officer (health promoter) and administrative clerks. Community based health workers will be primarily generic community based workers, placed with NPO's and will be provided with training registered on the National Qualifications Framework.¹⁴ The strategic direction (HC 2010) and the CSP will determine how the future nutrition workforce in the Western Cape will develop in the absence of an approved HR plan for the DOH. The CSP is the approved framework within which services will be delivered and provides the basis for decision making to implement HC2010.¹⁴

1.2 MOTIVATION OF THE STUDY

The crisis in terms of human resources has been acknowledged throughout the world, whether in developed or developing countries. The World Health Organisation published a "Working together for health" report in 2006, stating: "At the heart of each and every system, the workforce is central to advancing Health".⁵⁰ In the context of the Millennium Development Goals, human resources is seen to represent the most critical constraint in achieving the targets. It is imperative for health planners and decision makers to identify what human resources are required to meet these international targets and delivery of health services to the population.⁶¹

Nutrition is presently a declared national and provincial priority (or at least viewed as such), due to its beneficial impact on health, burden of disease and nutrition support of preventable diseases, disease of life-style, as well as the treatment of the high priority disease groups, namely TB and HIV/AIDS. A study conducted by the University of Western Cape in 2003 investigated the challenges faced with implementation of the policy of the INP in the Cape Metropole area. One of the key recommendations from this study was the need for an appropriate human resource plan for the implementation of the INP.⁴⁸

A number of changes have taken place within health services since 2003, including the promulgation of the New Health Act 63 of 2003, restructuring processes in the Western Cape province and the development of a Comprehensive Service Plan (CSP) for 2010. The CSP has been developed as a plan to implement the healthcare 2010 strategy of the Western Cape province and was approved in May 2007.¹⁴ In order to plan appropriately for nutrition services, the INP in the Western Cape needs to review the status of its human resources in the province as a first step towards developing a human resource plan to meet the nutrition service needs, taking into account the provincial context, service platforms and approved CSP in the public health sector.

Currently there is no final human resources strategic document for the nutrition workforce in the public health sector. It is believed that this study will provide evidence-based information of utmost importance to policy formulation and set forth an informed process to establish such a document and ultimately strengthen the INP in terms of all resources in the Western Cape province.

CHAPTER 2: METHODOLOGY

2.1 Aim and Objectives

Aim

To determine the current nutrition staffing profile of the Integrated Nutrition Programme (INP), in the Department of Health in the Western Cape province.

Objectives

1. To determine the current nutrition personnel staffing levels and categories at all levels of health care in the public health sector in the Western Cape province.
2. To determine location, placement, qualifications and skills of nutrition staff in the districts, sub-districts and health facilities in the Western Cape province.
3. To determine current nutrition personnel expenditure, per staff category at all levels of care.
4. To develop provincial maps of nutrition staff, indicating placement in the Western province.

2.2 Study Design

The study was of an observational and descriptive design.

2.3 Study Location

The study was conducted in the Western Cape province (Figure 2.1), which is located at the South Western tip of South Africa. The total area of the Western Cape is 129 370 square kilometres which equals 10,6% of the entire country. The province has 6 Districts; City of Cape Town, West Coast, Cape Winelands, Overberg, Eden, and Central Karoo. The two neighboring provinces are the Northern Cape and the Eastern Cape provinces.⁴⁰



Figure 2.1: Map of the Western Cape province, South Africa

2.4 Study Population

The study population included all nutrition personnel (of all staff categories) employed by the Western Cape Department of Health. Organisationally, health care services in the Western Cape province are divided into two main divisions (Figure 2.2):

- Tertiary, Regional and Emergency Medical Services
- District Health Services (DHS) and programmes

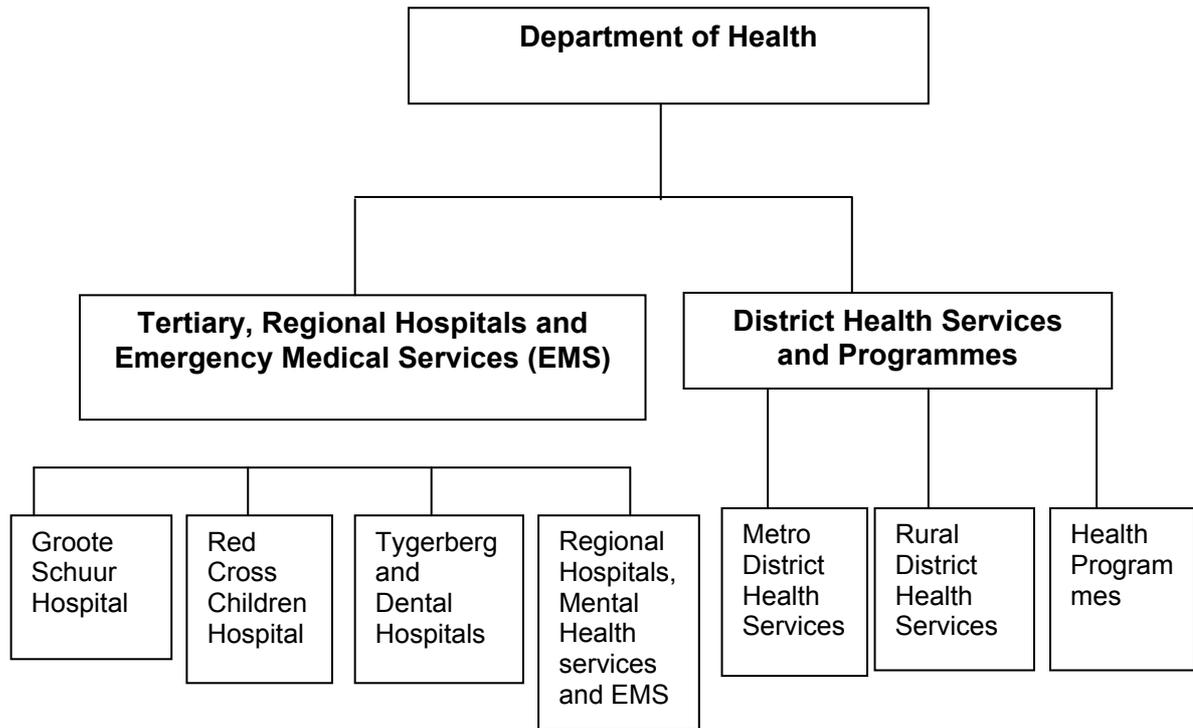


Figure 2.2: Segment Organisational structure of the Western Cape Department of Health⁴⁰

Tertiary, Regional and Emergency Medical services include services provided by tertiary, secondary and specialised hospitals. District and sub-district health services (primary care health services) include services provided by clinics, community health centres, district hospitals and outreach services into the community. Nutrition services (including clinical dietetic service, food service management and preventive promotive services) are provided in primary, secondary and tertiary care settings. Nutrition staff members are placed in these levels of care in respective districts and hospitals to deliver these services to clients.

Nutrition staff categories are classified in the Human Resource Framework for Nutrition, developed by the national Department of Health. The following categories of nutrition workers are listed in the Human Resource Framework for Nutrition as the core personnel who are expected to implement the INP:¹²

- Dietitians – Hospital, community and community service dietitians
- Nutritionists
- Mid level workers (Assistant Nutritionists - Nutrition advisors, Community liaison officers, specialised auxiliary service workers)
- Food service managers
- Food service supervisors
- Food service aids
- Nutrition Managers/Coordinators

2.4.1 Sample selection

All nutrition personnel based in the Western Cape were included in this census. All health districts, sub-districts and hospitals in the province were included in the sample as per the comprehensive service plan¹⁴ including; Health districts ($N = 6$), Sub districts ($N = 32$), District Hospitals ($N = 33$), Secondary/Regional Hospitals ($N = 6$), Tertiary Hospitals ($N = 3$), Specialised, Psychiatric and TB Hospitals ($N = 12$). These health care facilities reflect the different levels of care i.e. Primary (Level 1), Secondary (Level 2) and Tertiary (Level 3).

In order to have representation of all levels of care in the province, nutrition services in the different settings are clustered in four categories, namely:

- District Health services and programmes,
- Secondary Hospital services,
- Tertiary Hospital services,
- Specialised, Psychiatric and TB hospital services

A targeted sampling approach was applied by developing master lists of the respective nutrition /dietetic units/ food service units and their personnel within the geographical districts and hospitals at the different levels of care.

2.4.1.1 Inclusion criteria

Staff members categorised as nutrition personnel in all relevant categories who consented to participate were included i.e. dietitians, nutrition advisors, community liaison officers, auxiliary service workers, food service managers, food service supervisors, food service aids and nutrition managers/coordinators working for the Western Cape DOH.

2.4.1.2 Exclusion criteria

The focus of this study was to assess the nutrition human resource situation in the public health sector of the Western Cape Government, and, therefore, nutrition personnel working in private sectors, industries and academic Institutions were excluded from the survey. These included nutrition personnel on the staff establishments of Universities, Technicons, Colleges, Non-Governmental Organisations, Community Based Organisations, Agencies, and Consultancies. Those staff members, who did not consent to participate, were also excluded.

2.4.1.3 Sample size

Nutrition staff working in the health districts, sub-districts and hospitals in the Western province were included in the sample as per the Comprehensive Service Plan¹⁴ (Tables 2.1 - 2.4). The 4 regional offices i.e. Metropole (MDHS), Boland Overberg (BO), West Coast Winelands (WW) and Southern Cape Karoo (SCK) are in place and while managing the districts are in the process of becoming 6 district offices (Table 2.1). Within the regional office structure, the current Metropole will become one district with 8 sub-districts. The sub-districts in the current Boland Overberg (BO) region and West Coast Winelands (WW) region will split and form the Overberg, Cape Winelands and West Coast districts. The Southern Cape Karoo (SCK) region will split into the Eden and Central Karoo districts. A total of 756 staff members in the respective categories were included according to inclusion criteria.

Table 2.1: District Health services and programmes in the Western Cape provided by districts, sub-districts and regional offices¹⁴

District Health Services and Programmes			
METRO DISTRICT		RURAL DISTRICTS	RURAL SUBDISTRICTS
METROPOLE SUB DISTRICTS MDHS*	Northern	Cape Winelands BO/WW	Stellenbosch, Drakenstein Breede Valley BreedeRiver Winelands Witzenberg
	Tygerberg	Overberg BO†°	Swellendam Agulhas Overstrand Theewaterskloof
	Western	West Coast WW**††	Swartland Bergrivier Saldanha Matzikama Cederberg
	Southern	Central Karoo SCK‡‡	Beaufort West Laingsburg Prince Albert
	Klipfontein	Eden SCK	George Mosselbay Knysna Plettenberg Bay Oudtshoorn Kannaland Langeberg
	Khayelitsha		
	Mitchell's Plain		
	Eastern		

Table 2.2: Health services in the Western Cape provided by tertiary, regional, specialised, psychiatric and TB hospitals¹⁴

Tertiary Hospitals	Regional Hospitals	Specialised, Psychiatric and TB Hospitals
Groote Schuur Red Cross Tygerberg	Somerset Victoria Mowbray Maternity Worcester Paarl George	Lentegeur Valkenberg Stikland Alexandra Western Cape Rehabilitation Centre Brooklyn Chest DP Marais Brewelskloof Sonstraal Malmesbury Infectious Disease Nelspoort Harry Comay

* MDHS refers to the Metropole regional office

† ° BO refers to the Boland Overberg regional office

‡ WW refers to the West Coast Winelands regional office

§ SCK refers to the Southern Cape Karoo regional office

Table 2.3: Health services and programmes in the Western Cape for the Metropole district, sub-districts and district Hospitals¹⁴

METRO DISTRICT	
METRO SUB DISTRICTS	DISTRICT HOSPITALS
Northern	Karl Bremer
Tygerberg	
Western	Wesfleur
Southern	False Bay
Klipfontein	GF Jooste
Khayelitsha	Khayelitsha
Mitchell's Plain	Mitchell's Plain
Eastern	Eerste River Helderberg

Table 2.4: Health services and programmes in the Western Cape provided by rural districts, sub-districts and district hospitals¹⁴

RURAL DISTRICTS	RURAL SUB DISTRICTS	DISTRICT HOSPITALS
Cape Winelands BO ^{§§} /WW ^{***}	Stellenbosch Drakenstein Breede Valley Breede River Winelands Witzenberg	Stellenbosch Montagu Ceres Robertson
Overberg BO	Swellendam Agulhas Overstrand Theewaterskloof	Swellendam Caledon Hermanus Otto Du Plessis
West Coast WW	Swartland Bergrivier Saldanha Matzikama Cederberg	Swartland Citrusdal Clanwilliam Lapa Munnik Radie Kotze Vredenburg Vredendal
Central Karoo SCK ^{†††}	Beaufort West Laingsburg Prins Albert	Beaufort West Laingsburg Prince Albert Murraysburg
Eden SCK	George Mosselbay Knysna Plettenberg Bay Oudtshoorn Kannaland Langeberg	Mosselbay Knysna Oudtshoorn Riversdale Uniondale Ladismith

^{§§} BO refers to the Boland Overberg regional office

^{***} WW refers to the west Coast Winelands regional office

^{†††} SCK refers to the Southern Cape Karoo regional office

2.5 Data Collection

2.5.1 Data collection methods

Quantitative data collection methods were primarily used. These included coding sheets (per facility), questionnaires for the individual staff category and the official personnel database (Persal) of the Department of Health. Due to the variability of services, settings, and job outputs, questionnaires were constructed accordingly.

2.5.2 Data collection tools

2.5.2.1 Personnel coding sheet

A coding sheet was developed to confirm the staff (in filled or vacant posts) in the respective categories in facilities and districts. Each facility was given a unique facility code. Personnel information that was captured on the coding sheet included (Appendix 1):

- Persal number
- Job title
- Questionnaire number
- Staff names

Coding sheets were issued to all facilities and districts and were completed by the respective managers. Managers were requested to return coding sheets to the investigator within two weeks of issue. The investigator followed up and collected all outstanding coding sheets. Coding sheet lists were verified at the investigator's office against facility and district lists by the administrative assistant (job line function) and/or investigator. Coding sheets were recapitulated into one provincial sheet, which was used to determine the targeted sample, as well as to develop unique individual coded questionnaires to guarantee confidentiality.

2.5.2.2 Questionnaires

Self-administered questionnaires in English were used as the main data collection instrument for Districts and Hospitals. Standardized questionnaires were developed. These were based on existing provincial human resource frameworks, skills audit questionnaires, code of remuneration guidelines^{59,60} and national nutrition skills audit questionnaires.^{8,62,63,64,65} Eight individual questionnaires (Appendix 2), one each per staff category i.e. INP managers, district dietitians, hospital dietetic unit managers, hospital dietitians, food service managers, food service workers, auxiliary workers and administrative workers, were developed and divided into sections to capture the following information:

- Demographic information
- Formal qualifications and experience

- Generic competency and skills
- Specific competencies and skills
- Time spent on Integrated Nutrition Programme service
- General
 - Post structure and job descriptions
 - Infrastructure
 - Challenges and solutions
- Staff Establishments

2.5.2.3 *Data collection process*

The study was introduced to all managers at quarterly INP, provincial food service manager's and dietitian's working group meetings, and scheduled regional visits. Coordinators for regions and facilities were identified. In order to assist with the co-ordination of the data collection in regions, districts, sub-districts and facilities (Figure 2.2), the approaches of managers in the different settings were standardized. Managers provided inputs with regards to their respective settings and the data flow was subsequently clarified and determined.

The aims, objectives and data collection plan for the entire process were explained. Individual follow-up sessions on request were accommodated by the investigator. The two large tertiary hospitals, with large staff numbers and staff working shifts were both assisted by the investigator with follow-up sessions. Plans were devised to manage the data collection process based on the practicalities within operations.

INP Managers in the 4 regions took responsibility for the collection of the data for district hospitals and district based services. In the Metropole, a trained administrative clerk assisted the INP manager with data collection coordination with support from the investigator. The Metropole regional office also assisted with coordination of data collection from regional and specialist hospitals in the Metropole. In the rural regions, the INP manager and food service coordinator took responsibility for the data collection process with the support of the investigator. The objective was to support and enable managers in the different sub units to support staff on the different shifts as and when needed. The food service managers and dietetic unit heads took responsibility for data collection in the tertiary hospitals.

The investigator held one-on-one sessions with managers and coordinators to ensure that they understood the questions and processes to enable them to coordinate the process. Telephonic enquiries and support was provided to food service coordinators, INP managers and participants in the rural and remote areas as required. The training and support of

coordinators was very important, as they were responsible for the data collection. The process was entirely open to create an environment where managers and participants could be assured that they would be supported, not burdened and forced to participate in the data collection process.

Questionnaires were individually coded with a unique facility code, Persal number, job title code and questionnaire number as per coding sheet. The coding sheet, a covering letter addressing consensual, anonymity and confidentiality issues, pre-coded questionnaires and a detailed set of instructions were e-mailed, faxed and/or posted to the responsible INP managers/Sub-district dietitians/Dietetic unit heads/Food service managers and administrative managers at all relevant facilities to complete. Instructions (Appendix 3) outlined the purpose of the study and guided participants on how to complete the questionnaires.

Participants were targeted on the basis of their roles and responsibilities, as well as services rendered, to ensure that complete data were collected. Participants were also reminded that participation was voluntary and that confidentiality would be protected. Managers and coordinators were requested to complete their individual questionnaires and to assist staff in their units to complete the staff questionnaire per job code according to the coding sheet. Managers were also requested to check that all fields in the questionnaire were completed by their staff. Participants were requested to submit the completed coded questionnaire to an appointed administrative clerk and or unit managers within the DOH within 2 weeks.

A reminder e-mail or message was forwarded one week after the initial letter of invitation to participate in the study. Final reminders were sent to the respective managers and telephonic follow-up calls made for submission of the questionnaires after the 2-week set deadline. It was not practically possible for the large facilities to shift schedules and they needed two additional weeks to cover all staff on the shifts. The submission of completed questionnaires from far-reaching areas was also challenging. Arrangements were made to collect completed questionnaires where possible. For areas where collection was not feasible because of the distances involved, arrangements were made for postage and/or electronic submission of completed questionnaires.

The investigator had no direct influence on the number of questionnaires submitted and did not exert pressure with regard to late submissions, but started the data capturing process instead.

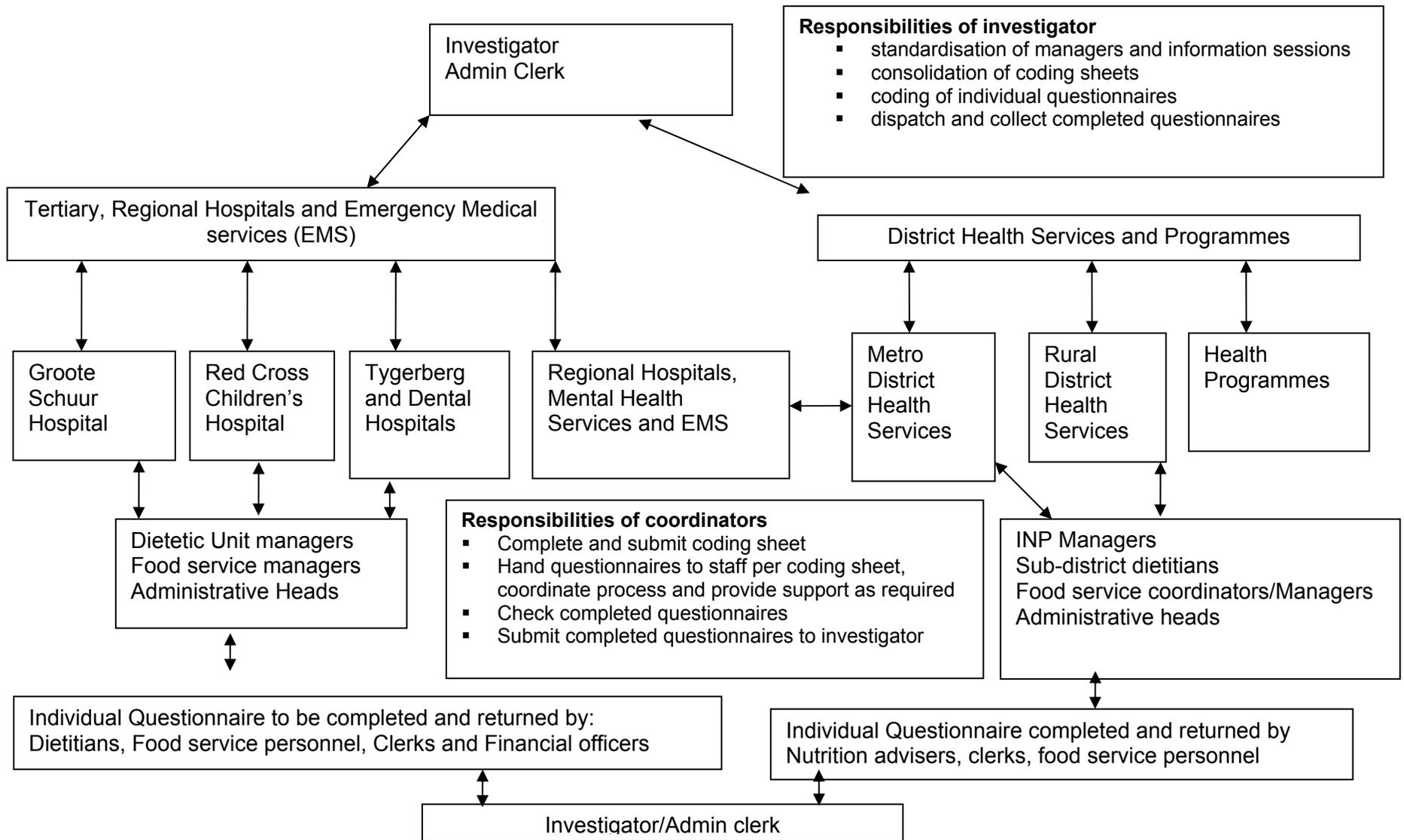


Figure 2.2: Data collection process

Data was collected from the following settings;

- District Health Nutrition/Dietetic services: INP managers based at regional offices who were responsible for the operational management of the INP within the region, which included planning for resources.
- Nutrition services at district/sub-district level: Dietitians who were responsible for the implementation of nutrition services in the specified geographical areas including services by nutrition advisors (districts and sub-districts).
- Dietetic services in Secondary and Tertiary Hospitals: Dietetic unit heads who were responsible for clinical dietetic services in secondary and tertiary hospitals.
- Food service management in hospitals – Food service managers and relevant administrative managers in hospitals who were responsible for food service units in hospitals.

2.5.3 Validity

To ensure that the measuring instruments were true and valid for what they purported to measure for this particular study design, face and content validity were evaluated.

2.5.3.1 Face validity

Face validity of the measuring instruments (questionnaires) was established through piloting of the questionnaires in each of the four settings identified, namely in District Health services, Sub-district services, Tertiary /Secondary Hospital services and one Food service unit.

2.5.3.1.1 Pilot study

A pilot study was conducted to determine if the questionnaires were well understood, or if the questions were ambiguous or confusing. Potential errors were identified, of whatever nature, and the questionnaires were tested to establish whether they could be self-administered without explanation and intervention other than the instructions provided. The pilot study was conducted in the Metropole region mainly, as it covers more than 60% of the staff in the province (Table 2.5).

Table 2.5: Pilot study sites and nutrition staff categories

Service Sites	Staff categories	Total
1. Metro District Health Services	1. INP manager 2. Admin Clerk 3. Finance clerk	<i>N</i> = 3
2. District dietitians	1. Two District Dietitians 2. Auxiliary services officer	<i>N</i> = 3
3. Food service Karl Bremer Hospital	1. Food service manager 2. Two Food service supervisors 3. Food service aid	<i>N</i> = 4
4. Hospital services	1. Unit Manager 2. Two Hospital Dietitians 3. Admin Clerk	<i>N</i> = 4
Total sites = 4	Categories 1. Nutrition programme manager at regional level 2. District and Sub-district personnel (dietitians and nutrition advisors) 3. Dietetic service unit head and hospital dietitian. 4. Food service manager and food service staff.	<i>N</i> = 14

The managers in the different service sites were approached and requested to participate voluntarily in the testing of the data collection tools and to evaluate practicalities in the different settings (Table 2.6). The participants in the pilot study were also notified that the data collection process was in its developmental phase and that they would be included in the study once the tools were finalised. A statistician was also consulted to review questionnaires and provide input.

A standard questionnaire comment sheet (Appendix 4) was developed and participants were requested to note if questions were easily understood, the amount of time they spent on completing the questionnaire, overall impressions and suggestions for improving the questions. The feedback per individual sheet was summarized according to issues relating to structure (Table 2.6), layout (Table 2.7), content (Table 2.8) and understanding (Table 2.9).

Table 2.6: Comments and recommendations on the structure of the questionnaires

Structure
<ul style="list-style-type: none"> ▪ Individual questionnaires per staff category to be developed
<ul style="list-style-type: none"> ▪ The pages of the questionnaire should be marked from page 1 for all individual questionnaires. The sections in the questionnaires were not clearly marked in all of the questionnaires.
<ul style="list-style-type: none"> ▪ Managers were requested to coordinate the process of data collection and felt that they should be provided with a summary sheet for listing the questionnaires completed, to indicate staff on leave and to record those who did not complete questionnaires. The purpose, how the data would be used and how confidentiality would be managed were of concern to two of the fourteen participants.
<ul style="list-style-type: none"> ▪ Time to complete respective questionnaires varied from a minimum of 15 minutes to a maximum of 30 minutes. (15 minutes = 6, 30 minutes = 7 and more than 45 minutes =1)

Table 2.7: Comments and recommendations on the layout of the questionnaires

Layout
<ul style="list-style-type: none"> ▪ When tables continue onto the next page the headings should be repeated to prevent paging back
<ul style="list-style-type: none"> ▪ Format questionnaires and ensure that all the blocks are aligned
<ul style="list-style-type: none"> ▪ Use the same font throughout
<ul style="list-style-type: none"> ▪ Keep the layout the same across all questionnaires
<ul style="list-style-type: none"> ▪ Allow enough space to write in

Table 2.8: Comments and recommendations on the content of the questionnaires

Content
<ul style="list-style-type: none"> ▪ Questions were identified that needed to be stated more clearly, more specifically and without ambiguity
<ul style="list-style-type: none"> ▪ Address to be specified as work address and contact numbers to be included in the questionnaire
<ul style="list-style-type: none"> ▪ All the salary level options were not provided, especially lower levels
<ul style="list-style-type: none"> ▪ All qualifications on the national qualifications framework to be included to accommodate all categories and levels of staff.
<ul style="list-style-type: none"> ▪ Questions on qualifications were repetitive of nature. Include only one question
<ul style="list-style-type: none"> ▪ Clarify 3 year and 4 year degrees in the qualifications framework question.
<ul style="list-style-type: none"> ▪ Remove codes for statistical analysis in answers, this confuses participants.
<ul style="list-style-type: none"> ▪ Determining percentage of time spent on key performance areas(KPA) was difficult ,it is recommended that examples of tasks be given next to KPA
<ul style="list-style-type: none"> ▪ Consider including management as an option under activities in manager's questionnaire.
<ul style="list-style-type: none"> ▪ Consider including typing under tasks for clerks.
<ul style="list-style-type: none"> ▪ Staff establishment question in district/sub-district questionnaire to be made clearer.
<ul style="list-style-type: none"> ▪ Use only one term i.e. assistant nutritionists or nutrition advisers
<ul style="list-style-type: none"> ▪ Separate enteral feeding and Total parental Nutrition in specific competencies
<ul style="list-style-type: none"> ▪ More options or option for <i>other</i>, please specify to be included in question on post structure
<ul style="list-style-type: none"> ▪ Staff members at lower levels do not always know their Persal numbers

Table 2.9: Comments and recommendations on the understanding of questionnaires

Understanding
<ul style="list-style-type: none"> ▪ Overall participants indicated that the questions were easily understood. (N =11 easily understood , N = 3 not easily understood)
<ul style="list-style-type: none"> ▪ All levels of staff could complete questionnaires independently although some of the lower levels needed support from managers.
<ul style="list-style-type: none"> ▪ Participants in the hospital setting had limited understanding of the INP.

Proposed changes, comments and recommendations in terms of structure, layout, content and understanding of questionnaires were considered and implemented in the finalisation of

questionnaires. The following changes were made to the questionnaires to address the issues raised;

- Seven individual questionnaires per personnel category were developed i.e. INP managers, district dietitians, admin staff, food service managers, food service workers, dietetic unit head and hospital dietitian questionnaires.
- The different sections was adjusted and numbered and not marked as sections.
- The survey was voluntary and no staff member needed to feel that they would be penalised if they did not participate. All questionnaires were individually coded, no names were recorded on the questionnaires.
- The coding sheet, completed for each facility, was provided to managers with the set of questionnaires which they had to return when submitting completed questionnaires. Managers were also requested to return and write reason for not completing on the questionnaire
- The covering letter and a one-page instruction sheet indicated clearly the purpose of the study, how data would be managed and that personnel numbers would be utilised to link to the Persal database. The Persal numbers are known to supervisors thus this was not of concern. Participants were assured, in a detailed instruction page and introductory paragraph on each questionnaire, that all information would be managed confidentially.
- It was noted that on average it would take between 15 and 30 minutes to complete the questionnaire.
- The layout of the questionnaires was adapted so that the questions did not extend beyond the page.
- The formatting of the questionnaire was adjusted to a table format to justify alignment.
- Questions that were identified to be ambiguous were rephrased and examples were included where possible i.e. inclusion of all NQF levels, giving examples in the schooling system within levels and the inclusion of all salary levels. The objectives for including questions determined how questions could be restructured and rephrased. Adjustments were made ensuring that questions were not leading and that there were not too many open-ended questions allowing participants to provide “safe” answers.
- Questions on qualifications were merged into one question.
- Questions regarding infrastructure were added under the general section.
- Numbers in the self-rating questions were removed and participants were requested just to mark these questions.
- The entire questionnaire was clustered into the sections indicated under 2.5.2.2.

- The numbering of the questions within the cluster was kept the same across all seven questionnaires. This formed part of the data analysis planning
- The establishment section was separated and only provided to managers separately.

Telephonic and personal interviews were conducted with pilot participants to ensure that comments and concerns were documented, verified and well understood.

Recommendations in terms of logistics were also considered and included in the data collection process.

2.5.3.2 *Content validity*

Specialists in the field of human resources planning for health and health programmes ($N=9$) were identified to review, evaluate, comment, provide feedback, reach consensus on the measuring instrument and review the adequacy of the data elements in terms of the set aims and objectives, and in comparison with the Persal system and the Comprehensive Service Plan.¹⁴

The following individuals were identified and approached for the content validity process.

1. Ms Lynn Boucher : Human Resource Management, Practitioner, Department of Health, Western Cape province
2. Mrs. L van Niekerk: Assistant Director, Integrated Nutrition Programme, Western Cape province
3. Mrs. L Sigasana : Assistant Director, Integrated Nutrition Programme, Western Cape province
4. Mr. S Titus: Director Comprehensive Health Programmes, Department of Health Western Cape province.
5. Ms C La Cock : Personal Assistant, Deputy Director General : District Health Services and Programmes, completed Divisional Skills Audit in 2007
6. Mr. J Walters: Deputy Director, Human Resource Management, Department of Health, Western Cape province.
7. Mr. W van Rooyen : Policy and Planning, Department of Health, Western Cape province, Drafter of the Comprehensive Service Plan
8. Ms S Spannenberg : Organisational Development, Provincial Government Western Cape
9. Mr. B Sikhakane: Deputy Director: Nutrition, National Focal Person, Human Resource Management for the Integrated Nutrition programme.

Appointments were scheduled with all specialists and they were briefed and received copies of the protocol, questionnaires and a covering letter with the required expectations in the process of reviewing contents (Appendix 5).

A follow up e-mail was sent to all specialists and copies of the documents were circulated electronically. Seven of the 9 targeted individuals (77%) provided feedback and comments.

Comments and recommendations received from Human Resource specialists (N =5) indicated the following:

- Increased validity will be established by utilizing existing human resource questionnaires.
- Consideration should be given to personal contact with the completion of the questionnaires. Investigate the use of norms especially in rural settings; more attention should be given to service needs. A more integrated approach should be applied in deciding how to allocate the number of posts.
- Community Based Services (CBS) are new developments and the role of nutrition and staff should be reviewed and determined clearly.
- The availability of legal prescripts with regard to nutrition service needs to be followed up as this will have an impact on how posts are allocated.
- Persal will only be linked to certain quantifiable variables e.g. Staff establishment data.
- Questionnaires are very comprehensive, complete, inclusive and thorough.
- Data collected will be useful for future planning.
- The number of data elements collected is quite extensive.
- Analysis of data must be carefully planned as the amount of data that will be collected will be large.
- Completion of all fields by the participants must be checked before submission of data.

The comments and recommendations were considered and questionnaires were adjusted before collection of data in the specified study population.

2.6 Persal System

The official personnel database of the Department of Health is the Persal system. The staff establishments of all facilities and staff occupying posts are captured in this system. Personnel budgets are linked to the Persal system and the data captured are important for planning and monitoring of resources. Data are loaded onto the Persal system continuously

and databases are downloaded from the system on the 15th of the month and at the end of the month. The different categories of nutrition workers were indicated to the Personnel Department, Provincial Office and it was requested that Persal reports should indicate facility establishments, posts filled and vacant for the respective districts and facilities. Persal data were compared with the actual collected data from districts and health facilities. Personnel/Persal data corresponding to the implementation dates of this study were secured for comparative purposes.

2.7 Provincial Maps

Electronic Maps of the Western Cape were obtained from the information management section of the Department of Health and an Excel database was developed for the study population for the entire Western Cape province.

2.8 Data Analysis

A statistician appointed by the Faculty of Health Sciences, Stellenbosch University was consulted for the analysis of data.

2.8.1 Analysis of data

The study domain was mainly quantitative. The advantages of a quantitative approach in this study secured investigator objectivity, focused the study on the specific questions that needed answering and maintained consistency in the investigation. The data collection procedures and types of measurement that were constructed in advance ensured application in a standardised manner.

An Excel data entry sheet was developed, in consultation with a statistician, for the seven different questionnaires. On receipt, completed questionnaires were marked off against the sampling coding sheet, checked for errors and entered into the Excel spreadsheets. The investigator, with the assistance of a part-time data capturer, was responsible for the capturing of the data. A training session with the data capturer was scheduled to ensure that she understood how data should be entered. The previous experience of the capturer contributed towards the completion of this task, but the time needed for its conclusion was underestimated by the investigator. It took four weeks to complete the data capturing instead of the planned two weeks. This can be ascribed to the fact that the capturing was done on a part-time basis and that it took 5-10 minutes in the beginning to capture one questionnaire.

Data cleaning and verification were done by the investigator, by double checking each individual data entry against the questionnaire and using the Persal database. The Persal database was used specifically to double check that the job ranks were correct as this would influence the cost analysis. This task took a further week to complete. Discussions and groundwork was done for the analysis, in consultation with the statistician, which further enhanced the quality of the data.

Measurement on specific variables was focused and was quantified by means of frequency counts. Analysis proceeded with the procurement of the statistical breakdown of the distribution of variables. Statistical methods were used to determine associations and differences between variables.

2.8.2 Statistical methods

Data were grouped in the respective categories/districts/sub-districts in order to ensure confidentiality. Data elements that were similar for all groups were combined. The collected data from this study were compared with the available Persal database.

Analyses were done by using Statistica 8 (Statsoft.Inc (2008) data analysis software system, version 8.www.statsoft.com). Descriptive statistical methods were utilised. When a continuous variable was compared to other continuous input variable(s), regression or multiple regression methods were used. The strength of the relationship was computed with either correlation or multiple correlations.

When a continuous variable was compared versus nominal input variables, appropriate ANOVA (analysis of variance) was used. If the residuals were not normally distributed, appropriate non-parametric methods were used as with ordinal variables.

When an ordinal variable was compared versus a nominal input variable, non-parametric ANOVA methods (like the Mann-Whitney test or the Kruskal-Wallis test or, for repeated measures, the Wilcoxon- or Friedman tests) were used.

When a nominal variable was compared to other nominal input variable(s), appropriate contingency table analyses were used (also referred to as chi-square tests).

When a nominal variable was compared versus either continuous and/or nominal input variables, logistic regression methods were used. All analyses were done with a significance level of 5%.

Cost comparisons based on salary levels were done for the actual situation and comprehensive service plan. Areas for the improvement of the human resource management situation were identified through recommendations.

2.9 Ethics

2.9.1 Ethics review committee

The study was approved by the Human Research Committee, Faculty of Health Sciences, Stellenbosch University (N07/10/219) and the research committee within the Department of Health (reference 19/18/RP93/2007, 17 January 2008) (Appendix 6,7). The submissions were done simultaneously.

2.9.2 Informed consent

Informed consent was obtained from all participants. Consent was presumed/accepted and recognised by the completion and submission of completed questionnaires.

2.9.3 Department of Health consent

All participants and the Department of Health were assured that the data will be utilised in the formulation of policy and managed anonymously and in a confidential manner. A covering letter, signed by the Director of Comprehensive Health Programmes, explaining the voluntary nature of participation, the purpose of the project, what input would be required from the participants and how the information would be utilised in policy development, accompanied the questionnaires (Appendix 8).

2.9.4 Confidentiality

Information was handled with the utmost confidentiality and no one, other than the investigator and study leaders for the research project, had access to the information. To ensure confidentiality, the questionnaires were coded and categories of staff, services and hospitals were grouped in order to ensure that all respondents' names were protected. The codes were only known to the investigator.

CHAPTER 3: RESULTS

3.1 Sample Demographics

The human resource study data were collected between April and June 2008 throughout the Western Cape province. A maximum of seven hundred and fifty-six ($N = 756$) personnel in the respective personnel categories were available for inclusion in the sample, of which six hundred and forty-seven ($N = 647$) responded. A response rate of 86% was therefore achieved. The non-responses were due to personnel being on leave ($N = 27$), personnel refusing to participate ($N = 4$), personnel not providing a reason ($N = 64$), contract personnel ($N = 8$) and vacant posts ($N = 6$).

For the purposes of the data analysis and presentation, the data from completed questionnaires were analysed and are presented firstly by the personnel categories and secondly by Individual categories of personnel profiles.

The 5 personnel categories were:

- Managers (MX), including dietetic unit heads, INP and food service managers
- Dietitians (DT), including community service, district/sub-district based dietitians and hospital based dietitians
- Auxiliary services officers (ASO), including nutrition advisers classified as auxiliary services officers and health promoters on Persal
- Food service workers (FSW), including food service supervisors and food service aids
- Admin, including clerks and financial officers working within nutrition components

The Individual categories of personnel profiles were:

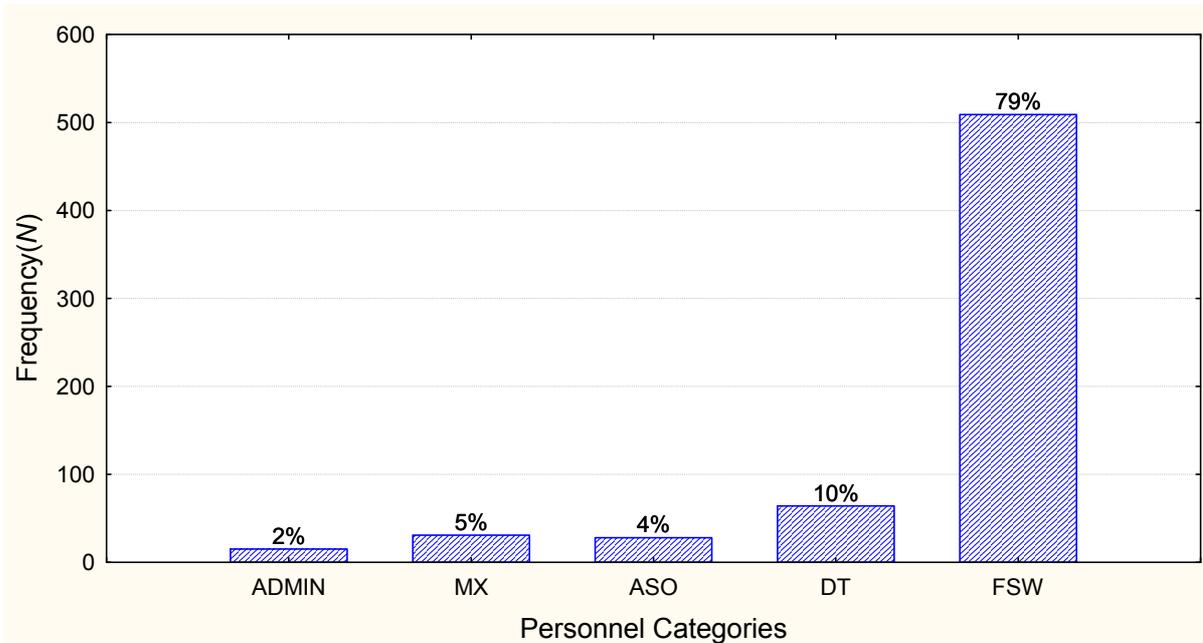
- INP Managers
- District dietitians
- Hospital dietetic unit managers
- Hospital dietitians
- Food service managers
- Food service workers
- Auxiliary workers
- Administrative workers

In view of the descriptive design of the study, all frequencies (percentage) are expressed in whole numbers, without decimals.

A: PROFILE OF THE NUTRITION WORKFORCE BY PERSONNEL CATEGORY

3.1.1 Demographics of the nutrition workforce per personnel category

The food service workers were the largest group of personnel (79%, $N = 509$) followed by dietitians (10%, $N = 64$), managers (5%, $N = 31$), auxiliary workers (4%, $N = 28$) and administrative workers (2%, $N = 15$) respectively (Figure 3.1).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.1: Frequency distribution of respondents by nutrition personnel category in the Western Cape province

The distribution of the workforce when grouped in the regional offices indicated that 1% ($N = 4$) was placed at the provincial office in Cape Town^{†††}, 62% ($N = 400$) placed in the Metropole region, 15% ($N = 94$) in the Southern Cape Karoo region, 13% ($N = 88$) in the Boland Overberg region and 9% ($N = 61$) in the West Coast Winelands region. Geographically, the Western Cape province is divided into 6 districts i.e. 1 urban (Cape Town Metro) district and 5 rural (Overberg, West Coast, Cape Winelands, Eden, Central Karoo) districts. Sixty two percent ($N = 404$) of the nutrition workforce in the sample were located in the urban district and 38% ($N = 243$) were in the rural districts (Figure 3.2).

^{†††}The provincial office in Cape Town has been included with the urban district in the analysis.

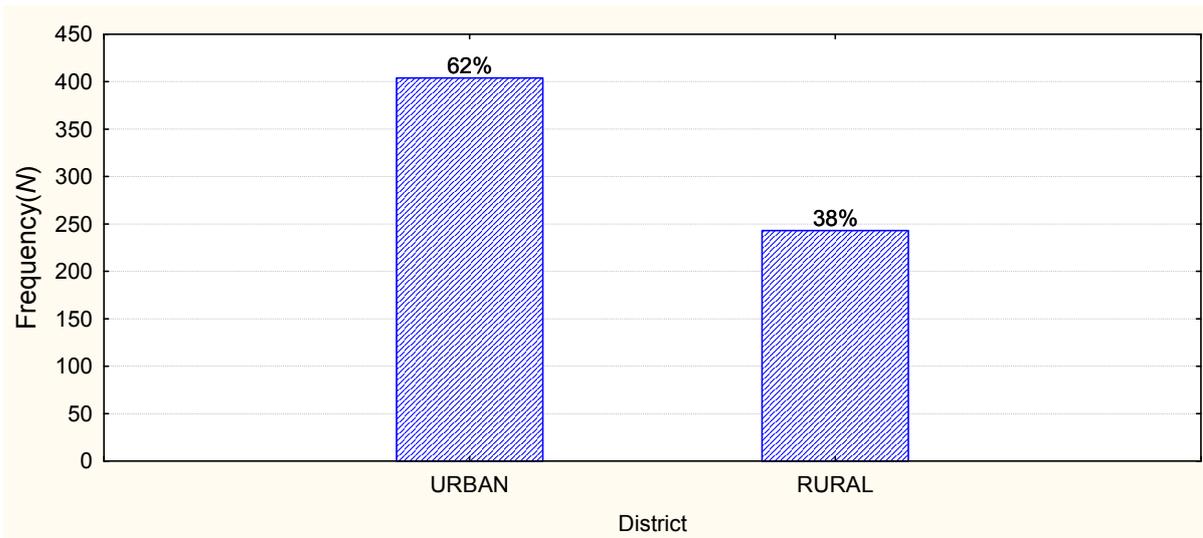


Figure 3.2: Geographic distribution of the nutrition workforce in the Western Cape province

The distribution of the different personnel categories (Table 3.1) in urban and rural areas indicated that food service workers formed the largest percentage in both urban and rural areas. The total workforce was also significantly larger (Chi-square test; $p = 0.0001$) in the urban than the rural areas.

Table 3.1 Distribution of nutrition personnel categories in urban and rural districts in the Western Cape province

Personnel category [N; (%)]						
District	Admin	MX	ASO	DT	FSW	TOTAL*
Urban	15 (4)	25 (6)	11 (3)	47 (12)	306 (75)	404 (100)
Rural	0 (0)	6 (2)	17 (7)	17 (7)	203 (84)	243 (100)
Totals	15(2)	31(5)	28(4)	64(10)	509((79)	647 (100)

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers * (Chi -square test; $p = 0.0001$)

3.1.1.1 Age

The ages of the personnel ranged from 20 to 70 years of age (Figure 3.3). The mean age of the nutrition workforce was 43 years [Standard Deviation (SD) 10.47] with a median of 44 years.

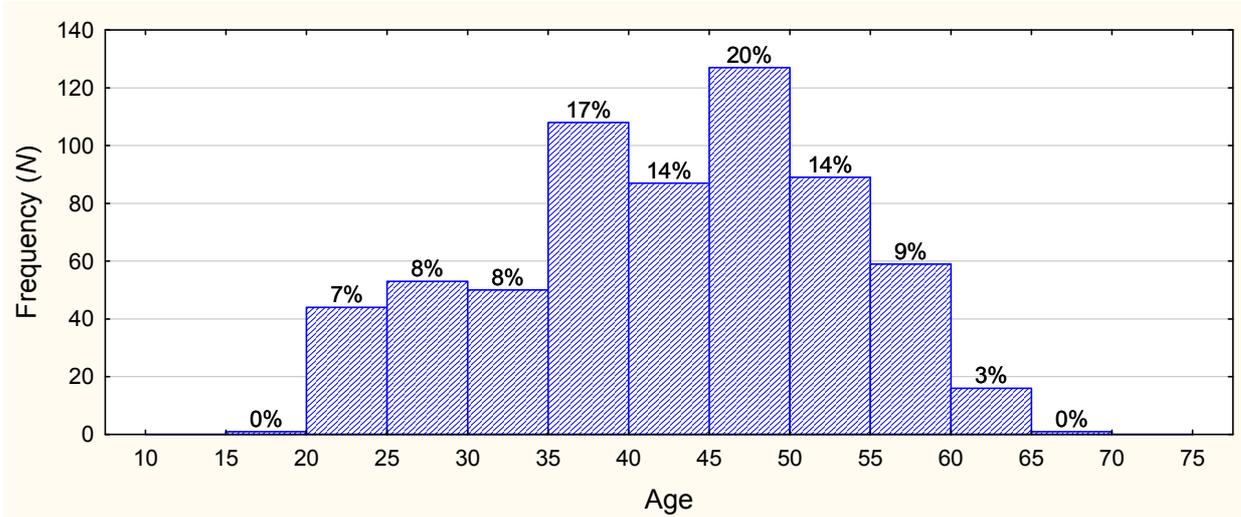
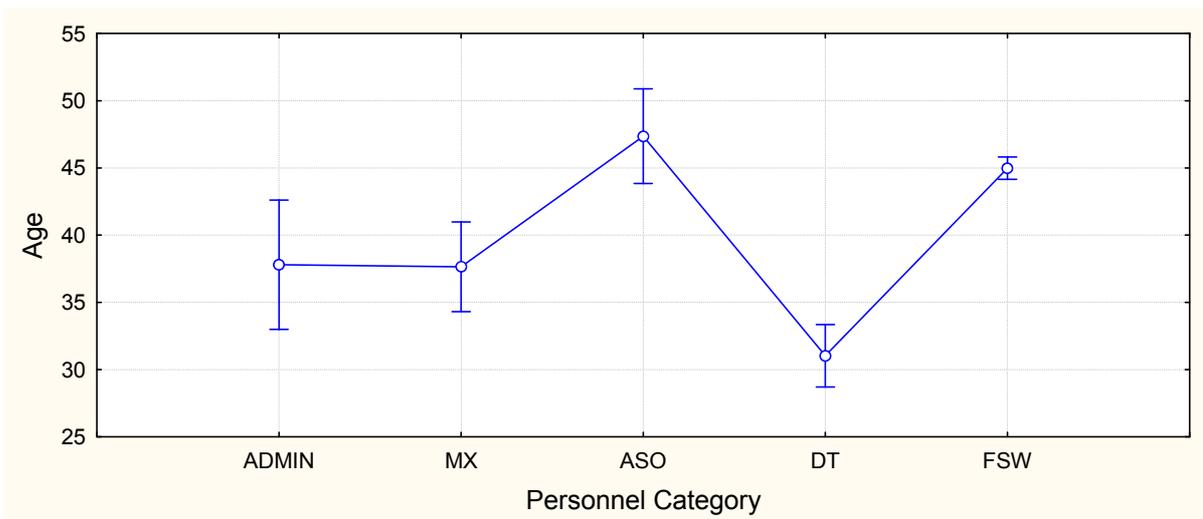


Figure 3.3: Age distribution of the nutrition workforce in the Western Cape province

The mean ages of the individual personnel categories (Figure 3.4) was 37.8 years (SD 8.8) for administrative workers, 37.6 years (SD 8.7) for managers, 47.3 years (SD 6.89) for auxiliary workers, 31.0 years (SD 7.7) for dietitians and 44.9 years (SD 9.8) for food service workers. The differences between the group mean ages was significant (Kruskal – Wallis, $p < 0.01$)



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.4: Mean age of individual nutrition personnel categories in the Western Cape province

The age of the nutrition workforce was normally distributed for age around the respective means (Figure 3.5)

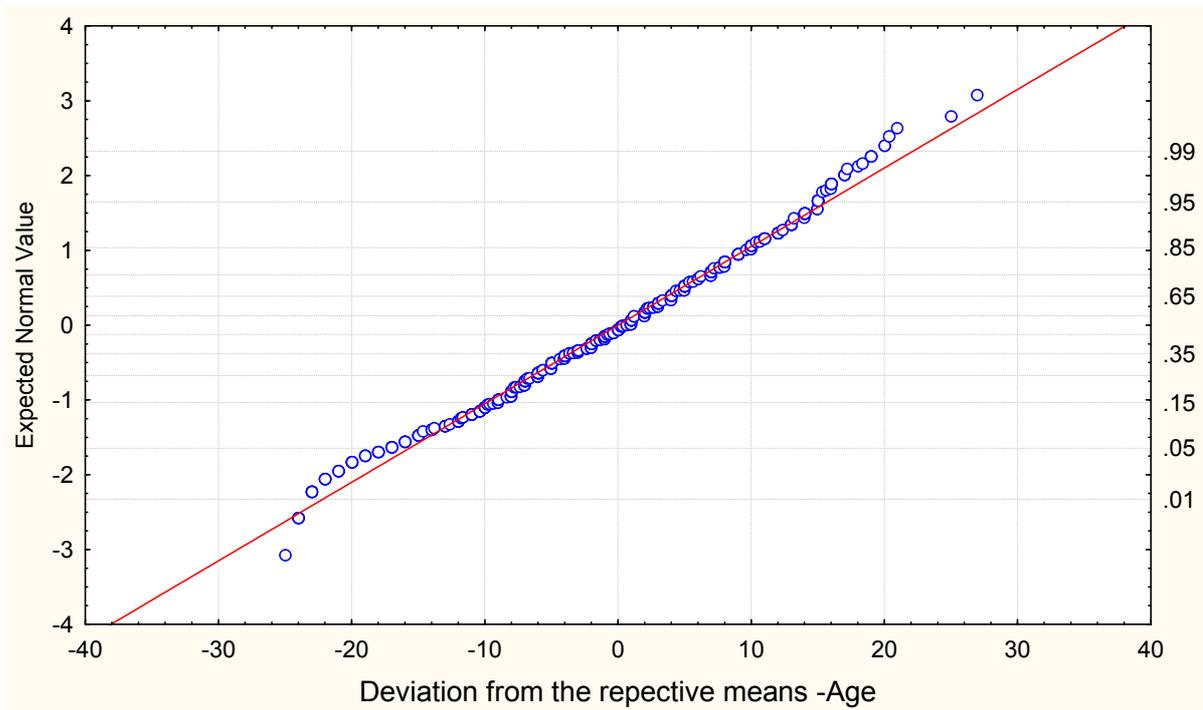


Figure 3.5: Age distribution of nutrition personnel categories in the Western Cape province from respective means

3.1.1.2 Language

The distribution of the home language of nutrition workforce (Table 3.2) in the urban and rural areas was significantly different (Chi-square test; $p = 0.0001$). Seventy-four percent of the workforce's home language was Afrikaans, 15% Xhosa, 10% English and 1% other.

Table 3.2: Distribution of home languages of the nutrition workforce in urban and rural districts in the Western Cape province

Languages [N; (%)]					
District	Xhosa	English	Afrikaans	Other	Totals*
Urban	70(17)	59(15)	272(67)	3(1)	404(100)
Rural	28 (12)	6(2)	209(86)	0(0)	243(100)
Totals	98(15)	65(10)	481(74)	3(1)	647(100)

*(Chi-square test; $p = 0.0001$)

The distribution of home language between the different personnel categories (Chi -square test; $p = 0.0001$) was significantly different for the personnel categories (Table3.3).

Table 3.3: Distribution of home languages of the nutrition personnel categories in the Western Cape province

Personnel categories [N; (%)]						
Home Language	Admin	MX	ASO	DT	FSW	TOTAL*
Xhosa	3(3)	7(7)	3(3)	0(0)	85(87)	98(100)
English	5(8)	10(15)	3(5)	31(48)	16(24)	65(100)
Afrikaans	7(1)	14(3)	22(5)	33(7)	405(84)	481(100)
Other	0	0	0	0	3(100)	3(100)
Totals	15	31	28	64	509	647

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers * (Chi -square test; p = 0.0001)

Afrikaans and English were the home languages present in all personnel categories. Xhosa, as a home language, was present predominantly amongst food service workers (87%, $N = 85$) and non-existent amongst dietitians. Other home languages that were indicated ($N = 3$) were evident only in the food service worker category.

3.1.1.3 Gender, ethnicity, marital status and disability

The distribution of ethnicity was significantly different, but not significantly different for marital status, gender and disability for the nutrition workforce in rural and urban areas (Table 3.4). Sixty-eight percent ($N = 442$) of the workforce was coloured, 17% ($N = 110$) African, 14% ($N = 87$) white and 1% ($N = 8$) Indian (Table 3.4).

The majority of the 625 respondents were married (47%, $N = 292$), 36% ($N = 227$) single, 12% ($N = 73$) divorced and 5% ($N = 33$) widowed. Twenty-two of the 647 respondents left the question blank and did not respond (Table 3.4).

Eighty percent ($N = 515$) of the workforce was female and 20% ($N = 132$) male. Ninety-eight percent ($N = 632$) of the workforce had no disabilities and 2% ($N = 15$) indicated disability. The specific disabilities that were indicated were physical disabilities due to polio, hearing and visual impairments (Table 3.4).

Table 3.4: Distribution of ethnicity, marital status, gender and disability of the nutrition workforce in urban and rural districts in the Western Cape province

Ethnicity [N; (%)]					
District	African	Coloured	White	Indian	Totals*
Urban	78(19)	270(67)	48(12)	8(2)	404(100)
Rural	32(13)	172(71)	39(16)	0(0)	243(100)
Totals	110(17)	442(68)	87(14)	8(1)	647(100)
*Chi-square; p=0.04					
Marital status [N; (%)]					
District	Single	Married	Divorce	Widowed	Totals*
Urban	140(36)	176(45)	52(13)	19(5)	387(100)
Rural	87(37)	116(49)	21(9)	14(6)	238(100)
Totals	227(36)	292(47)	73(12)	33(5)	625 ^{§§§}
*Chi-square; p=0.33					
Gender					
District	Females		Males		Totals*
Urban	326(81)		78(19)		404(100)
Rural	189(78)		54(22)		243(100)
Totals	515(80)		132(20)		647(100)
*Chi-square; p=0.37					
Disability					
District	No Disability		Disability		Totals*
Urban	398(99)		6(1)		404(100)
Rural	234(96)		9(4)		243(100)
Totals	632(98)		15(2)		647(100)
*Chi-square; p=0.07					

The distribution of personnel categories was significantly different for ethnicity (Table 3.5) and marital status (Table 3.6) (Chi -square test; p = 0.0001).

Not all of the ethnic groups were represented amongst all the personnel categories. No dietitians, administrative and food service workers were represented in the African and Indian ethnic groups.

§§§ 22 no responses

Fifty-one percent of the managers ($N = 16$ of 31) were white, 25% coloured ($N = 8$ of 31), 19% ($N = 6$ of 31) African and 3% Indian ($N = 1$ of 31). The representation of Indian workers amongst all personnel categories was the lowest ($N = 8$).

Table 3.5: The distribution of ethnicity of nutrition personnel categories in the Western Cape province

Personnel categories [N ; (%)]						
Ethnicity	Admin	MX	ASO	DT	FSW	TOTAL*
African	3(3)	6(5)	4(4)	0(0)	97(88)	110(100)
Coloured	11(3)	8(2)	22(5)	19(4)	382(86)	442(100)
White	1(1)	16(18)	2(2)	38(44)	30(34)	87(100)
Indian	0(0)	1(12)	0(0)	7(87)	0(0)	8(100)
Totals	15	31	28	64	509	647

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers * (Chi -square test; $p = 0.0001$)

Table 3.6: The distribution of marital status of nutrition personnel categories in the Western Cape province

Personnel categories [N ; (%)]						
Marital Status	Admin	MX	ASO	DT	FSW	TOTAL*
Single	5(2)	12(5)	3(1)	39(17)	168(74)	227(100)
Married	8(3)	16(5)	17(6)	25(9)	226(77)	292(100)
Divorce	2(3)	2(3)	6(8)	0(0)	63(86)	73(100)
Widowed	0(0)	1(3)	2(6)	0(0)	30(91)	33(100)
Totals	15	31	28	64	487	625****

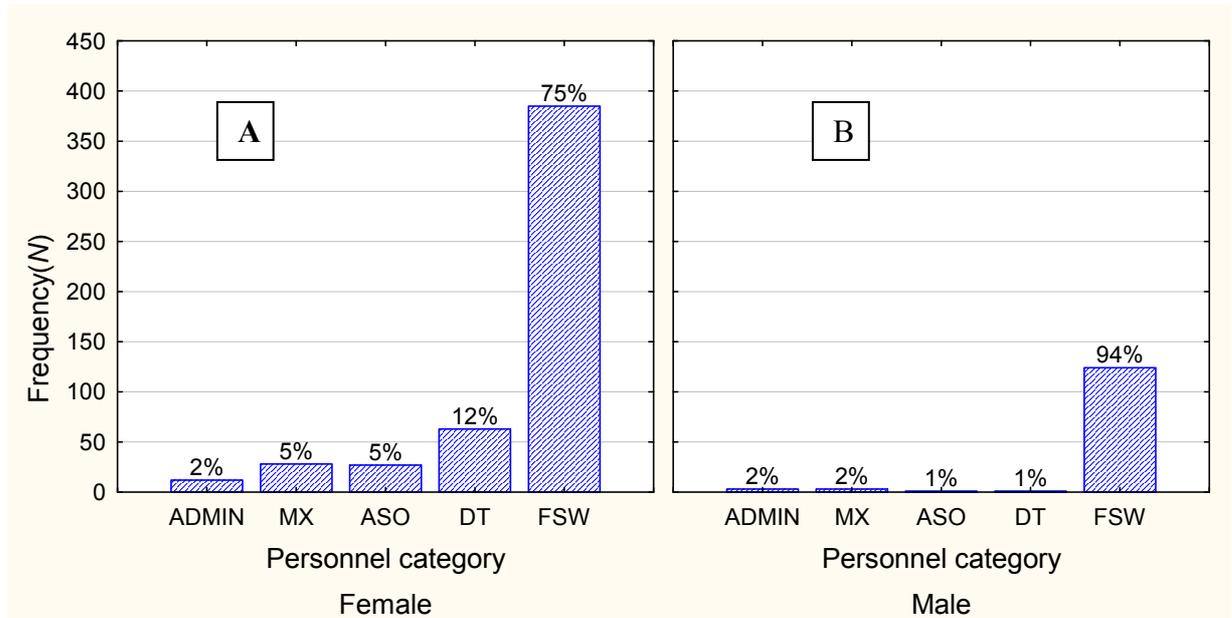
Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers * (Chi -square test; $p = 0.0001$)

The marital status of personnel in the different categories indicated that food service workers, auxiliary workers and managers had been widowed. All groups, with the exception of dietitians, had been affected by divorce.

Disabilities were present in all personnel categories, and were distributed as follows; 66% food service workers ($N = 10$), 7% managers ($N = 1$), 7% dietitians ($N = 1$), 13% (auxiliary workers ($N = 2$) and 7% administrative workers ($N = 1$).

**** 22 no responses

The gender distribution amongst the personnel categories was significantly different (Chi-square test; $p=0.0001$) (Figure 3.6). The female distribution (Figure 3.6A) indicated that 75% ($N = 385$) were food service workers, followed by dietitians (12%, $N = 63$), managers and auxiliary workers (5%, $N = 28$) for each category, and administrative workers 2% ($N = 12$). Ninety- four percent of the males ($N = 124$) (Figure 3.6B) were food service workers, 2% ($N = 3$) managers, 2% ($N = 3$) administrative workers, 1% ($N = 1$) dietitians and 1% ($N = 1$) auxiliary workers.



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

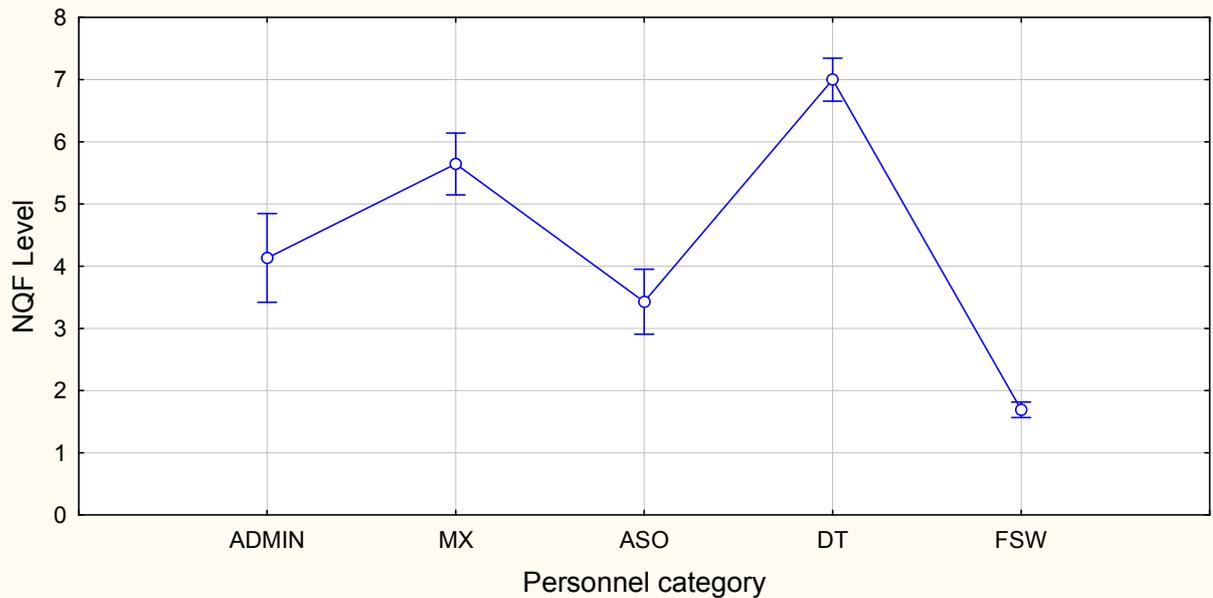
Figure 3.6: Gender distribution of the nutrition personnel categories in the Western Cape province

The distribution of males and females in urban and rural districts was not significantly different. Eighty-one percent ($N = 326$) of workers in urban districts was female and 19% ($N = 78$) male. In rural districts the distribution was 78% ($N = 189$) female and 22% ($N = 54$) males.

3.1.2 Qualifications and experience of the nutrition workforce per personnel category

3.1.2.1 Qualifications

The mean qualifications of the individual personnel categories, according to the national qualifications framework (NQF)^{††††} levels (Figure 3.7), indicated a mean qualification 4.1 (SD 1.12) for administrative workers, 5.6 (SD 1.37) for managers, 3.4 (SD 1.03) for auxiliary workers, 7 (SD 0.00) for dietitians and 1.6 (SD 1.51) for food service workers. The differences between the groups was significant (Kruskal – Wallis, $p = <0.01$).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers; (Kruskal – Wallis, $p = <0.01$)

Figure 3.7: Distribution of NQF^{††††} levels of the nutrition personnel categories means in the Western Cape province

The qualification level of the nutrition workforce was normally distributed around respective means (Figure 3.8).

^{††††} NQF keys: 0 = Adult based education training 3 and lower, grade 5/6 or standards3/4, 1 = Standard 7 or grade 9 or lower than adult based education training 4, 2 = Standard 8 or grade 10 or Technical N1, 3 = Standard 9 or grade 11 or Technical N2, 4 = Standard 10 or grade 12 or Technical N3, 5 = Occupational certificates, Diplomas, N4 – N6, 6 = First degrees, Higher diplomas, 7 = Higher Degrees, Professional qualifications, 8 = Doctorates/Further research degrees

^{††††} NQF keys : 0 = Adult based education training 3 and lower, grade 5/6 or standards3/4, 1 = Standard 7 or grade 9 or lower than adult based education 4, 2 = Standard 8 or grade 10 or Technical N1, 3 = Standard 9 or grade 11 or Technical N2, 4 = Standard 10 or grade 12 or Technical N3, 5 = Occupational certificates ,Diplomas, N 4 – N6, 6 = First degrees, Higher diplomas, 7 = Higher Degrees, Professional qualifications, 8 = Doctorates/Further research degrees

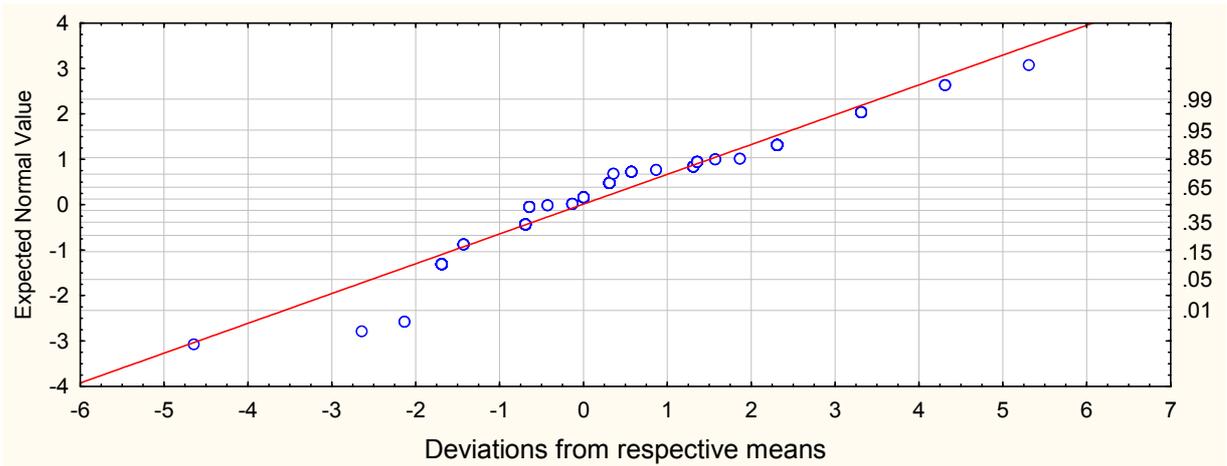
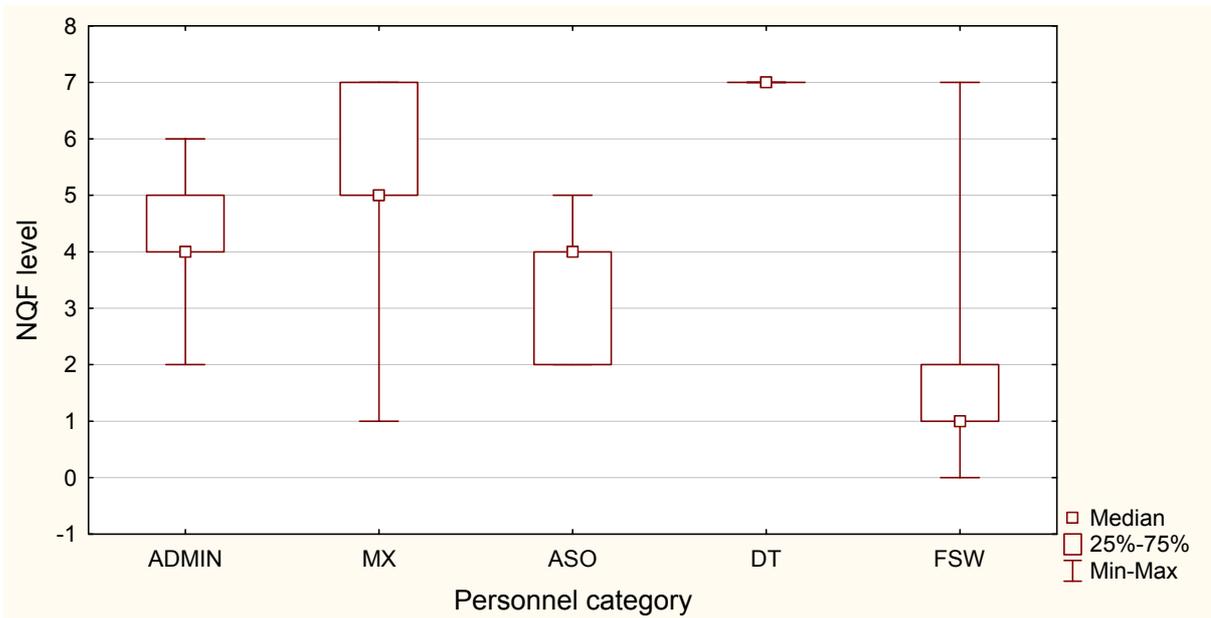


Figure 3.8: NQF level of the nutrition personnel categories, deviation from respective means in the Western Cape province

The minimum and maximum qualifications per NQF^{§§§§} level varied for the respective personnel categories indicating minimum and maximum levels for dietitians at level 7, managers at a minimum level 1 and maximum level 7, administrative workers at a minimum level 2 and a maximum level 6, auxiliary service workers at a minimum level 2 and a maximum level 6, auxiliary service workers at a minimum level 2 and a maximum level 5 and food service workers at a minimum level 0 and a maximum level 7 (Figure 3.9).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.9: Minimum and maximum NQF levels per nutrition personnel category in the Western Cape province

§§§§ NQF keys: 0 = Adult based education training 3 and lower, grade 5/6 or standards3/4, 1 = Standard 7 or grade 9 or lower than adult based education 4, 2 = Standard 8 or grade 10 or Technical N1, 3 = Standard 9 or grade 11 or Technical N2, 4 = Standard 10 or grade 12 or Technical N3, 5 = Occupational certificates ,Diplomas, N 4 – N6, 6 = First degrees, Higher diplomas, 7 = Higher Degrees, Professional qualifications, 8 = Doctorates/Further research degrees

The distribution in terms of qualifications was significantly different (chi-square; $p=0.00098$) in the urban (Figure 3.10A) and rural districts (Figure 3.10B). Seventy-nine percent of urban nutrition workers had primary and secondary school qualifications and twenty-one percent had tertiary/higher education qualifications. In rural areas 83% of nutrition workers had primary and secondary school qualifications and 17% tertiary/higher education qualifications.

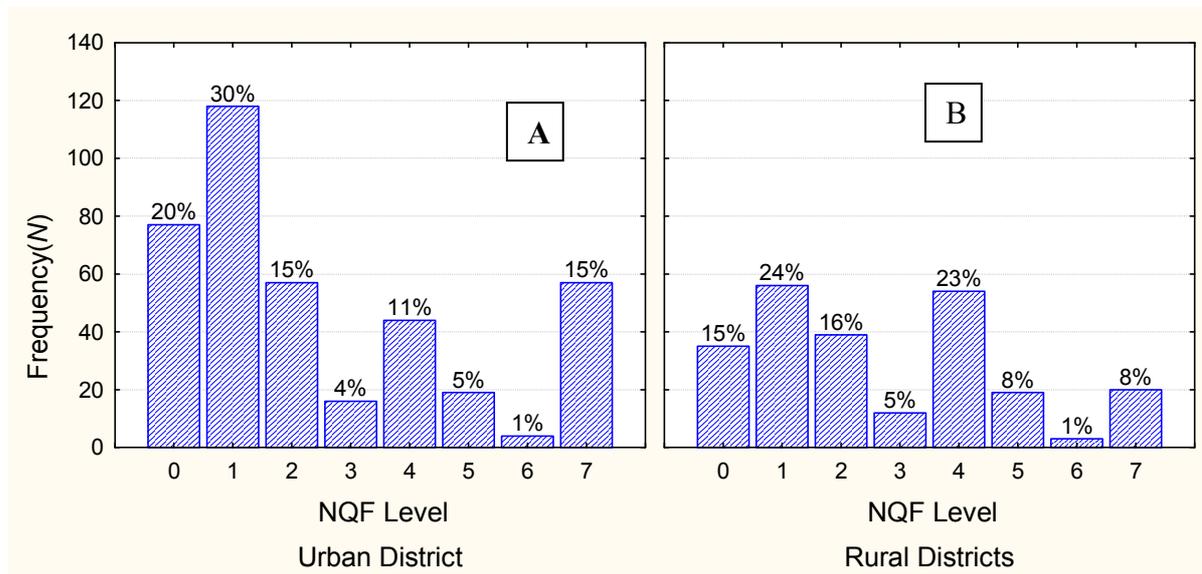


Figure 3.10: Distribution of NQF levels of the nutrition workforce in urban (A) and rural (B) districts in the Western Cape province

Seventy-four (11%) of the nutrition workforce had professional registration with health councils. A significant difference was found between rural and urban personnel with regard to professional registration ($p=0.042$) (Table 3.7).

Table 3.7: Nutrition personnel in rural and urban districts with professional registration in the Western Cape province

Professional registration [N; (%)]			
District	No Professional registration	Professional registration	Totals*
Urban	350(87)	54(13)	404(100)
Rural	223(92)	20(8)	243(100)
Totals	573(89)	74(11)	647(100)

*Chi –square test; $p=0.042$

3.2.1.2 Professional Experience

The professional experience (Table 3.8) of respondents indicated that 52% ($N = 291$) had more than 15 years experience. In urban districts 55% ($N = 191$) and in rural districts 47% ($N = 100$) of the personnel had 15 years and more professional experience. Forty-two percent

($N = 255$) of the respondents had been in their present positions for more than 15 years and the distribution in urban and rural districts was 47% ($N = 177$) and 34% ($N = 78$) respectively. The mean professional experience in the urban district was 10 – 14 years (SD 1.28) and 5 – 9 years (SD 1.44) in rural districts. The difference was found to be significant (Mann – Whitney test; $p=0.03$). The distributions were normal from the respective means.

The mean professional experience of the individual personnel categories was 5 to 9 years (SD 1.27) for administrative workers, 10 to 14 years (SD 1.16) for managers, 10 to 14 years (SD 0.67) for auxiliary workers, 5 – 9 years (SD 1.22) for dietitians and 10 to 14 years (SD 1.31) for food service workers (Figure 3.11). The mean years of the individual personnel categories in their present positions was 5 to 9 years (SD 1.43) for administrative workers, 5 to 9 years (SD 1.53) for managers, 10 to 14 years (SD 0.83) for auxiliary workers, 1 to 4 years (SD 1.86) for dietitians and 10 to 14 years (SD 1.48) for food service workers (Figure 3.12). The differences between the groups was significant for both professional years' experience and years in the present position (Kruskal – Wallis, $p = <0.01$). The data were normally distributed from the respective means for both experience and years in present position.

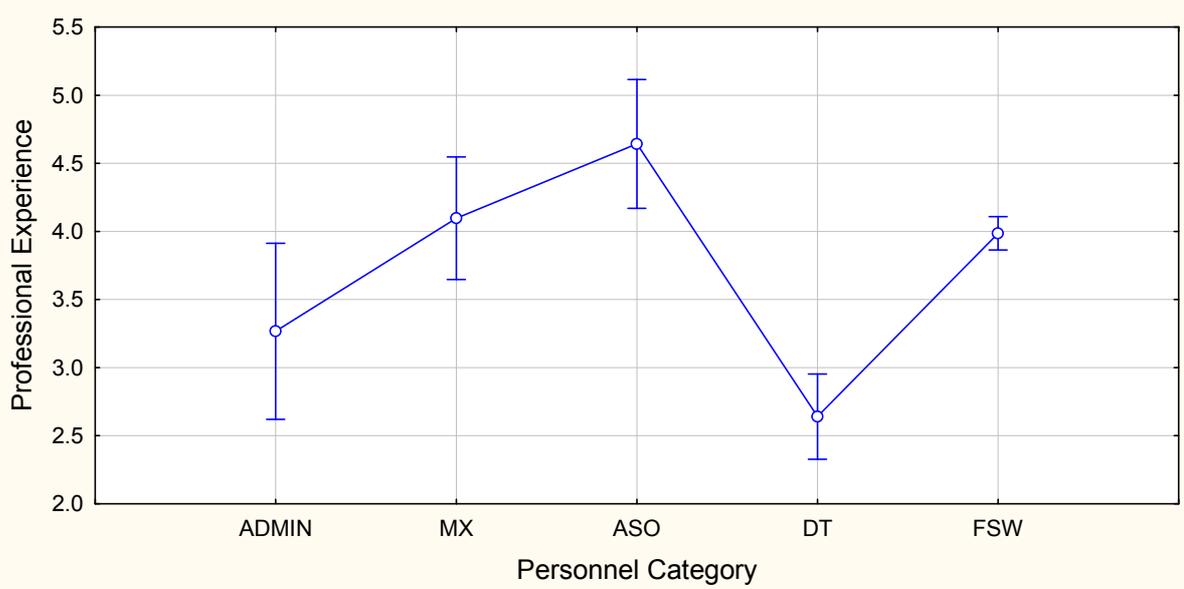
Table 3.8: Professional experience and years in present position of the nutrition workforce in urban and rural districts in the Western Cape province

Professional Experience [N ; (%)]						
District	Less than one year	One to 4 years	Five to 9 years	Ten to 14 years	15 Years and more	Total
Urban	13(4)	52(15)	59(17)	32(9)	191(55)	347(100)
Rural	14(7)	53(25)	24(11)	20(10)	100(47)	211(100)
Total	27(5)	105(19)	83(15)	52(9)	291(52)	558(100) ****
Years in present position [N ; (%)]						
District	Less than one year	One to 4 years	Five to 9 years	Ten to 14 years	15 Years and more	Total
Urban	53(14)	62((16)	58((15)	30(8)	177(47)	380(100)
Rural	33(14)	63(27)	26(11)	33(14)	78(34)	233(100)
Total	86(14)	125(20)	84(14)	63(10)	255(42)	613(100) ††††

Kruskal – Wallis, $p = <0.01$

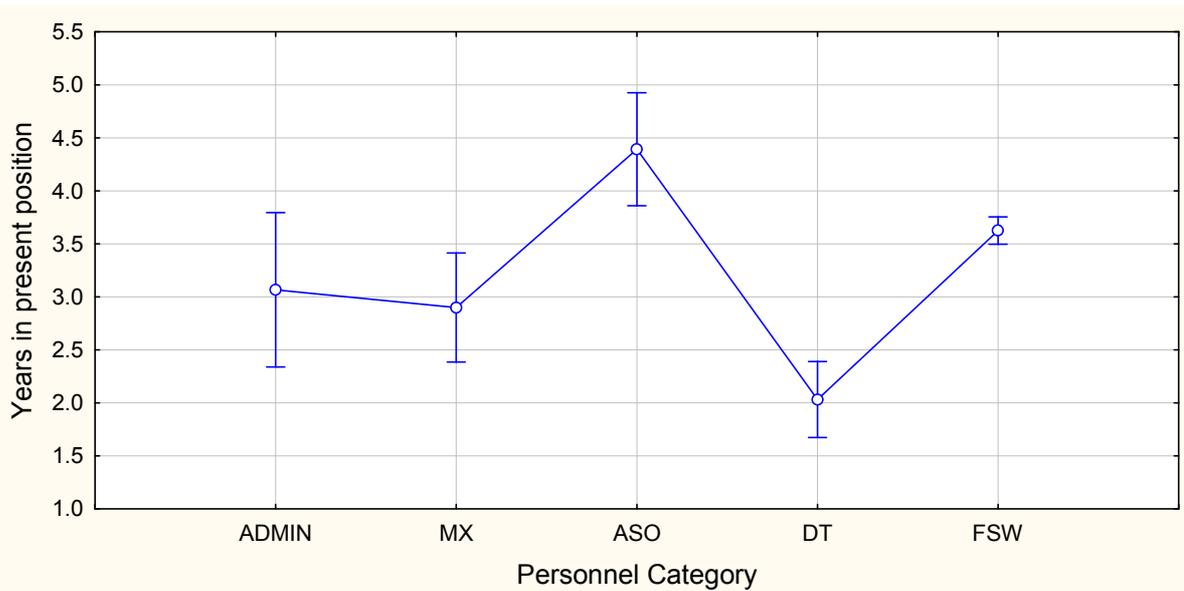
**** 89 no responses

†††† 34 no responses



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.11: Means of years of professional experience^{††††} of individual nutrition personnel categories in the Western Cape province



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.12: Means of years in the present position^{§§§§} of individual nutrition personnel categories in the Western Cape province

†††† 1= Less than one year, 2 = One to 4 years, 3 = Five to 9 years, 4 = Ten to 14 years, 5 = 15 years and more

§§§§ 1= Less than one year, 2 = One to 4 years, 3 = Five to 9 years, 4 = Ten to 14 years, 5 = 15 years and more

The professional experience and years in the present position differed significantly for the individual personnel categories ($p= 0.0001$). None of the auxiliary service workers had less than 5 years experience and were in their present positions for less than 5 years. The largest percentage of food service workers (57%, $N = 241$) had 15 years and more experience. Forty- six percent ($N = 222$) of food service workers have been in their present positions for 15 years and more (Table3.9).

Table 3.9: Professional experience and years in present position of nutrition personnel categories in the Western Cape province

Professional Experience [N; (%)]						
Personnel Categories	Less than one year	One to 4 years	Five to 9 years	Ten to 14 years	15 Years and more	Total
Administrative workers	1(7)	3(20)	6(40)	1(7)	4(26)	15(100)
Managers	0(0)	5(16)	4(13)	5(16)	17(55)	31(100)
Auxiliary service workers	0(0)	0(0)	3(11)	4(14)	21(75)	28(100)
Dietitians	10(16)	25(39)	15(23)	6(9)	8(13)	64(100)
Food service workers	16(4)	72(17)	55(13)	36(9)	241(57)	420(100)
Total	27	105	83	52	291	558 ^{*****}
Years in present position [N; (%)]						
Personnel categories	Less than one year	One to 4 years	Five to 9 years	Ten to 14 years	15 Years and more	Total
Administrative workers	2(13)	4(27)	4(27)	1(6)	4(27)	15
Managers	7(23)	7(23)	6(20)	2(7)	8(27)	30
Auxiliary service workers	0(0)	0(0)	6(21)	5(18)	17(61)	28
Dietitians	26(42)	20(32)	8(13)	4(6)	4(6)	62
Food service workers	51(11)	94(20)	60(12)	51(11)	222(46)	478
Total	86	125	84	63	255	613 ^{†††††}
Chi-square test: $p=0.0001$						

***** 89 no responses

††††† 34 no responses

3.1.2.3 Training

Forty-nine percent ($N = 315$) of all respondents had received some form of training in the last year with 51% ($N = 332$) indicating that they did not attend any training in the last year. The distribution of nutrition personnel who attended courses in the last year were (Figure 3.13A); food service workers, 75% ($N = 237$); dietitians, 12% ($N = 37$); auxiliary services workers, 3% ($N = 10$); managers, 7% ($N = 21$) and administrative workers, 3% ($N = 10$).

The distribution for the respective nutrition personnel categories not attending courses in the last year (Figure 3.13B) were; food service workers, 82% ($N = 272$); dietitians, 8% ($N = 27$); auxiliary services workers, 5% ($N = 18$); managers, 3% ($N = 10$) and administrative workers, 2% ($N = 5$). The distribution of training attended and training not attended in the last year was significantly different for the personnel categories, (Chi - square test; $p = 0.021$) with food service workers having the highest percentage of attending and administrative workers the lowest percentage (Figure 3.13).

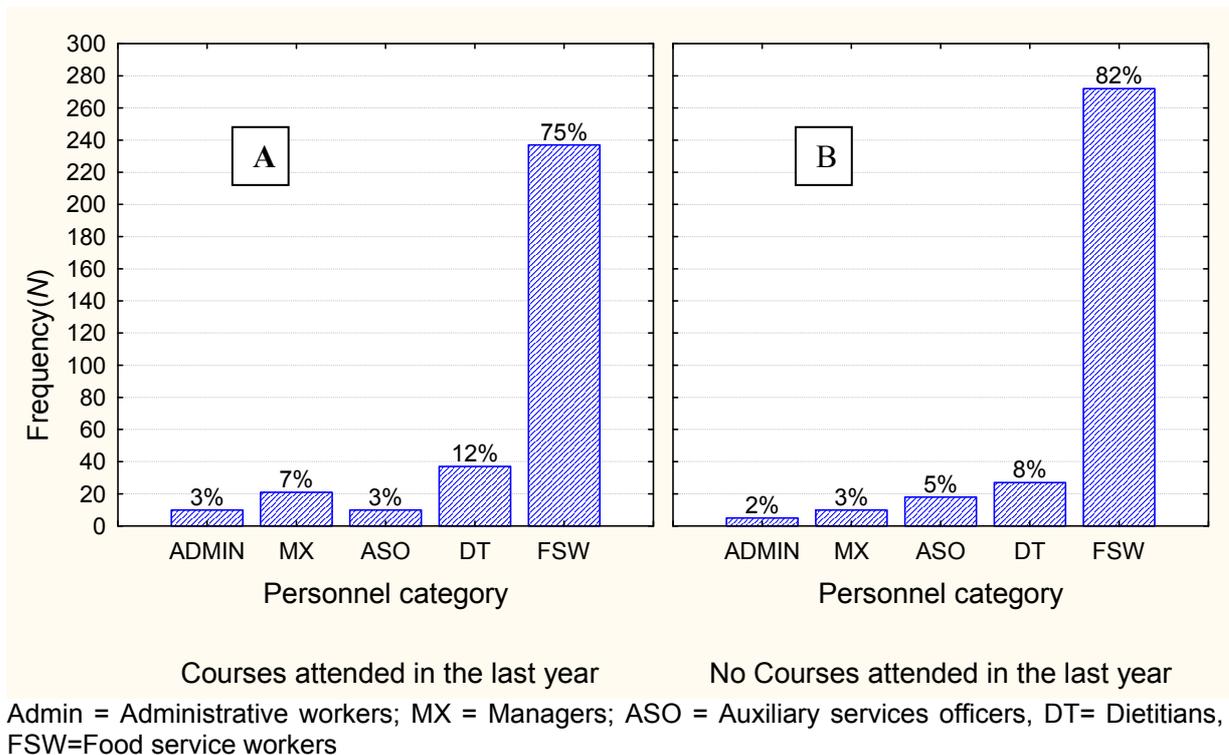
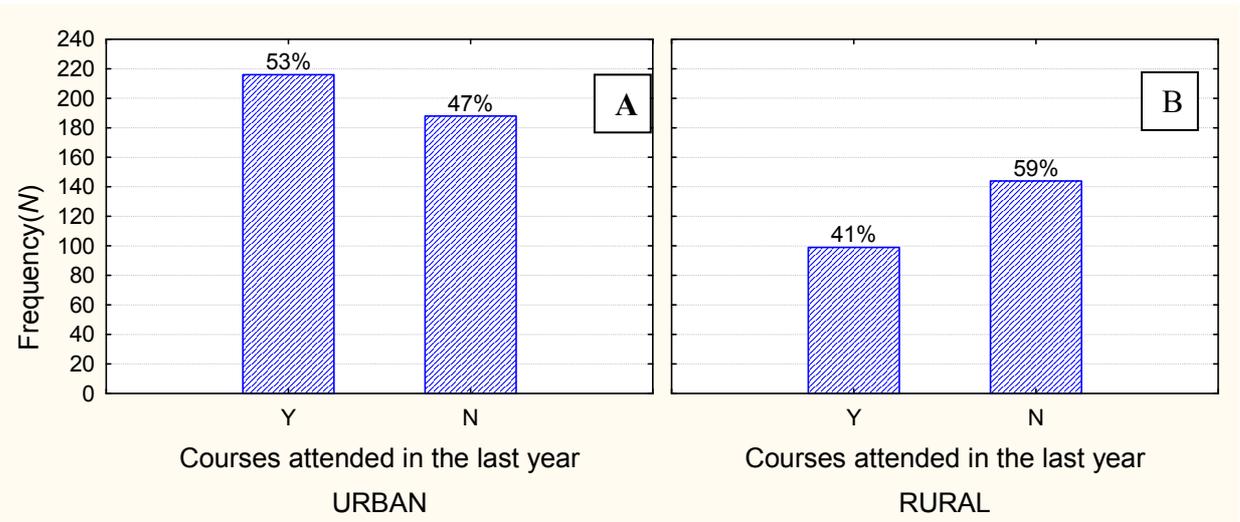


Figure 3.13: Percentage of respondents attending (A) or not attending (B) training courses in the last year by nutrition personnel categories in the Western Cape province

The distribution of courses attended and not attended in the last year in urban (Figure 3.14A) and rural districts (Figure 3.14B) was significantly different (chi square test; $p = 0.016$). A larger percentage of personnel in the urban district (53%) attended courses in the last year, whereas only 41% of personnel attended courses in the last year in rural districts.



Y = yes, N = No

Figure 3.14: Percentage of the nutrition workforce respondents attending (A) or not attending (B) courses in the last year in rural and urban districts in the Western Cape province

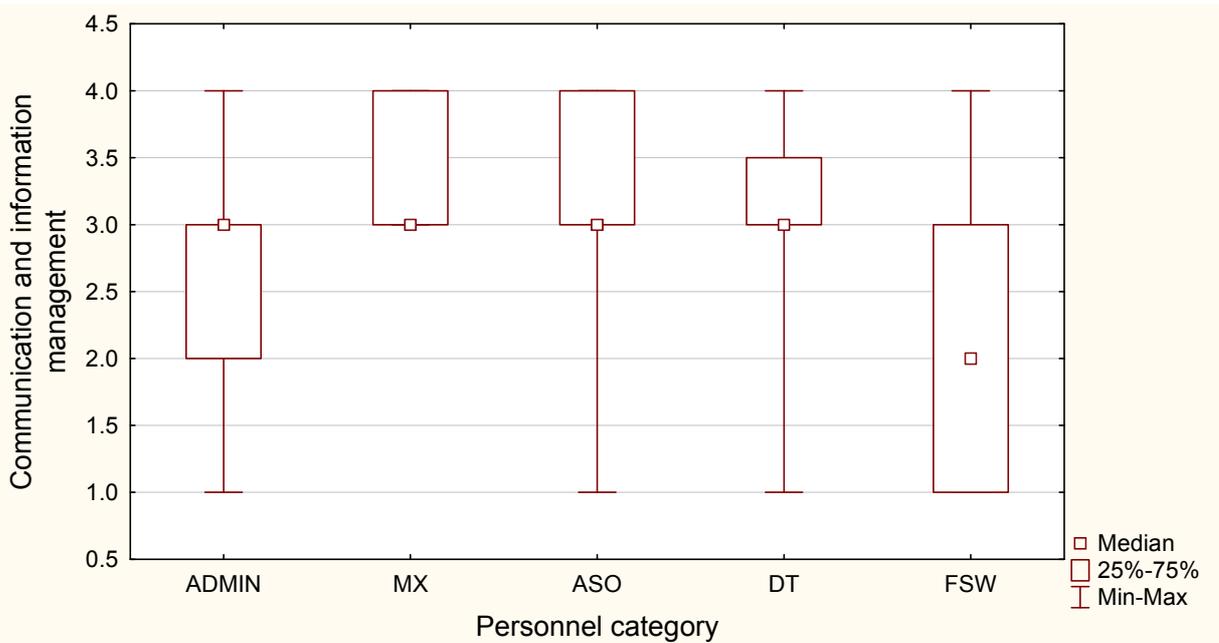
3.1.3 Skills and competencies of the nutrition workforce per personnel category

Evaluation of different generic competencies and skills⁺⁺⁺⁺⁺ i.e. communication^{sssss} and customer focus^{*****} was evaluated by self rating for the different personnel categories. The competencies and skill, communication and information management varied (Figure 3.15) for all the personnel categories from 1 to 4 with the exception of managers, with ratings of 3 and 4. The median for administrative workers, managers, auxiliary service workers and dietitians was 3 (sufficiently skilled). Food service workers had a median of 2 indicating that the group rated themselves as low skilled. There was a significant difference in the self ratings of communication and information management in urban and rural districts (Chi-square test; $p=0.00002$). Thirty-six percent of respondents in urban districts (Figure 3.16A) rated themselves as skilled compared to 29% in rural districts (Figure 3.16B). A higher percentage (43%) of the workforce in the rural districts considered themselves not skilled, compared with their counterparts in the urban district (24%).

+++++ Rating of competencies and skills: 1= Not skilled, 2= Low skilled, 3=Sufficiently skilled, 4=Highly skilled

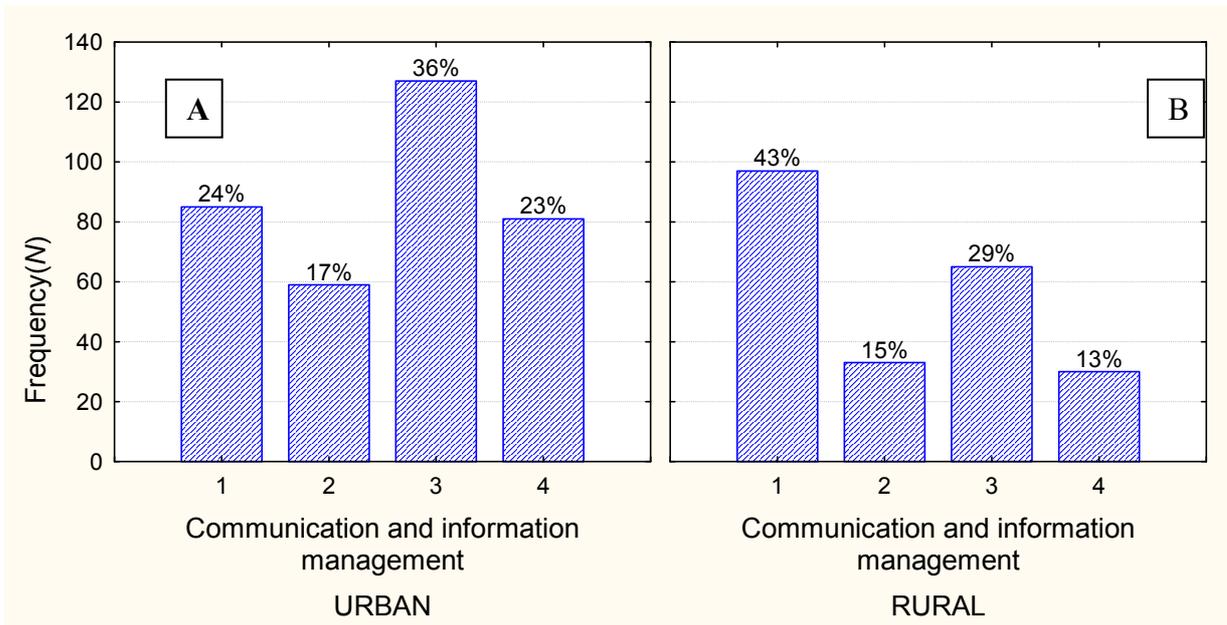
sssss Communication – ability to express ideas clearly, orally or in writing, to listen and to check understanding

***** Customer focus and responsiveness – making clients' needs a priority and developing a productive consumer relationship



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.15: Generic skill and competencies^{††††††}, communication and information management per nutrition personnel category in the Western Cape province

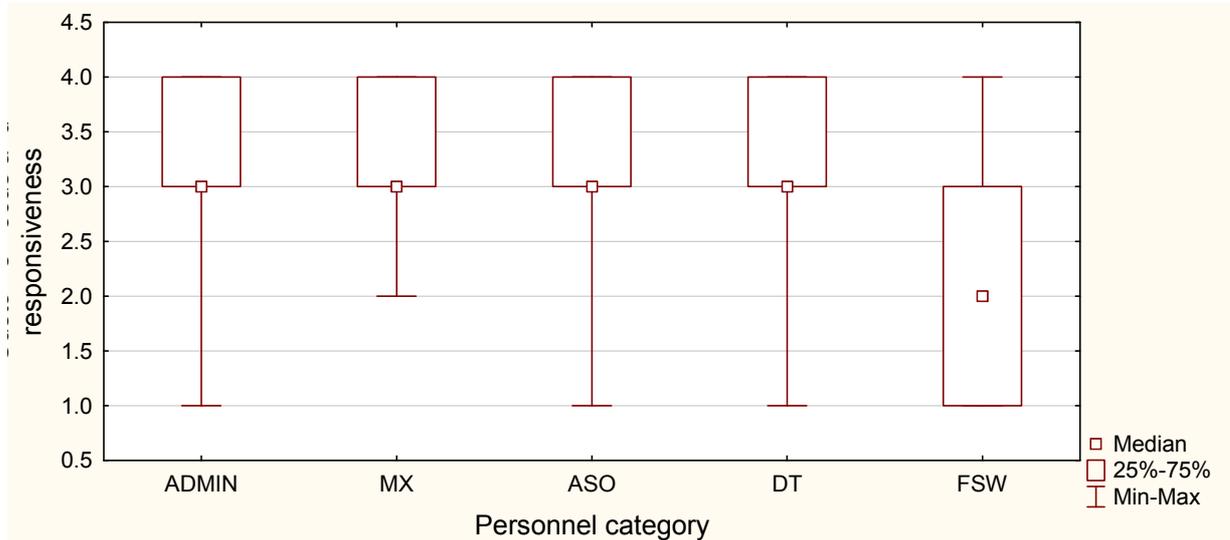


1= not skilled, 2= low skilled, 3=sufficiently skilled, 4=highly skilled

Figure 3.16: Distribution of the nutrition workforce generic competencies and skill, communication and information management in urban (A) and rural (B) districts in the Western Cape province

^{††††††} Rating of competencies and skills: 1= Not skilled, 2= Low skilled, 3=Sufficiently skilled, 4=Highly skilled

Competencies and skills, customer focus and responsiveness varied (Figure 3.17) for all of the personnel categories. The median for administrative workers, managers, auxiliary service workers and dietitians was 3 (sufficiently skilled). Food service workers had a median of 2 indicating that the group rated themselves as low skilled.



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.17: Generic skill and competencies^{#####} - customer focus and responsiveness per nutrition personnel category in the Western Cape province

There was a significant difference in the self ratings of customer focus and responsiveness in urban (Figure 3.18A) and rural districts (Figure 3.18B) (Chi-square test; $p=.00009$). A large percentage of respondents in both urban (23%) and rural (36%) districts indicated that they were not skilled in customer focus and responsiveness. Thirty-six percent of the respondents in both urban and rural groups indicated that they were sufficiently skilled. A lower percentage (14%) of the workforce in the rural districts considered themselves as highly skilled compared with their counterparts in the urban district (27%). The cumulative distribution of highly and sufficiently skilled in rural districts was equally divided with the cumulative distribution of low and not skilled (50%:50%), while in cumulative distributions in urban districts, 63% were highly and sufficiently skilled, and 37% low and not skilled.

Rating of competencies and skills: 1= Not skilled, 2= Low skilled, 3=Sufficiently skilled, 4=Highly skilled

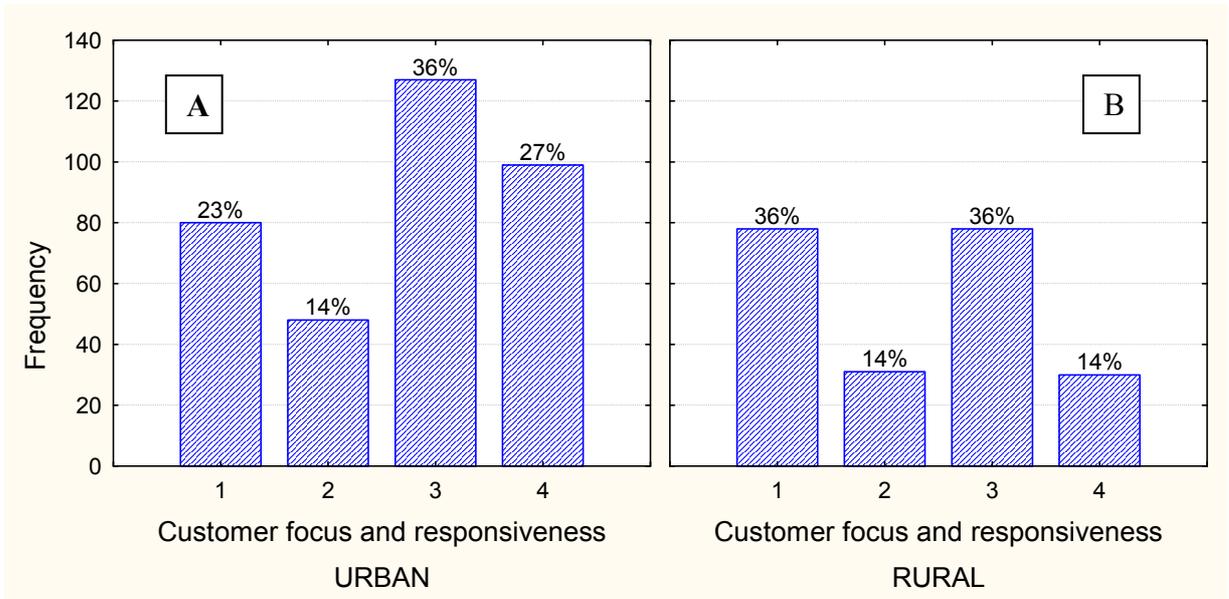
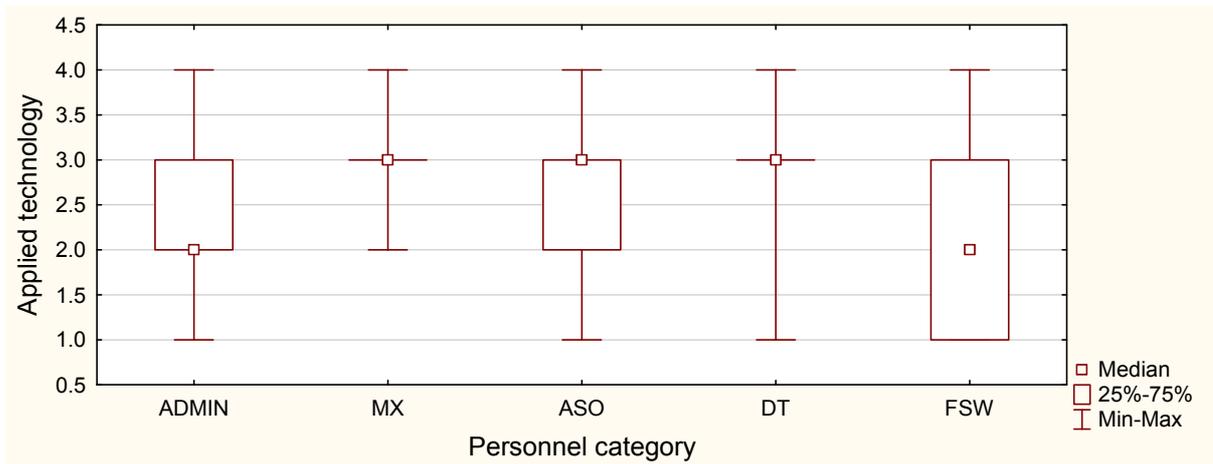


Figure 3.18: Distribution of the nutrition workforce generic competencies and skill^{§§§§§§§§}, customer care and responsiveness in urban (A) and rural (B) districts in the Western Cape province

Competencies and skills, applying technology^{*****} varied (Figure 3.19) for all the personnel categories. The median for managers, auxiliary service workers and dietitians was 3 (sufficiently skilled). Administrative workers and Food service workers had a median of 2 indicating that the group rated themselves as low skilled.



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.19: Generic skill and competencies, applying technology per nutrition personnel category in the Western Cape province

§§§§§§§§ Rating of competencies and skills: 1= Not skilled, 2= Low skilled, 3=Sufficiently skilled, 4=Highly skilled

***** Applying technology - using technology ((tools, machines, computers) in the workplace

Significant differences in the self ratings of applied technology in urban (Figure 3.20A) and rural districts (Figure 3.20B) (Chi-square test; $p=.00001$) (Figure 3.20) were found. A large percentage of respondents indicated in both urban (28%) and rural (47%) districts that they are not skilled in applying technology. The cumulative distribution of highly and sufficiently skilled personnel in the urban district was 43% with the cumulative distribution low and not skilled 57%. In rural districts the cumulative distributions were 35% highly and sufficiently skilled and 65% low and not skilled (Figure 3.20).

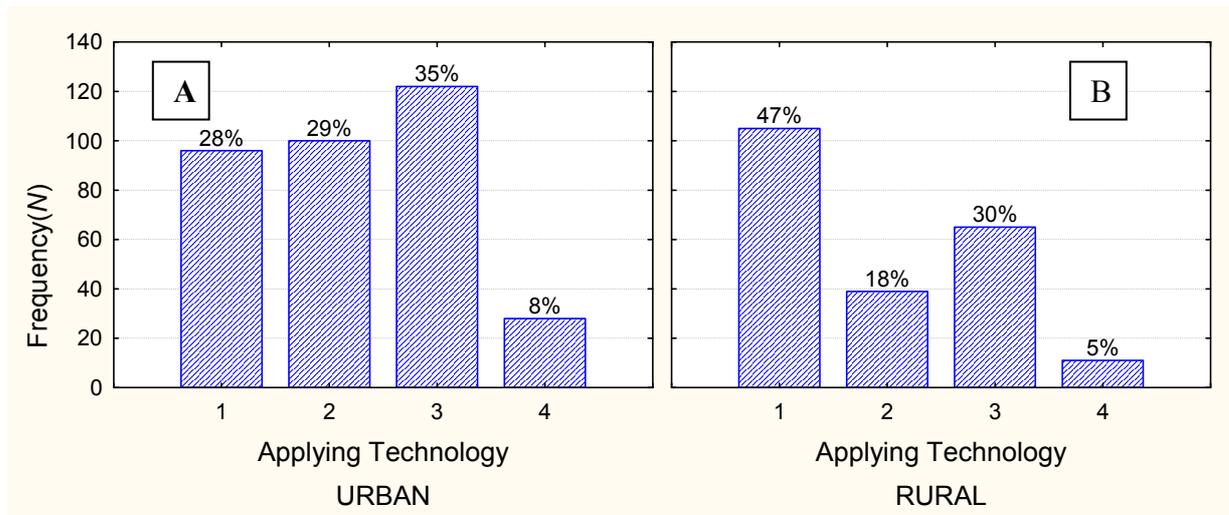


Figure 3.20: Distribution of the nutrition workforce generic competencies and skill⁺⁺⁺⁺⁺, applying technology in urban and rural districts in the Western Cape province

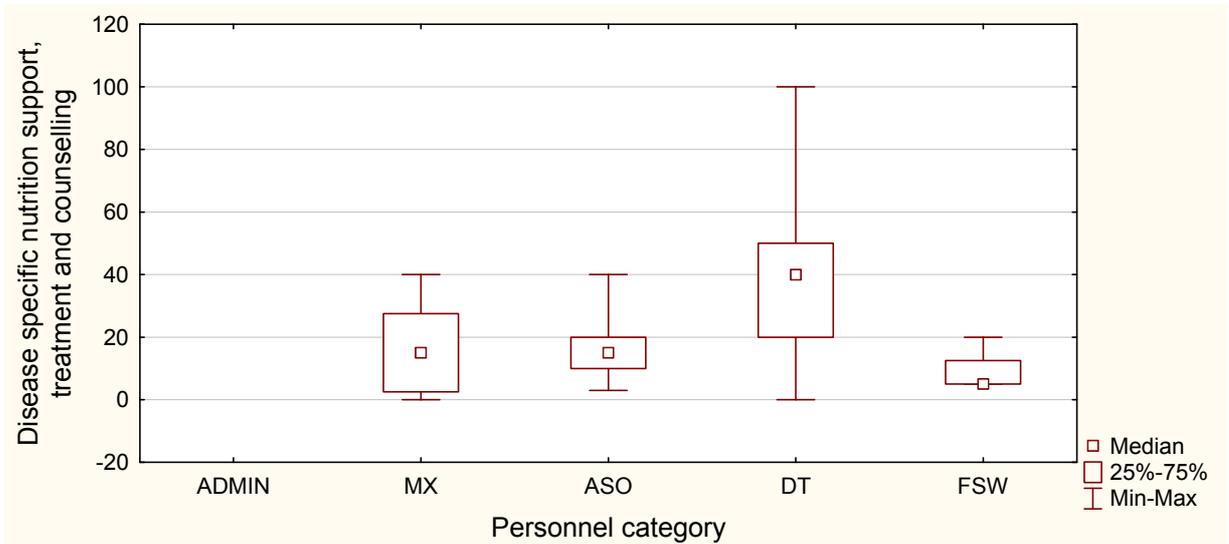
3.1.4 The nutrition workforce and the INP per personnel category

Respondents were requested to indicate the amount of time spent on the respective focus areas the INP and on certain of its key activities. These included time spent on disease-specific nutrition support, treatment and counselling; maternal nutrition; infant and young child feeding; youth and adolescent nutrition; micronutrient control; food service management; nutrition education; promotion and advocacy; community based nutrition interventions and the three support systems: nutrition information, human resources and administration and finance.

The time spent on disease-specific nutrition support, treatment and counselling by respondents in the respective personnel categories indicated that the median for dietitians

⁺⁺⁺⁺⁺ Rating of competencies and skills: 1= Not skilled, 2= Low skilled, 3=Sufficiently skilled, 4=Highly skilled

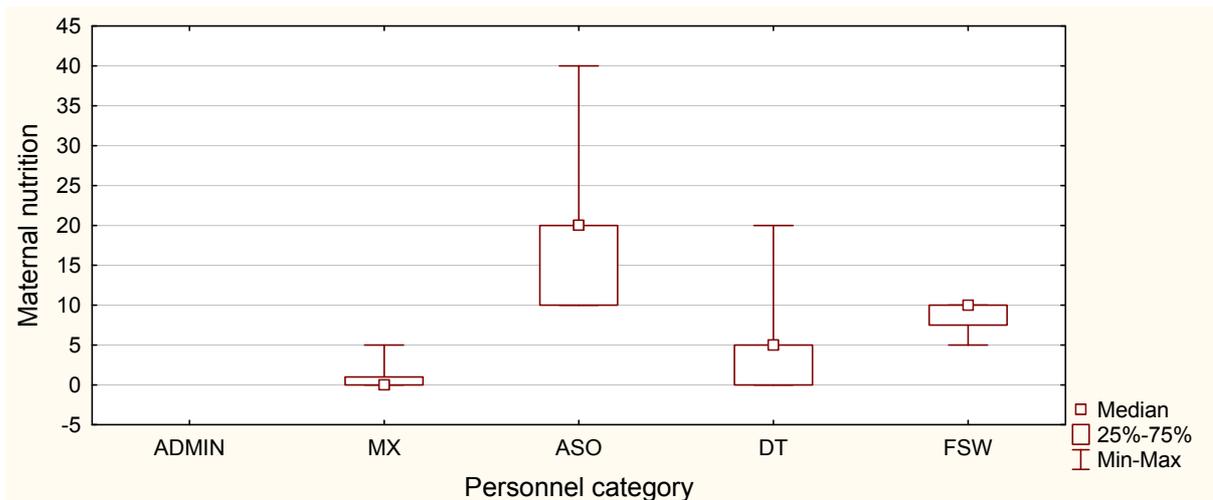
was 40%, followed by auxiliary services officers and managers 18%, food service workers 5% and administrative staff 0% (Figure 3.21).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.21: Medians of time spent on Disease-specific nutrition support, treatment and counselling by nutrition personnel category in the Western Cape province

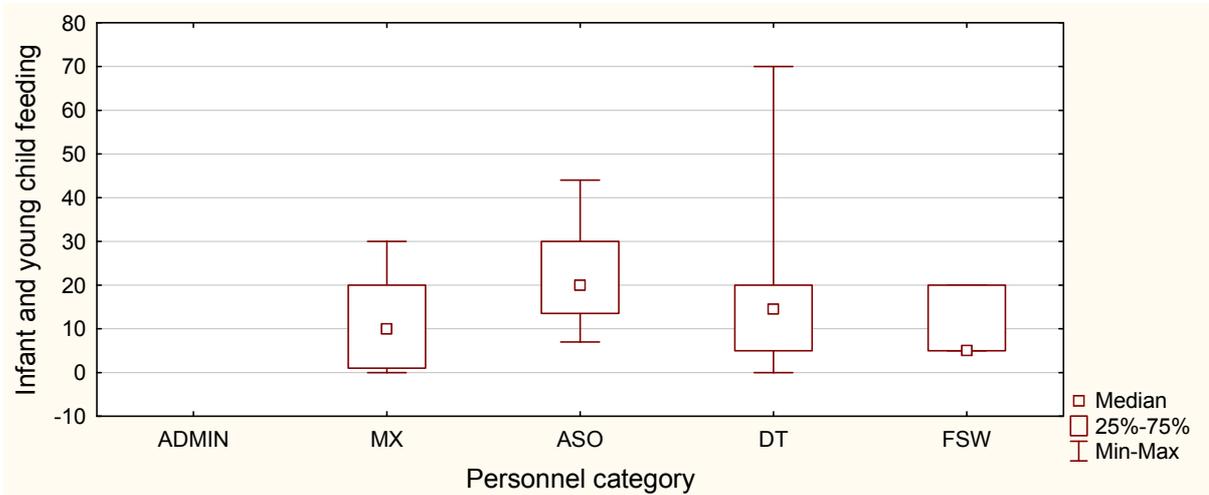
The time spent on maternal nutrition, indicated by respondents in the respective personnel categories, indicated that the median for dietitians was 5%, auxiliary services officers 20%, managers 0%, food service workers 10% and administrative workers 0% (Figure 3.22).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.22: Medians of time spent on maternal nutrition by nutrition personnel category in the Western Cape province

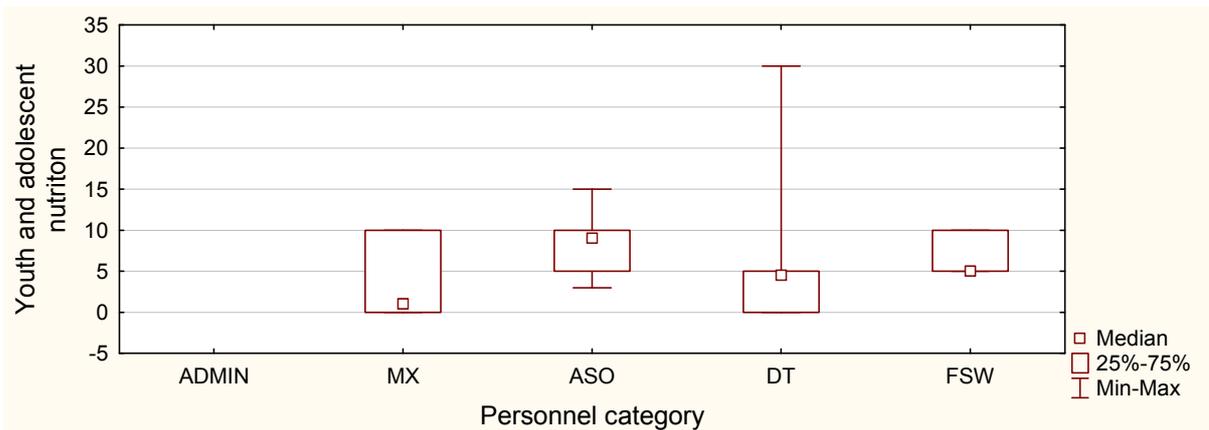
The time spent on infant and young child feeding by respondents in the respective personnel categories indicated that the median time spent by dietitians was 15%, auxiliary services officers 20%, managers 10%, food service workers 5% and administrative workers 0% (Figure 3.23).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.23: Medians of time spent on infant and young child feeding by nutrition personnel category in the Western Cape province

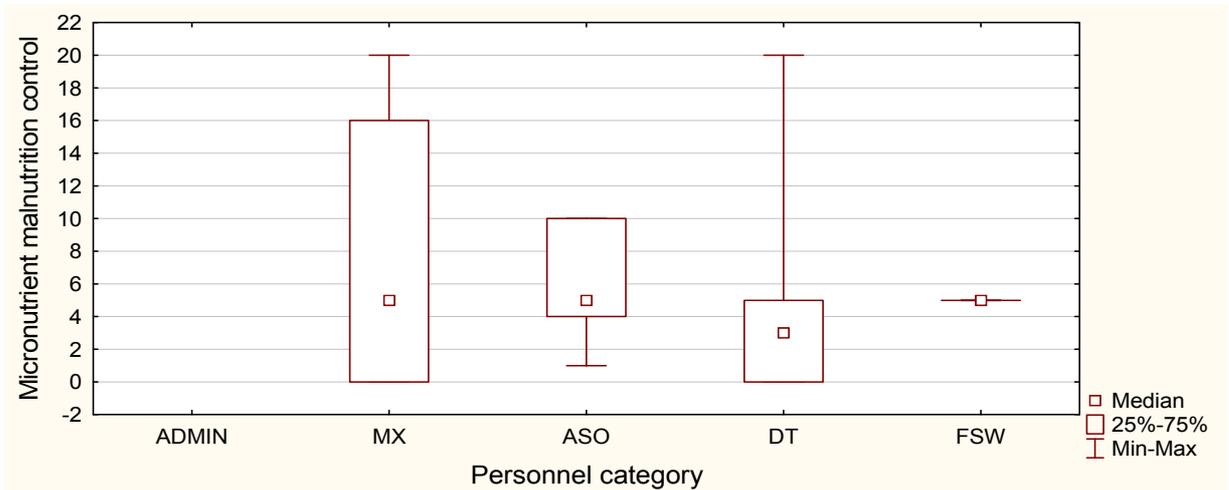
The time spent on youth and adolescent nutrition by respondents in the respective personnel categories indicated that the median time spent by dietitians was 5%, auxiliary services officers 10%, managers 2%, food service workers 5% and administrative workers 0% (Figure 3.24).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.24: Medians of time spent on youth and adolescent nutrition by nutrition personnel category in the Western Cape province

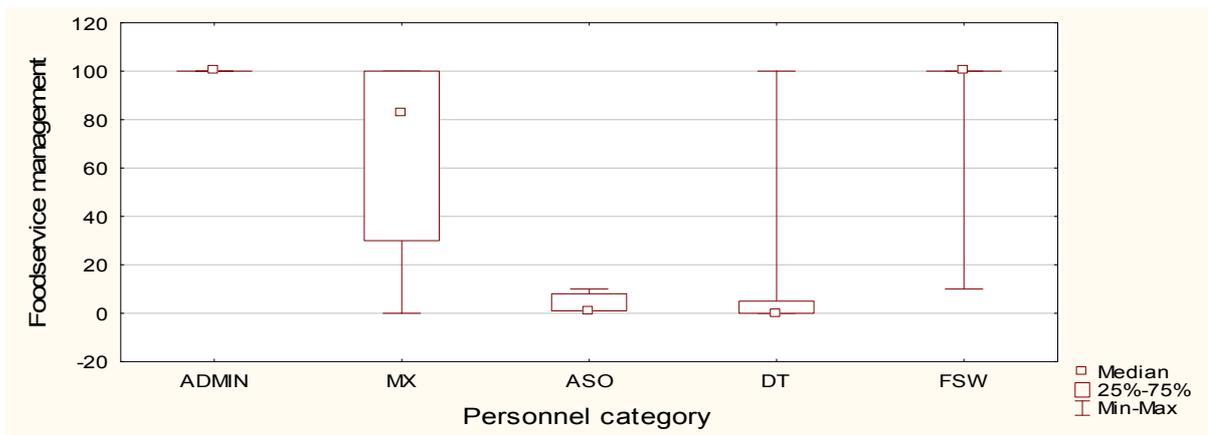
The time spent on micronutrient malnutrition control by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 3%, auxiliary services officers 5%, managers 5%, food service workers 5% and administrative workers 0% (Figure 3.25).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.25: Medians of time spent on micronutrient malnutrition control by nutrition personnel category in the Western Cape province

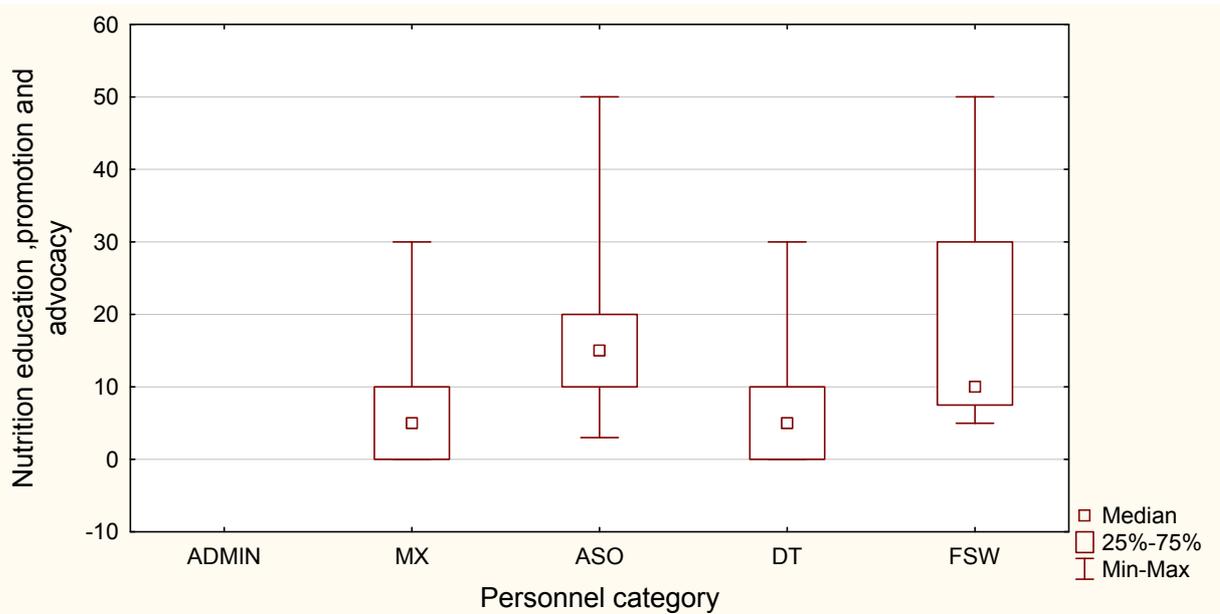
The time spent on food service management by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 2%, auxiliary services officers 2%, managers 80%, food service workers 100% and administrative workers 100% (Figure 3.26).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.26: Medians of time spent on food service management by nutrition personnel category in the Western Cape province

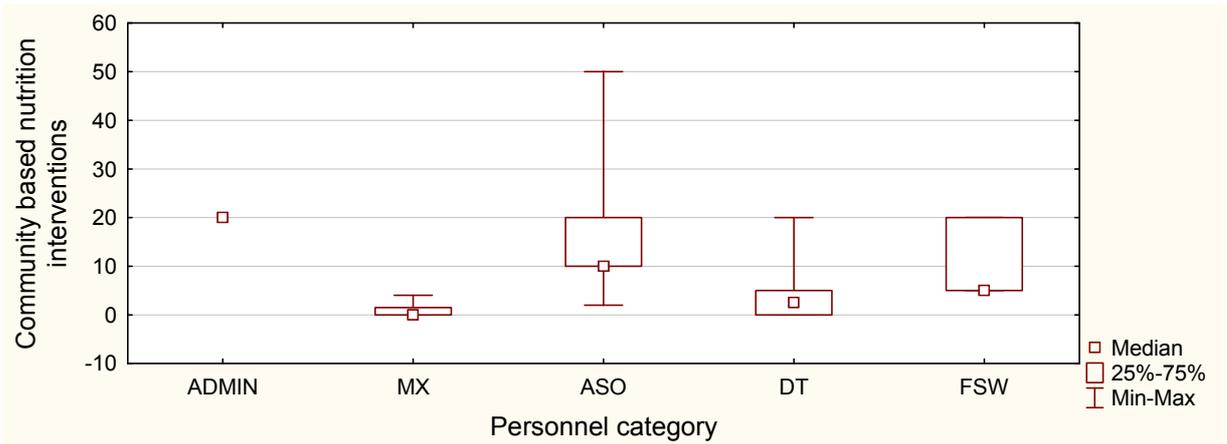
The time spent on nutrition education, promotion and advocacy by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 5%, auxiliary services officers 15%, managers 5%, food service workers 10% and administrative workers 0% (Figure 3.27). Auxiliary service officers spent the most time of the categories on this focus area.



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.27: Medians of time spent on nutrition education, promotion and advocacy by nutrition personnel category in the Western Cape province

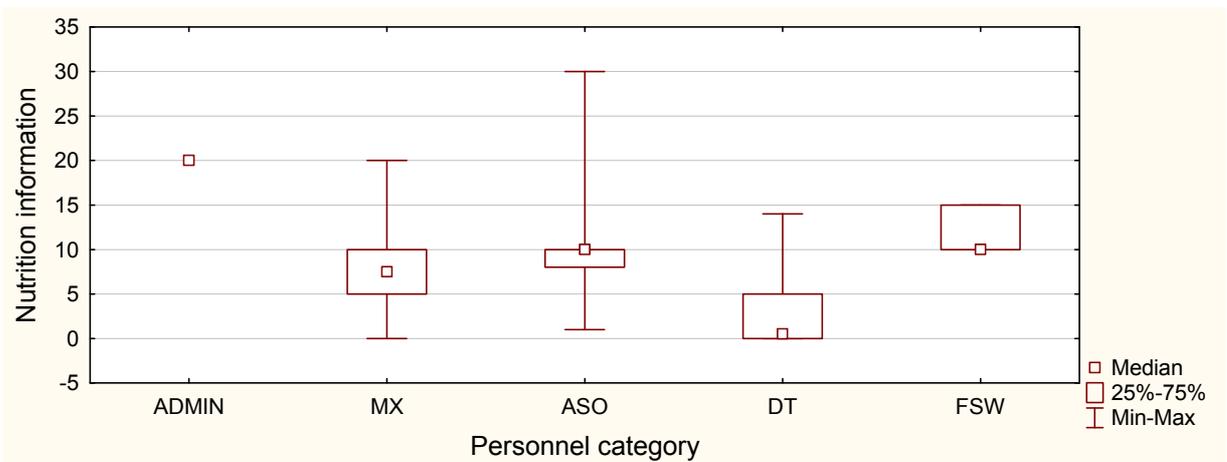
The time spent on community based nutrition interventions by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 2%, auxiliary services officers 10%, managers 1%, food service workers 5% and administrative workers 20% (Figure 3.28).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.28: Medians of time spent on community based nutrition interventions by nutrition personnel category in the Western Cape province

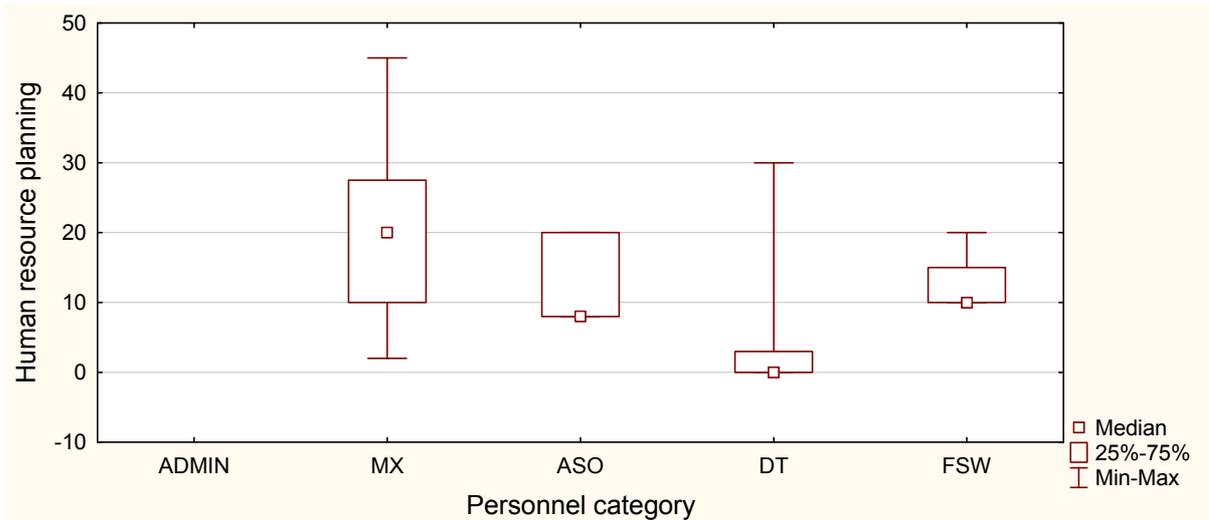
The time spent on nutrition information by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 2%, auxiliary services officers 10%, managers 8%, food service workers 10% and administrative staff 20% (Figure 3.29).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.29: Medians of time spent on nutrition information by nutrition personnel category in the Western Cape province

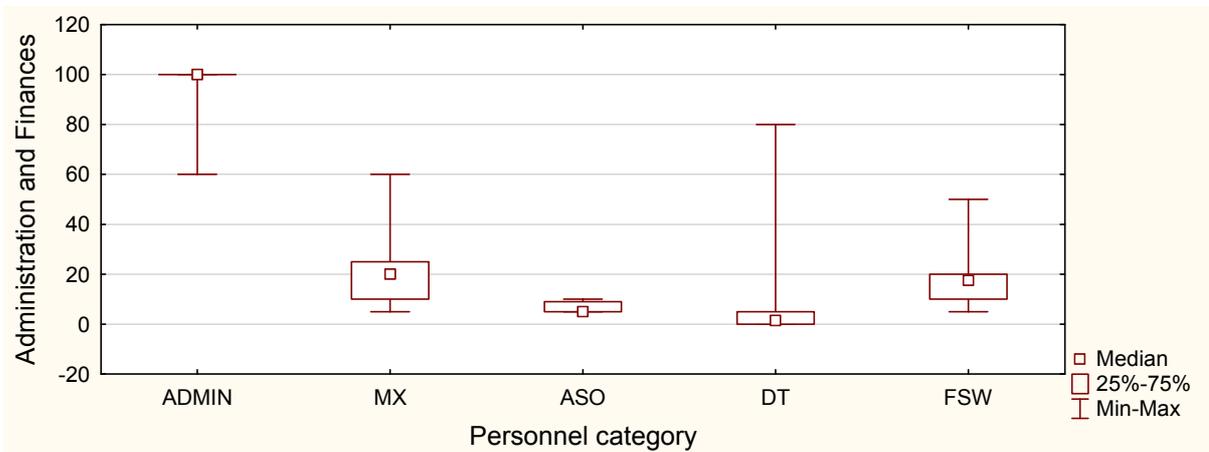
The time spent on human resource planning by the respondents in the respective personnel categories indicated that the median time spent by dietitians was 1%, auxiliary services officers 8%, managers 20%, food service workers 10% and administrative workers 0% (Figure 3.30).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.30: Medians of time spent on human resource management by nutrition personnel category in the Western Cape province

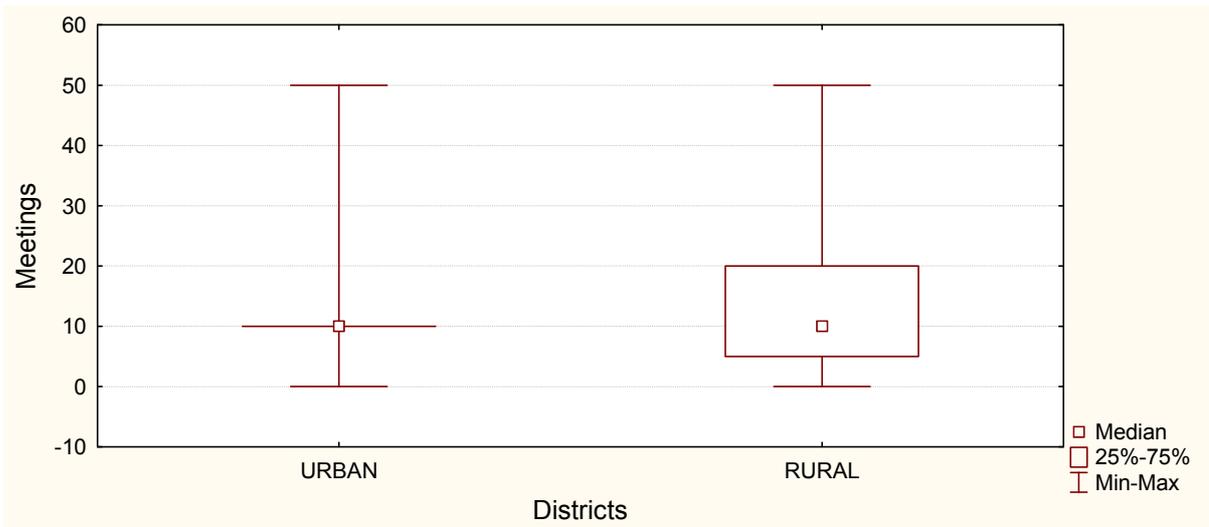
The time spent on administration and finances by the respective personnel categories indicated that the median time spent by dietitians was 1%, auxiliary services officers 3%, managers 20%, food service workers 20% and administrative workers 100% (Figure 3.31).



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.31: Medians of time spent on administration and finances by nutrition personnel category in the Western Cape province

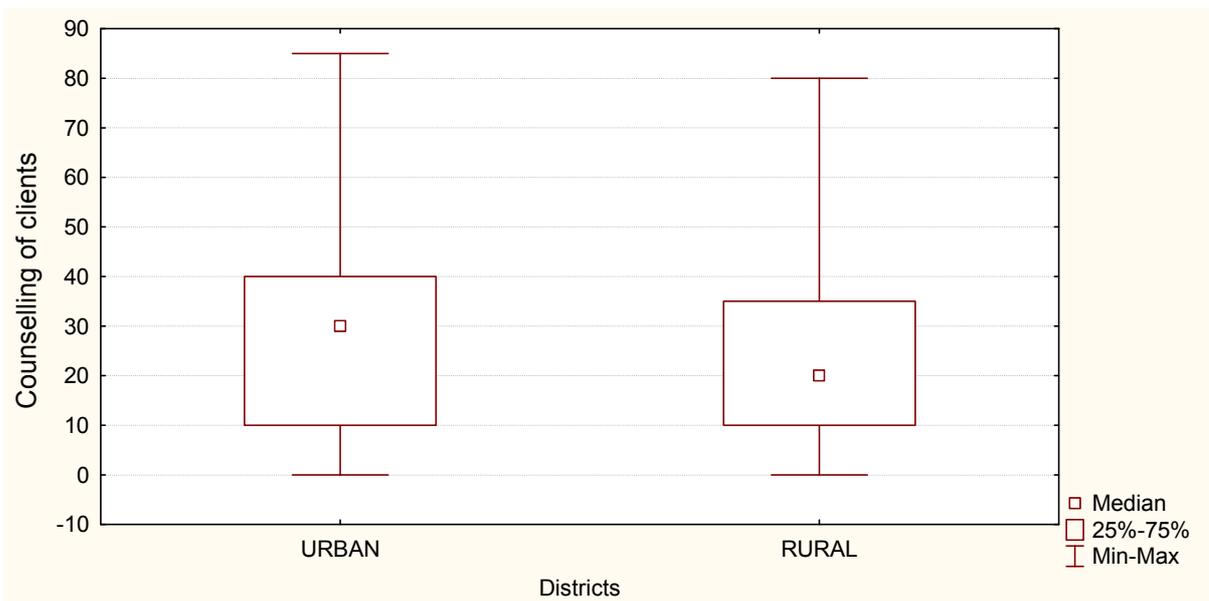
The medians for meetings was 10% for all respondents in rural and urban districts (Figure 3.32)



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.32: Medians of time spent by the nutrition workforce on meetings in urban and rural districts in the Western Cape province

The median for time spent in counselling of clients in urban district was 30% and 20% in rural districts (Figure 3.33).



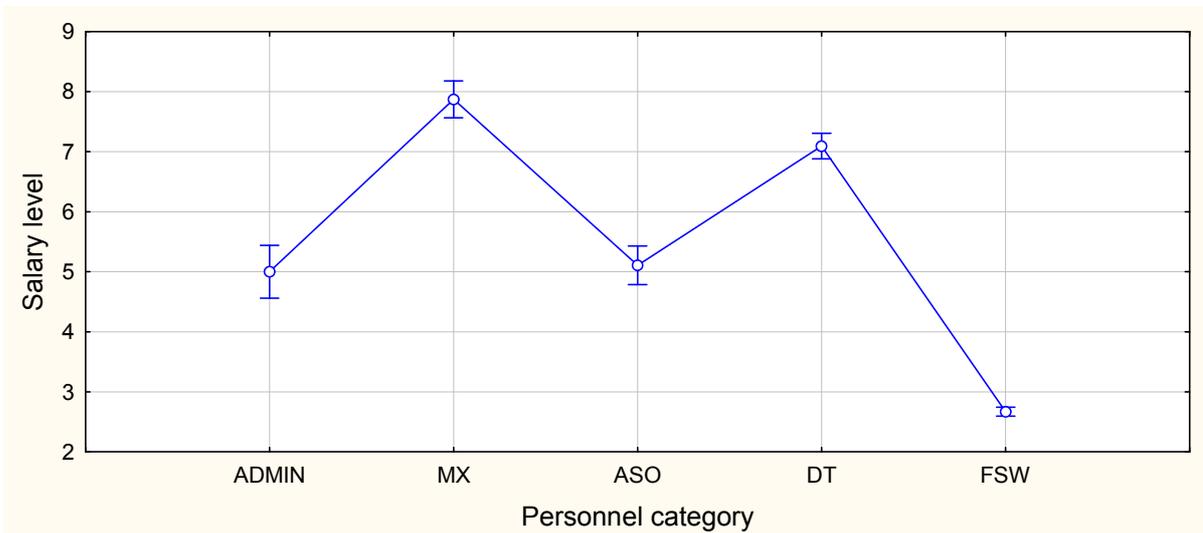
Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.33: Medians of time spent by the nutrition workforce on counselling of clients in urban and rural districts in the Western Cape province

3.1.5 General aspects of the nutrition workforce per personnel category

3.1.5.1 Salaries

The mean salary for all categories of personnel was 3.5 (SD 1.91). The means for salary level of the individual personnel categories was salary level 5 (SD 1.06) for administrative workers, salary level 7.8 (SD 0.71) for managers, salary level 5.1 (SD 0.95) for auxiliary workers, salary level 7.1 (SD 0.63) for dietitians, and salary level 2.7 (SD 0.88) for food service workers (Figure 3.34). The data were significantly different for the respective groups (Kruskal – Wallis $p < 0.01$) (Figure 3.35) and normally distributed from the respective means for salaries (Figure 3.36). Managers and dietitians were on the highest salary levels and food service workers were on the lowest salary level. Administrative staff and auxiliary services workers were on the same mean level.



Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

Figure 3.34: Means of salary level of nutrition personnel categories in the Western Cape province

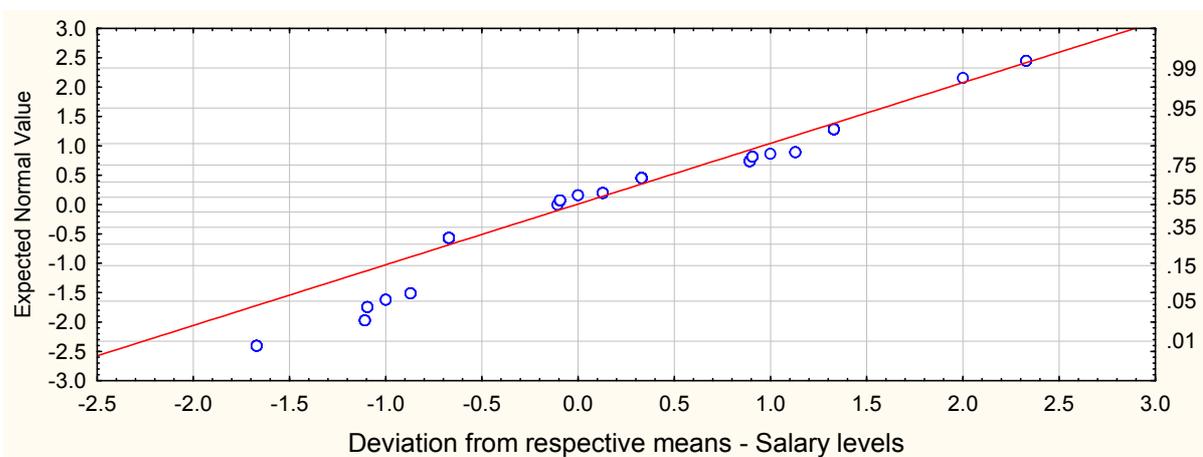


Figure 3.35: Salary distribution of nutrition personnel categories from respective means in the Western Cape province

The distribution of salaries in urban (Figure 3.36A) and rural districts (Figure 3.36B) was significantly different (Chi-square test; $p=0.0038$). One percent ($N = 6$) of the personnel were on salary level 9 in the urban district and no staff at this salary level in the rural districts. Cumulatively, 86% ($N =208$) of personnel in rural districts were on salary levels 1-4 and 76% ($N =309$) in the urban district. Cumulatively 15% ($N =35$) were on salary levels 5 -8 in rural and 23% ($n=89$) in urban districts.

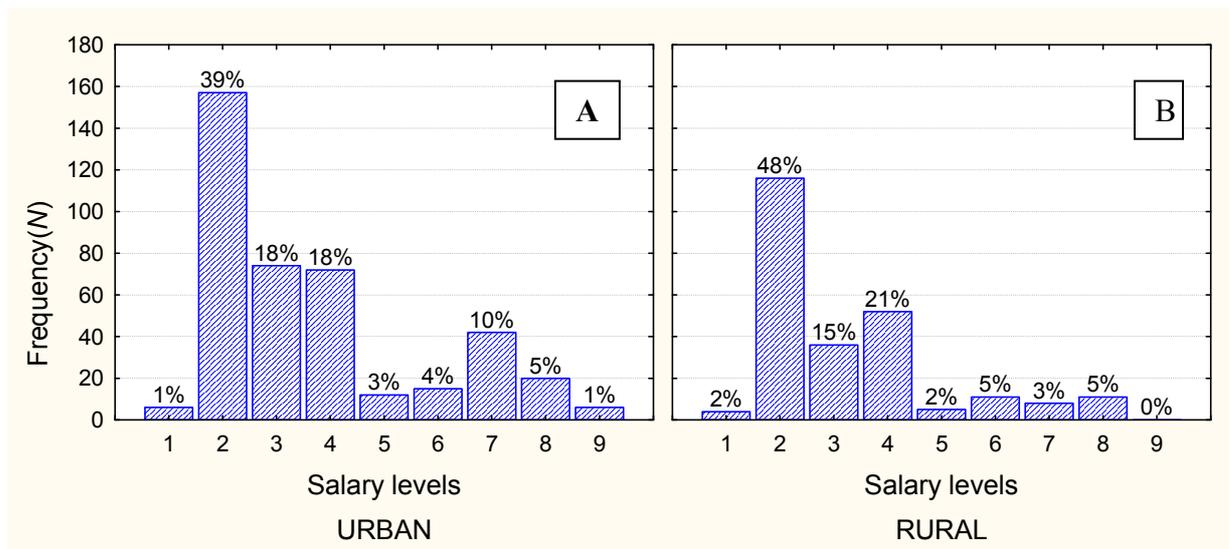
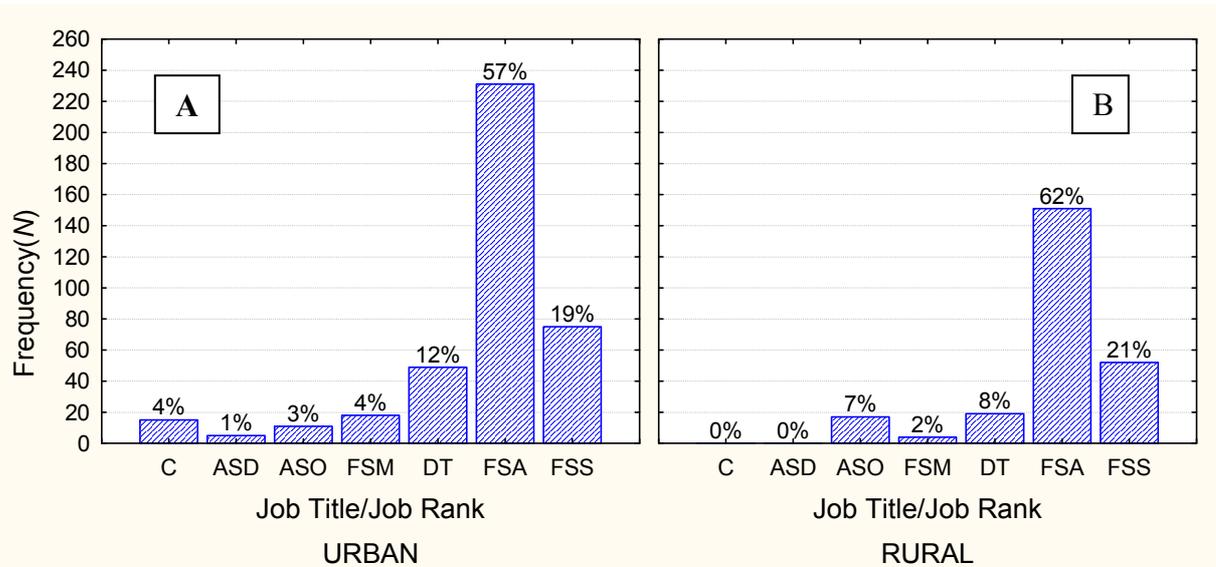


Figure 3.36: Distribution of salary levels of nutrition personnel in rural (A) and urban (B) districts in the Western Cape province

3.1.5.2 Job Titles/Ranks

The specific job titles/ranks were significantly different in rural (Figure 3.37A) and urban (Figure 3.37B) districts (Chi-square test; $p=0.00001$). No respondents in rural districts were in administrative and assistant director posts, whereas in the urban district 4% ($N = 15$) of the respondents were in administrative posts and 1% ($N = 5$) in assistant director posts. The majority of the posts in urban and rural districts were in food service aid posts, 57% ($N = 231$) and 62% ($N = 151$) respectively. Dietitians in the urban district were 12% ($N = 49$), and 8% ($N = 19$) in rural districts. The percentage food service supervisors in the urban district were 19% ($N = 75$), and 4% ($N = 18$) were food service managers. In rural districts - 21% ($N = 52$) were food service supervisors and 2% ($N = 4$) food service managers. The percentage auxiliary service workers in nutrition in rural districts was 7% ($N = 17$), and 3% ($N =11$) in the urban district.



C = admin clerks, ASD = assistant directors, ASO = Auxiliary service officers, FSM = Food service managers, DT = dietitians, FSA = Food service aids, FSS = Food service supervisors, (Chi-square test: $p=0.0001$)

Figure 3.37: Distribution of job titles/job ranks of the nutrition workforce in urban (A) and rural (B) districts in the Western Cape province

3.1.5.3 Appointment Status

The appointment status of the different personnel categories was significantly different for the personnel categories (Table 3.10) (Chi-square test; $p=0.0001$). Contract appointments were only present amongst dietitians (55%, $N = 17$) and food service workers (45%, $N = 14$). Of personnel who had to complete probation periods, thirty-three (73%) were food service workers. One of the managers was in an acting capacity. The majority of the respondents were in permanent positions (88%, $N = 568$).

Table 3.10: Appointment status of nutrition personnel categories in the Western Cape province

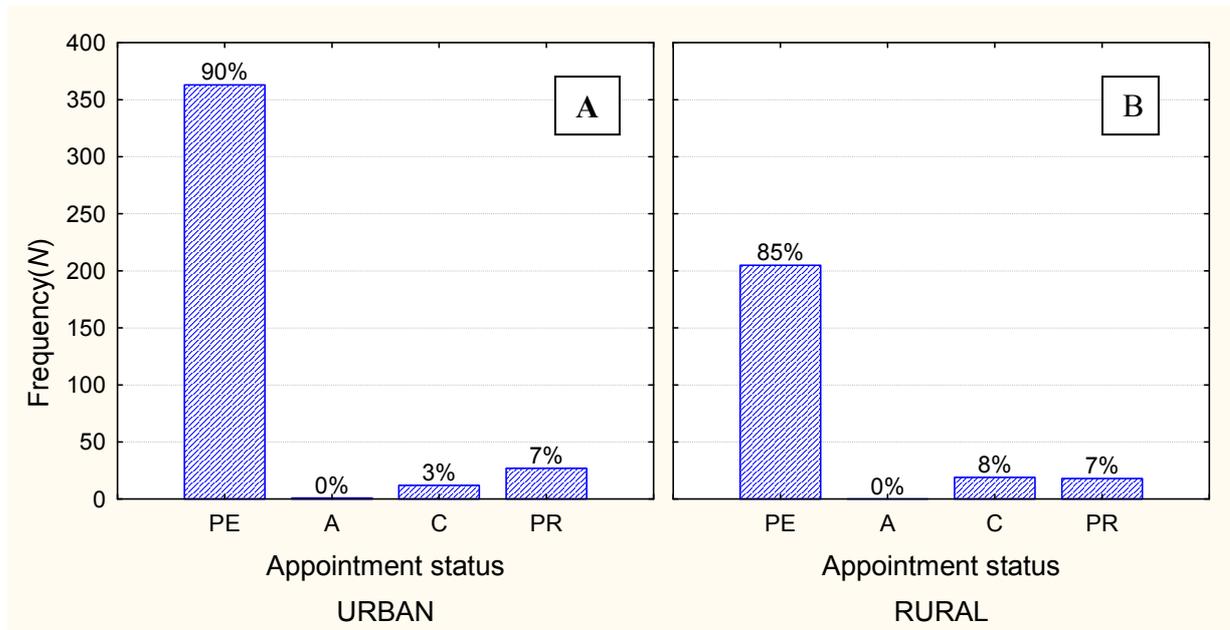
Personnel categories [N; (%)]						
Appointment status	Admin	MX	ASO	DT	FSW	TOTAL*
Permanent	13(2)	25(4)	28(5)	42(8)	460(81)	568(100)
Acting	0(0)	1(100)	0(0)	0(0)	0(0)	1(100)
Contract	0	0	0	17(55)	14(45)	31(100)
Probation	2(5)	5(11)	0(0)	5(11)	33(73)	45(100)
Totals	15	31	28	64	507	645 #####

*Chi-square test; $p=0.0001$

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers

2 no responses

The appointment status of respondents in urban (Figure 3.38A) and rural (Figure 3.38B) districts was significantly different (Chi-square test; $p=0.033$). Ninety percent of the respondents in the urban district were permanent, 3% on contract and 7% on probation. In rural districts 85% of respondents were permanent, 8% on contract and 7% on probation. Rural districts had a higher percentage contract (8%) staff than in the urban district (3%).



PE=permanent, A = acting. C = contract, PR = probation

Figure 3.38: Appointment status of the nutrition workforce in urban (A) and rural (B) districts in the Western Cape province

3.1.5.4 Job descriptions

Ninety-seven percent of respondents ($N = 618$) had job descriptions in place (Table 3.11). There was a significant difference between personnel categories for job descriptions, but not for staff performance management systems (SPMS) (Chi-square test; $p=0.0022$) and individual staff performance plans (IPDP) (Chi-square test: $p=0.120$). All administrative staff ($N = 15$) and auxiliary staff ($N = 28$) who responded had job descriptions in place. The respondents in the categories: managers, food service workers and dietitians, did not all have job descriptions in place. The administrative categories of respondents indicated that they all have staff performance management systems in place, which was not the same for the managers, food service workers, dietitians and auxiliary staff who responded.

Table 3.11: Job descriptions per nutrition personnel category in the Western Cape province

Personnel categories [N; (%)]						
	Admin	MX	ASO	DT	FSW	TOTAL*
Job description in place	15(2)	30(5)	28(5)	56(9)	489(79)	618(100)
No job description in place	0(0)	1(6)	0(0)	8(44)	9(50)	18(100)
Total	15	31	28	64	498	636 §§§§§§§§

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers, *Chi-square test; p=0.0022

Table 3.12: Staff performance and development plans per nutrition personnel category in the Western Cape province

Personnel categories [N; (%)]						
	Admin	MX	ASO	DT	FSW	TOTAL*
SPMS/IPDP In place	15(3)	28(5)	27(5)	57(10)	469(79)	596(100)
No SPMS/IPDP in place	0(0)	3(10)	1(3)	7(23)	20(65)	31(100)
Total	15	31	28	64	489	627 ^{*****}

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers, *Chi-square test: p=0.120

There was a significant difference for job descriptions (chi-square; p= 0.0022) and no significant difference in staff performance and development systems (chi-square; p= 0.120) in urban and rural districts. The distribution of job descriptions in place in the urban district was 98% and 96% in rural districts. Two percent of respondents in the urban district did not have job descriptions and 4% in rural districts. Ninety-six percent of respondents indicated that SPMS and IPDP's were in place in the urban district and 93% in rural districts. Four percent of the respondents indicated in the urban district that they have no SPMS and IPDP's in place and 7% in rural districts.

§§§§§§§§ 11 no responses
***** 20 no responses

3.1.5.5 Resources

Resources in the different staff categories (Table 3.13) and comparisons in rural and urban districts were evaluated. Resources that were included were own offices, telephone, own email access, own internet access, own storage space and access to transport for duties. Significant differences were found for all the resources between the different personnel categories ($p=0.001$ and $p=0.029$). Of all the respondents in all personnel categories ($N = 587$), seventeen percent ($N = 99$) indicated that they had their own offices, 61%, ($N = 360$) did not have their own offices and 22% ($N = 128$) indicated that they shared offices. Of all the respondents ($N = 597$), eighteen percent ($N = 110$) indicated that they had their own telephone, 39% ($N = 230$) shared a telephone and 43% ($N = 257$) did not have one. The majority of respondents (80%, $N = 460$) indicated that they did not have own email access, 3% ($N = 19$) shared and 17% ($N = 101$) had own email access. Similarly, internet access amongst the respondents ($N = 580$) was not available to 91% ($N = 526$) of the respondents, 4% ($N = 26$) indicated they have access, and 5% ($N = 28$) shared access. Of the 576 respondents, 62% ($N = 360$) indicated that they had their own storage space, 9% ($N = 52$) shared and 28% ($N = 164$) had no storage space. The majority of the respondents ($N = 536$) indicated that they had transport for duties (60%, $N = 322$) and 32% ($N = 172$) did not have transport, while 42 (8%) respondents indicated that they shared transport facilities.

The distribution of resources was significantly different for own offices ($p=0.02$), own telephone ($p=0.006$) and own email access ($p=0.05$) and not significantly different for own internet access ($p=0.07$), storage ($p=0.18$) and transport ($p=0.24$) in urban and rural districts (Table 3.14). The respondents in rural districts indicated that 23% ($N = 48$ of 213) share offices compared to 13% ($N = 51$ of 374) in urban districts.

The majority of respondents in both urban and rural districts indicated that they shared telephones (40% of 379 respondents in the urban district and 47% of 218 respondents in rural districts). Respondents who had their own email access in both urban and rural districts were 20% and 13% respectively, with no access 77% in urban and 84% in rural districts. Internet access was almost non-existent amongst respondents in urban and rural districts indicated as 89% in urban and 94% in rural districts. Own storage space was available amongst the majority of respondents in urban (63%) and 61% in rural districts. Of the 344 respondents in the urban district, 62% ($N = 212$) had transport available for duties, 32% ($N = 110$) had no available transport and 6% ($N = 22$) shared transport facilities, a trend that was similar for the rural districts.

Table 3.13: Resources available per nutrition personnel category in the Western Cape province

Personnel categories [N; (%)]						
Own office	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	6(6)	19(19)	16(16)	26(26)	32(32)	99(100)
No	4(1)	0(0)	0(0)	2(1)	354(98)	360(100)
Shared	5(4)	12(9)	10(8)	36(28)	65(51)	128(100)
Totals	15	31	26	64	451	587
*Chi-square test: $p=0.0001$, 60 no responses						
Own telephone	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	8(7)	22(20)	9(8)	25(23)	46(42)	110(100)
No	1(1)	0	11(4)	5(2)	240(93)	257(100)
Shared	6(4)	9(4)	7(3)	34(15)	174(76)	230(100)
Totals	15	31	27	64	460	597(100)
*Chi-square test: $p=0.0001$, 50 no responses						
Own e mail	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	9(9)	29(29)	1(1)	41(41)	21(20)	101(100)
No	3(1)	1(1)	25(5)	14(3)	417(91)	460(100)
Shared	2(11)	1(5)	0(0)	9(47)	7(37)	19(100)
Totals	14	31	26	64	445	580
*Chi-square test: $p=0.0001$, 67 no responses						
Own internet access	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	3(12)	11(42)	0(0)	7(27)	5(20)	26(100)
No	9(2)	17(3)	27(5)	40(8)	433(82)	526(100)
Shared	2(7)	3(11)	0(0)	16(57)	7(25)	28(100)
Totals	14	31	27	63	445	580
*Chi-square test: $p=0.0001$, 67 no responses						
Own storage space	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	6(2)	14(4)	10(3)	25(7)	305(85)	360(100)
No	7(4)	8(5)	13(8)	19(12)	117(71)	164(100)
Shared	0(0)	8(15)	3(6)	18(35)	23(44)	52(100)
Totals	13	30	26	62	445	576
*Chi-square test: $p=0.00001$, 71 no responses						
Transport for duties	Admin	MX	ASO	DT	FSW	TOTAL*
Yes	7(2)	23(7)	12(4)	30(9)	250(78)	322(100)
No	3(2)	2(1)	8(5)	18(10)	141(82)	172(100)
Shared	0(0)	3(7)	5(12)	5(12)	29(69)	42(100)
Totals	10	28	25	53	420	536
*Chi-square test: $p=0.029$, 111 no responses						

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers, The *no* responses are ascribed to the lack of relevance in the work environment

Table 3.14: Resources available to the nutrition workforce in urban and rural districts in the Western Cape province

[N; (%)]				
Own Office	Yes	No	Shared	Total*
Urban	51(13)	238(64)	85(23)	374(100)
Rural	48(23)	122(57)	43(20)	213(100)
Total	99(17)	360(61)	128(22)	587(100)
*Chi-square test: $p=0.02$, 60 no responses				
Own Telephone	Yes	No	Shared	Total*
Urban	59(16)	167(44)	153(40)	379(100)
Rural	51(23)	63(29)	104(47)	218(100)
Total	110(18)	230(39)	257(43)	597(100)
*Chi-square test: $p=.0006$, 50 no responses				
Own E mail access	Yes	No	Shared	Total*
Urban	75(20)	284((77)	12(3)	371(100)
Rural	26(13)	176(84)	7(3)	209(100)
Totals	101(18)	460(79)	19(3)	580
*Chi-square test: $p=0.05$, 67 no responses				
Own Internet access	Yes	No	Shared	Total*
Urban	20(5)	329(89)	22(6)	371(100)
Rural	6(3)	197(94)	6(3)	209(100)
Total	26(4)	526(91)	28(5)	580(100)
*Chi-square test: $p=0.07$, 67 no responses				
Own Storage space	Yes	No	Shared	Total*
Urban	229(63)	95(26)	37(10)	361(100)
Rural	131(61)	69(32)	15(7)	215(100)
Total	360(63)	164(28)	52((9)	576
*Chi-square test: $p=0.18$, 71 no responses				
Transport access	Yes	No	Shared	Total*
Urban	212(62)	110(32)	22(6)	344(100)
Rural	110(57)	62(32)	20(11)	192(100)
Total	322((60)	172((32)	42(8)	536
*Chi-square test: $p=.0.24$, 111 no responses				

Admin = Administrative workers; MX = Managers; ASO = Auxiliary services officers, DT= Dietitians, FSW=Food service workers,

B: INDIVIDUAL CATEGORIES OF PERSONNEL PROFILES

3.2 .1 Profile of INP managers

3.2.1.1 Demographics

The INP managers were all female and all ($N = 5$) responded (100% response). Their ages varied with 60% ($N = 3$) under 40 years and 40% ($N = 2$) over 40 years of age. The managers were distributed across the province with 2 placed at the provincial office and the other 3 at regional offices, namely Metropole, Boland Overberg and Southern Cape Karoo. The distribution of home languages amongst managers was 60% ($N = 3$) Afrikaans, 20% ($N = 1$) Xhosa and 20% ($N = 1$) English. The distribution of ethnicity was 60% ($N = 3$) white, 20% ($N = 1$) African and 20% ($N = 1$) Coloured. All 5 INP managers were married and 1 had a disability described as a hearing impairment.

3.2.1.2 Qualifications and experience

All the managers had a qualification on level 7 on the national qualifications framework (Professional qualification) and were all professionally registered with a health council i.e. Health Professions Council of South Africa (HPCSA). The professional experience and years in their present positions ranged from 1 year to 15 years and more. The distribution of personnel who attended key training courses in the INP indicated that 80% ($N = 4$) of the INP managers had not completed the INP induction course themselves (Table 3.15). The majority of the managers had completed all the other prescribed key INP courses. Three of the five managers (60%) had not completed any courses in the last year. Two of the managers reported other areas of expertise, which were motivational speaking and counselling, through their involvement in churches. One of the managers reported attending the continuous education course at the University of Stellenbosch and one had reported attending an infant and young child feeding and counselling course in the last year.

Table 3.15: Courses attended by INP managers in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	1(20)	4(80)	5(100)
HFBNP policy	4(80)	1(20)	5(100)
BFHI	4(80)	1(20)	5(100)
Lactation management	5(100)	0(0)	5(100)
IYCF	4(80)	1(20)	5(100)
Sinjani	4(80)	1(20)	5(100)
Nutrition Surveillance	3(60)	2(40)	5(100)
Micronutrient malnutrition Control	4(80)	1(20)	5(100)
Growth Monitoring and Promotion	4(80)	1(20)	5(100)
Nutrition HIV and Aids	5(100)	0(0)	5(100)
Attended Courses in the last year	2(40)	3(60)	5(100)

INP = Integrated nutrition programme, HFBNP = Health facility based nutrition programme, BFHI = Baby friendly hospital initiative, IYCF = Infant and young child feeding

3.2.1.3 Skills and competencies

Managers were requested to rate themselves on generic and specific competencies and skills. Generic competencies included competencies for all personnel. Specific skills and competencies were in relation to the job outputs and in terms of the code of remuneration guidelines for managers. The ratings were numbered from 1 – 4 in the analysis (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated and the 5 INP managers rated themselves highly skilled and sufficiently skilled in applied strategic thinking, planning and organising, problem solving and decision making, guidance to junior colleagues and implementation of programmes and financial control (Table 3.16). Areas rated as low skill were budget and financial management, training of health care workers and diversity management ($N = 1$). Three of the five managers indicated that they were lowly skilled and not skilled in technical dietetic quality control.

Table 3.16: Skills and competencies of INP managers in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total
Applied strategic thinking	1(20)	4(80)	0(0)	0(0)	5(100)
Budget and financial management	1(20)	3(60)	1(20)	0(0)	5(100)
Diversity management	0(0)	4(80)	1(20)	0(0)	5(100)
Planning and organising	0(0)	5(100)	0(0)	0(0)	5(100)
Problem solving and decision making	0(0)	5(100)	0(0)	0(0)	5(100)
Planning nutrition programmes for communities	1(20)	4(80)	0(0)	0(0)	5(100)
Training of all health care workers	1(20)	3(60)	1(20)	0(0)	5(100)
Guidance to junior colleagues	0(0)	5(100)	0(0)	0(0)	5(100)
Implementation of programmes and financial control	0(0)	3(60)	0(0)	0(0)	5(100)
Technical dietetic quality control	0(0)	2(40)	2(40)	1(20)	5(100)

Managers indicated that interventions required to ensure that they had the necessary skills and competencies to implement Health Care 2010 were: increasing the number of short courses in management, time management, prioritise activities, more exposure to the tertiary service environment and an increased focus on key priorities that will provide outcomes.

3.2.1.4 Time spent on the Integrated Nutrition Programme

The time spent on the different focus areas and activities by the INP managers varied amongst the 5 managers. The total time (working hours) each of the managers spent on their tasks amounted to 100% of their working time. The five managers indicated the time being spent (0-35%) on the focus areas of disease specific nutrition support and counselling, maternal nutrition (0-5%), youth and adolescent nutrition (0-10%), food service management (0-35%) and nutrition education promotion and advocacy (0-30%). The five managers spent their time on infant and young child feeding (0-30%); micronutrient control (0-20%) and nutrition information (0-20%). Three managers indicated no time spent on community based nutrition interventions, and all managers indicated some time being spent on human resource planning (2-20%), as well as administration and finances (5-60%). Four of the five managers spent 10-20% of their time on monitoring, projects and nutrition advocacy. One of

the managers spent some of her time (2%) on counselling of clients and nutrition education. Three of the managers spent time on research (2-5%). The greater part of the managers' time was spent on meetings (10 – 45%), training (3 – 30%), administration (8 – 30%) and management (10 – 50%).

Four of the five managers were permanently appointed and one was in an acting manager's position. The five managers all indicated that they had job descriptions and staff performance and development systems in place. Managers indicated that they reported administratively for such matters as leave, staff performance and day to day supervision, either to an assistant director of comprehensive health programmes, or to the deputy director of INP depending on where they were placed. Managers indicated that they were technically supported for nutrition programming and INP policies by the Nutrition Advisory Committee (NAC) and the Deputy Director of INP for the Provincial Office-based Managers. District INP managers indicated that they were technically supported by the provincial office, INP. Four of the five managers shared offices, all five had telephones, access to storage space, access to transport and four of the five managers had access to the internet.

Managers reported on the tasks they perform and indicated the task areas that would require further training. The areas that were identified by all managers for future attention were financial and staff management (Table 3.17).

Table 3.17: Key challenges and solutions in the work environment identified by INP managers in the Western Cape province

Key Challenges
Training courses identified that were not available
Accessibility of government transport
High turnover of dietetic staff, retention of staff
Lack of acknowledgement and recognition for nutrition
Lack of support by team members
Clarity with regard to roles and responsibilities
Availability of computers
Appointment of competent staff
Key solutions proposed
Training programmes that address the needs to be developed
Allocated cars to be made available to nutrition units
Improved conditions of service and salaries to retain staff
Appoint staff on merit

3.2.1.5 Salaries, job ranks, appointment status, job descriptions and resources

This section of the questionnaire was common for INP Managers, Dietetic Unit Heads and all dietitians, and the results are presented for the whole group. The salary levels and job ranks indicated by the five INP managers were 2 on salary level 8 (principal dietitians) and 3 on salary level 9 (assistant directors). The collective preference of Managers (INP and dietetic unit heads) ($N = 7$) as well as qualified dietitians ($N = 64$) was obtained on post structure (Figure 3.39) and salary level for the post structure (Figure 3.40). There was no significant difference for dietitians (Figure 3.39A) and managers (Figure 3.39 B) for post structure (Chi-square test; $p=0.165$) and salary level (Figure 3.40) (Chi-square test; $p=0.413$). Seventy five percent of the dietitians and 71% of INP managers and dietetic unit heads indicated that they preferred post structure 1, which progresses from community service dietitian to junior dietitian to senior dietitian to principal dietitian.

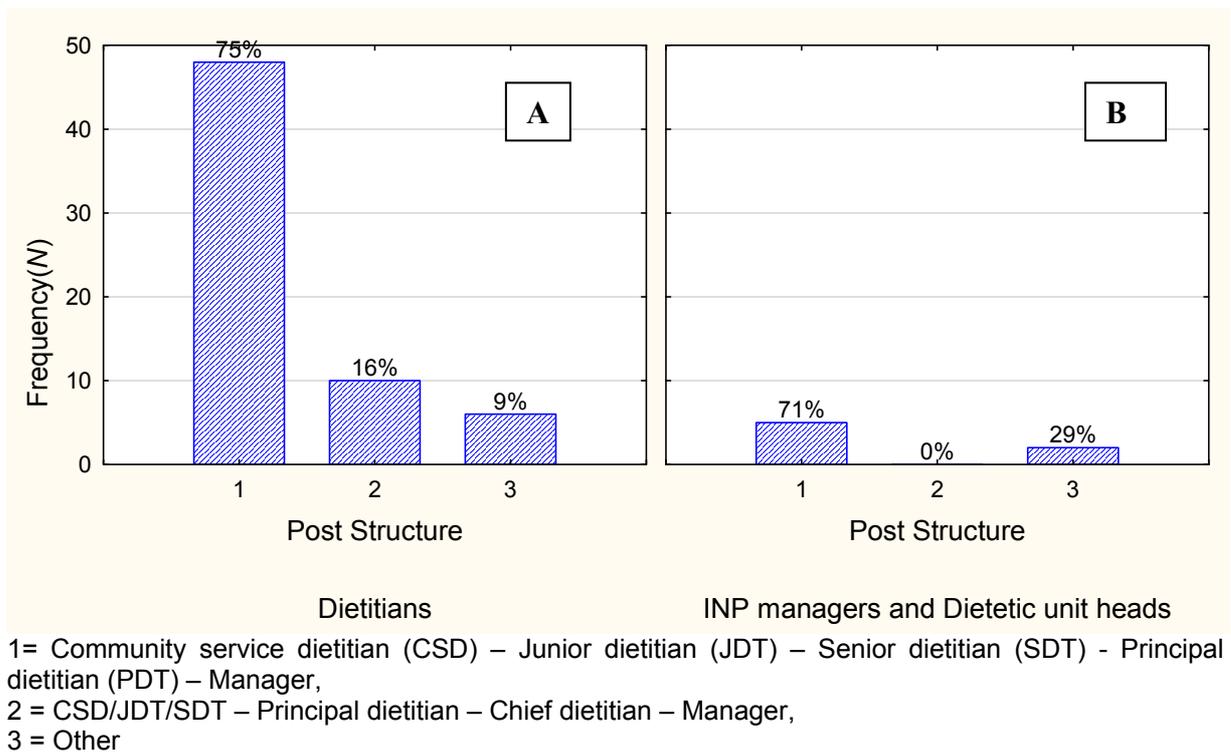
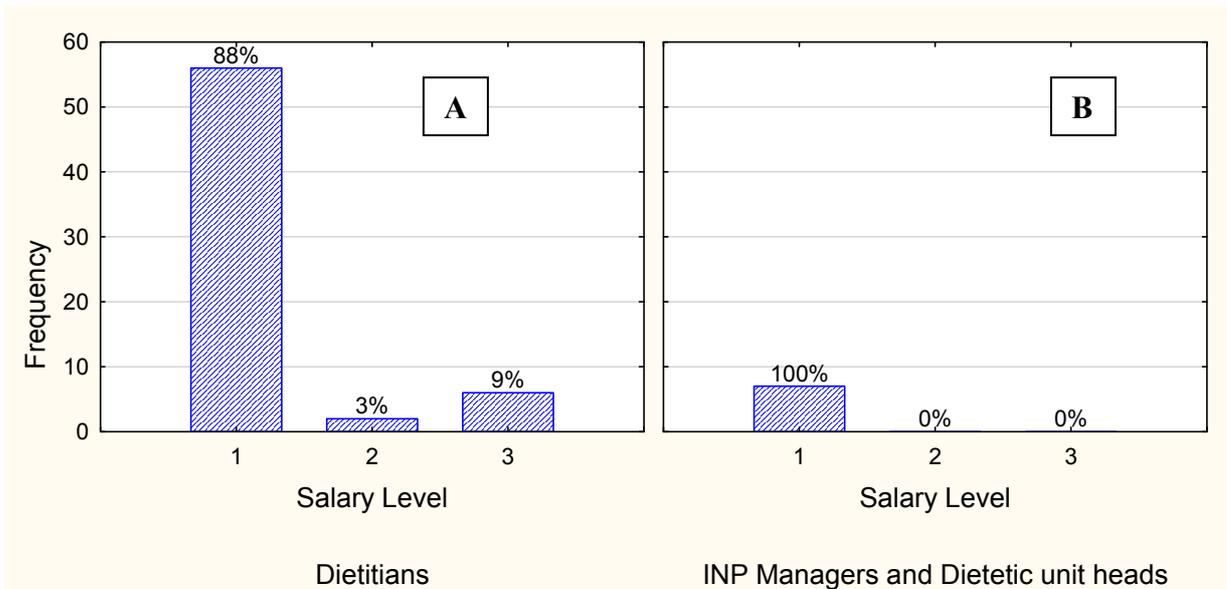


Figure 3.39: Distribution of preferred post structure for dietitians in the Western Cape province

Dietitians (Figure 3.40A) and managers (Figure 3.40B) preferred the option 1 in terms of preferred salary levels which are Community service at level 7, Junior dietitian at level 8, Senior dietitian at level 9, Principal dietitian at a level 10 and manages at level 10.



1= Community service dietitian (CSD) level 7 – Junior dietitian (JDT) level 8 – Senior dietitian (SDT) level 9 - Principal dietitian (PDT) level 10 – Manager level 11,
 2 = CSD/JDT/SDT level 7 – Principal dietitian level 8 – Chief dietitian level 9 – Manager level 10,
 3 = Other

Figure 3.40: Distribution of preferred salary level by dietitians (A) and INP managers and unit heads (B) in the Western Cape province

3.2.2 Profile of district dietitians

3.2.2.1 Demographics

The number of district dietitians who responded was 32 (out of a total of 35) females and their ages ranged from 22 – 58 years with 62% ($N = 20$) aged under 30 years, 22% ($N = 7$) under 40 years and 16% ($N = 5$) over 40 years of age. Across the province, there were 15 district dietitians (47%) in the Metropole region, 6 (19%) in Southern Cape Karoo region, 5 (16%) in West Coast Winelands region, and 6 (19%) in the Boland Overberg region. The distribution of home languages amongst managers was 5% ($N = 17$) Afrikaans, and 47% ($N = 15$) English. The distribution of ethnicity was 59% ($N = 19$) white, 6% ($N = 2$) Indian and 34% ($N = 11$) Coloured. The marital status of dietitians indicated that 66% ($N = 21$) were single and 34% ($N = 11$) married. None of the dietitians described having any form of disability.

3.2.2.2 Qualifications and experience

All thirty-two district dietitians had a qualification level 7 of the national qualifications framework (Professional qualification) and were all professionally registered with a health council i.e. Health Professions Council of South Africa (HPCSA). The professional experience indicated that 53% ($N = 17$) of the district dietitians had less than 5 years experience and 47% ($N = 15$) were in their present positions for less than a year (Table 3.18).

Table 3.18: Professional experience and years in present position of district dietitians in the Western Cape province

Number of years in the profession and position	[N; (%)]	
	Professional Experience	Years in present position
Less than a year	6(19)	15(47)
One to 4 years	17(53)	12(38)
Five to 9 years	3(9)	1(3)
Ten to 14 years	1(3)	2(6)
Fifteen years and more	5(15)	2(6)
Total	32(100)	32(100)

The majority of the district dietitians (56%, $N = 18$) had completed the INP induction course (Table 3.19). Seventy five percent ($N = 24$) of the district dietitians had not completed the Baby-friendly hospital initiative (BFHI) training. The majority of dietitians had also not attended the courses on nutrition surveillance (75%, $N = 24$) and Sinjani training (97%, $N = 31$). Fifty-nine percent ($N = 19$) of the dietitians had attended courses in the last year. Other courses attended by dietitians in the last year were: continuous education at the Stellenbosch University; diabetes; stroke and counselling. A few other areas of expertise were indicated by 14 of the 32 dietitians which included; tutoring, public speaking and organising events.

Table 3.19: Courses attended by district dietitians in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	18(56)	14(44)	32(100)
HFBNP policy	22(69)	10(31)	32(100)
BFHI	8(25)	24(75)	32(100)
Lactation management	24(75)	8(25)	32(100)
IYCF	19(59)	13(41)	32(100)
Sinjani	1(3)	31(97)	32(100)
Nutrition Surveillance	8(25)	24(75)	32(100)
Micronutrient malnutrition Control	16(50)	16(50)	32(100)
Growth Monitoring and Promotion	19(59)	13(41)	32(100)
Nutrition HIV and Aids	24(75)	8(25)	32(100)
Attended Courses in the last year	19(59)	13(41)	32(100)

INP = Integrated nutrition programme, HFBNP = Health facility based nutrition programme, BFHI = Baby friendly hospital initiative, IYCF = Infant and young child feeding

3.2.2.3 Skills and competencies

Generic competencies included for all personnel, and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for dietitians, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated for dietitians, which indicated a sufficiently skilled rating of 75% ($N = 24$) for applied strategic thinking, 66% ($N = 21$) for project management, 75% ($N = 24$) for understanding the department's mandate and strategies and 72% ($N = 23$) for policy analysis, understanding, application and implementation. Twenty-eight percent ($N = 9$) of district dietitians indicated low skill for therapeutic nutrition and diversity management (Table 3.20).

Table 3.20: Skills and competencies of district dietitians in the Western Cape province

[N; (%)]					
Generic and specific skills and competencies	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total
Applied strategic thinking	7(21)	24(75)	1(3)	0(0)	32(100)
Diversity management	5(16)	18(27)	9(28)	0(0)	32(100)
Project management	4(12)	21(66)	7(22)	0(0)	32(100)
Understanding the department's mandate and strategies	4(12)	24(75)	5(13)	0(0)	32(100)
Policy analysis, understanding, application and implementation	8(25)	23(72)	0(0)	1(3)	32(100)
Planning of nutrition programmes for communities	9(29)	19(61)	3(10)	0(0)	31(100) +++++++
Nutrition counselling of clients referred from higher levels of care	19(59)	12(38)	1(3)	0(0)	32(100)
Advisory service to institutions	5(16)	23(72)	3(9)	1(3)	32(100)
Implementation of programmes and financial control	5(17)	18(62)	3(10)	0(0)	29(100) +++++++
Therapeutic nutrition	10(31)	12(38)	9(28)	1(3)	32(100)

+++++++ no responses
+++++++ no responses

Ten dietitians out of the group of 32 indicated interventions that would be required to ensure that they would have the necessary skills and competencies to provide a sustainable service and successfully implement the Health Care 2010 Plan. These interventions were: offering of a Xhosa course, training in therapeutic nutrition, training on nutrition aspects for low socioeconomic groups, increasing the number of permanent posts for dietitians in order to retain dietitians, skills training in communication and financial management, upgrading of infrastructure and resources for dietitians (offices, transport), even distribution of work and evaluation of staff norms.

3.2.2.4 Time spent on the Integrated Nutrition Programme

The percentage time (working hours) spent on the respective focus areas varied amongst dietitians. The total time (working hours) each of the dietitians spent on their tasks amounted to 100% of their working time. Time spent on disease-specific nutrition support and counselling (10 - 80%), maternal nutrition (1 - 15%), youth and adolescent nutrition (0 - 30%), food service management (0 - 15%), nutrition education promotion and advocacy (1 - 20%), infant and young child feeding (2 - 40%), micronutrient control (0 - 10%) and nutrition information (0 - 14%), community based nutrition interventions (0 - 15%), human resource planning (0 - 15%), administration and finances (0 - 19%). Fifty percent ($N = 16$) of the dietitians indicated that they spent less than 10% of their time in meetings and fifty percent indicated that they spent between 10 and 20%. Less than 10% of time was spent on training and workshops by 56% ($N = 18$) of the district dietitians and 43% ($N = 14$) indicated that they spent between 10 to 60% on this activity. The bulk of the district dietitians (72%, $N = 23$) spent less than 45% of their time on counselling of clients, whilst 28% ($N = 9$) spent 50 - 80% on this activity. The difference between monitoring activities was indicated as 40% ($N = 13$) spending less than 10%, and 60% ($N = 19$) between 10 and 20% of their time. The areas that were identified by more than 40% of district dietitians as those for which they required training to perform their tasks, were business planning (53%, $N = 17$) and financial management (43%, $N = 14$).

3.2.2.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated by the 32 district dietitians were: Six (19%) on salary level 6, 62% ($N = 20$) on level 7 and 19% ($N = 6$) on salary level 8. The distribution of job ranks indicated that the majority of the district dietitians were in senior dietitian posts (56%, $N = 18$), 6 principal dietitians ($N = 19$), 3 with the rank of dietitian (9%) and 5 community service dietitians (16%) (Table 3.21). The appointment status indicated by district dietitians showed

that 59% ($N = 19$) were permanent, 25% on contract ($N = 8$) and 16% ($N = 16$) on probation. Eighty-one percent ($N = 26$) of the dietitians had job descriptions and 19% ($N = 6$) did not have such descriptions. Reasons given for not having job descriptions, included that they did not receive one ($N = 3$), they were on contract ($N = 2$) or were new appointees ($N = 1$). Staff performance management systems and individual performance plans were in place for 91% ($N = 29$) of the district dietitians. The reasons given by those who did not have a staff performance plan in place, were that they were on contract ($N = 1$) or new appointees ($N = 1$), and because it was not implemented and they had to set it up themselves ($N = 1$).

Table 3.21: Distribution of job ranks /titles of district dietitians in the Western Cape province

Job Titles /Job Ranks	<i>N</i>	%
Senior dietitian	18	56
Community service dietitian	5	16
Principal dietitian	6	19
Dietitian	3	9
Total	32	100

There was no standard job rank that district dietitians reported to administratively. The supervisors varied and included PHC managers, facility managers, sub district managers, principal dietitians and assistant directors. Technically (with nutrition programming, INP policies), dietitians were supported by assistant directors or principal dietitians in the INP. The reported availability of resources indicated that district dietitians largely shared offices (47%, $N = 15$) and telephones (44%, $N = 14$) (Table 3.22). District dietitians indicated key challenges in their work environment and suggested possible solutions to overcome them (Table 3.23).

Table 3.22: District dietitian resources in the Western Cape province

Resources available	[<i>N</i> ; (%)]			
	Yes	No	Shared	Totals
Own office	15(47)	2(6)	15(47)	32(100)
Own telephone	14(44)	4(12)	14(44)	32(100)
Own email	19(59)	8(25)	5(16)	32(100)
Own internet access	4(12)	23(72)	5(16)	32(100)
Own storage space	10(31)	13(41)	8(25)	31(100)
Transport for duties	20(62)	7(22)	5(16)	32(100)

Table 3.23: Key challenges and solutions in the work environment identified by district dietitians in the Western Cape province

Key Challenges
Limited resources i.e. offices, government vehicles, budget for activities, e mail
Training courses identified, not available
No space for consultations
Poor referrals from doctors
High turn-over of dietetic staff, retention of staff
Lack of acknowledgement and recognition for nutrition and dietitians
Lack of support from administrative and supply chain management
Inadequate number of post for the workload and priorities too many
Not enough posts for nutrition advisers to support dietitians in districts
Key solutions proposed
Presentation of Xhosa courses
Allocated cars to be made available to nutrition units
Dedicated INP managers to support district dietitians
Provision of basic resources i.e. office space, e-mail
Increase of advocacy for nutrition
Improvement of conditions of service and salaries to retain staff
Increase in the number of posts for dietitians and nutrition advisers in districts
Standardization of orientation and induction for dietitians and inclusion of administrative processes
Allocation of food service manager to districts to support food service management

3.2.3 Profile of dietetic unit managers

3.2.3.1 Demographics

The number of dietetic unit managers who responded was 2 (out of a total of 3) females, out of a potential 3 posts. Both the participants were above 40 years of age and were placed at tertiary hospitals in the province. The home language of both respondents was English and they were ethnically distributed as Coloured and White and both were single with no disability.

3.2.3.2 Qualifications and experience

The dietetic unit managers were both on the qualification level 7 of the National Qualifications Framework (Professional qualification) and were professionally registered with a health council i.e. Health Professions Council of South Africa (HPCSA). The professional

experience for both was more than 15 years. Courses which they, as unit managers, had attended were Nutrition, HIV and Aids and Sinjani training ($N = 1$). None of the other courses (INP induction course, Baby Friendly Hospital initiative, Infant and young child feeding, lactation management, nutrition surveillance, micronutrient control) were attended by these managers. Other general courses attended in the last year by managers were, supervision, office management, disciplinary procedure, mentoring and coaching. One other area of expertise indicated by one of the dietetic unit managers was youth leadership.

3.2.3.3 Skills and competencies

Generic competencies (included for all personnel) and specific skills and competencies, in relation to the job outputs and in terms of the code of remuneration guidelines for managers, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic, specific skills and competencies were evaluated for managers. The results indicated sufficiently skilled ratings for budget and financial administration, diversity management, planning and organising, problem solving and decision making, control and management of therapeutic nutrition. The results showed low and non skilled ratings for total parental nutrition (Table 3.24).

Table 3.24: Skills and competencies of dietetic unit managers in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total
Applied strategic thinking	1(50)	1(50)	0(0)	0(0)	2(100)
Budget and financial management	0(0)	2(100)	0(0)	0(0)	2(100)
Diversity management	0(0)	2(100)	0(0)	0(0)	2(100)
Planning and organising	0(0)	2(100)	0(0)	0(0)	2(100)
Problem solving and decision making	0(0)	2(100)	0(0)	0(0)	2(100)
Dietary prescription and its implementation	2(100)	0(0)	0(0)	0(0)	2(100)
Knowledge on the comprehensive field of clinical nutrition	0(0)	1(50)	1(50)	0(0)	2(100)
Guidance to junior colleagues	0(0)	2(100)	0(0)	0(0)	2(100)
Total parental nutrition	0(0)	0(0)	1(50)	1(50)	2(100)
Control and management of therapeutic nutrition	0(0)	2(100)	0(0)	0(0)	2(100)

The respondents indicated that they need clarity on the division of clients according to the level of care, to ensure that they have the necessary skills and competencies to implement the Health Care 2010 Plan.

3.2.3.4 Time spent on the Integrated Nutrition Programme

The percentage time spent on the different focus areas by the two dietetic unit heads were, respectively: disease-specific nutrition support and counselling 20 and 10%, maternal nutrition 0%, youth and adolescent nutrition 10% and 0%, food service management 5 % and 0%, nutrition education promotion and advocacy 10% and 0%, infant and young child feeding 10% and 0%, micronutrient control 5% and 0% and nutrition information 5% and 0%, community based nutrition interventions 0%, human resource planning 15% and 45%, administration and finances 20% and 45%. Time spent on activities were described by the two dietetic unit heads individually and indicated the following: meetings, 10% and 30%; training and workshops, 15% and 0%, counselling of clients, 12% and 0%; nutrition education 7% and 0%, nutrition advocacy 7% and 0%; research, 3% and 0%, monitoring 5% and 0%, projects 5% and 0%, administration 16% and 30% and management 20% and 40%. Unit managers indicated another area of involvement as student training. They indicated the need for training in project management and implementation of micronutrient malnutrition control.

3.2.3.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated were level 8 and 9. The job ranks indicated were assistant director dietary services and principal dietitian. Both had permanent appointment status. Job descriptions and staff performance management systems were in place. Both dietitians reported administratively to the senior medical superintendents and heads of academic departments. Technical support was provided by the INP provincial office and senior medical superintendent. Both managers had their own offices, own telephone, email, internet access, storage space and transport for duties. Key challenges in their work environment, indicated by managers, were personnel and financial shortages and the discrepancy between the levels of manager posts in facilities. Possible solutions were to review the post structure in terms of Health Care 2010 Plan and to motivate for increased budgets.

3.2.4 Profile of hospital dietitians

3.2.4.1 Demographics

The number of hospital dietitians who responded was 32 (out of a total of 38); [31 females and 1 male] whose ages ranged from 24 – 46 years with 44% ($N = 14$) aged under 30 years, 47% ($N = 15$) under 40 years and 9% ($N = 3$) over 40 years of age. The hospital dietitians were in the Metropole region. The distribution of home languages amongst hospital dietitians was 50% ($N = 16$) Afrikaans, and 50% ($N = 16$) English. The distribution of ethnicity was 59% ($N = 19$) white, 16% ($N = 5$) Indian and 25% ($N = 8$) Coloured. The marital status of dietitians indicated that 56% ($N = 18$) were single and 44% ($N = 14$) were married and one dietitian reported a disability, but did not describe it.

3.2.4.2 Qualifications and experience

The hospital dietitians all had a qualification, level 7 on the National Qualifications Framework (Professional qualification) and were all professionally registered with a health council i.e. Health Professions Council of South Africa (HPCSA). The professional experience indicated that 38% ($N = 12$) of the hospital dietitians had less than 5 - 9 years professional experience and 9% ($N = 3$) had more than 15 years experience. Thirty-five percent ($N = 11$) of the dietitians were in their present position for less than a year.

The distribution of key training courses in the INP indicated that 94% ($N = 30$) of the hospital dietitians did not complete the INP induction course, Health facility based nutrition programme (HFBNP) policy, BFHI, and nutrition surveillance courses (Table 3.25). Eighty-seven percent ($N = 28$) of the 32 hospital dietitians also had not completed training in micronutrient control and growth monitoring and promotion. Fifty-six percent ($N = 18$) of the 32 hospital dietitians had not attended any courses in the last year. Some of the courses which had been attended by dietitians in the last year were: continuous education of the University of Stellenbosch, IT web design, allergies, counselling, metabolic syndrome and nutrition in intensive care. Other areas of expertise indicated by 12 of the 32 hospital dietitians included: tutoring, public speaking, pharmacy assisting, and ornithology.

3.2.4.3 Skills and Competencies

Generic competencies (included for all personnel) and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for hospital dietitians, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated by the hospital dietitians, who indicated

highly and sufficiently skilled ratings for dietary prescription and its implementation, 75 % ($N = 24$) and 25 % ($N = 8$) (Table 3.26) respectively. The majority of hospital dietitians rated themselves as highly skilled on interviewing patients, taking of diet history, discussing food preferences and intolerance and taking height and weight measurements (75%, $N = 24$). Cumulatively 59% ($N = 19$) of dietitians indicated that they were low and not skilled in total parental nutrition.

Table 3.25: Courses attended by hospital dietitians in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	2(6)	30(94)	32(100)
HFBNP policy	2(6)	30(94)	32(100)
BFHI	2(6)	30(94)	32(100)
Lactation management	5(16)	27(84)	32(100)
IYCF	3(3)	29(91)	32(100)
Sinjani	1(3)	31(97)	32(100)
Nutrition Surveillance	2(6)	30(94)	32(100)
Micronutrient malnutrition Control	4(14)	28(87)	32(100)
Growth Monitoring and Promotion	4(14)	28(87)	32(100)
Nutrition HIV and Aids	15(47)	17(53)	32(100)
Attended Courses in the last year	1(44)	18(56)	32(100)

INP = Integrated nutrition programme, HFBNP = Health facility based nutrition programme, BFHI = Baby friendly hospital initiative, IYCF = Infant and young child feeding

Table 3.26: Skills and competencies of hospital dietitians in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total
Applied strategic thinking	9(28)	21(66)	2(6)	0(0)	32(100)
Diversity management	3(9)	17(53)	8(25)	4(12)	32(100)
Project management	4(12)	17(53)	7(22)	4(12)	32(100)
Understanding the department's mandate and strategies	5(16)	20(63)	4(12)	3(9)	32(100)
Policy analysis, understanding, application and implementation	5(16)	19(59)	4(12)	4(12)	32(100)
Interview patients for diet history, food preferences and intolerance, height and weight measurement	24(75)	7(22)	1(3)	0(0)	32(100)
Dietary prescription and its implementation	24(75)	8(25)	0(0)	0(0)	32(100)
Knowledge on the comprehensive field of clinical nutrition	13(41)	13(41)	5(16)	1(3)	32(100)
Monitoring of patients, evaluation of treatment and modification if needed	23(72)	6(19)	3(9)	0(0)	32(100)
Total parental nutrition	7(22)	6(19)	10(31)	9(28)	32(100)

Fifty percent of hospital dietitians indicated interventions that would be required to ensure that they have the necessary skills and competencies in order to implement Health Care 2010 Plan which included the following: the need for updates on scientific research, increased CPD activities, increased staff numbers in order to deliver an adequate nutrition service, funding made available for research and training, computer-based training, clinical nutrition training, mentoring of community service dietitians and access to the latest journals.

3.2.4.4 *Time spent on the Integrated Nutrition Programme*

The percentage time spent on the different focus areas by the hospital dietitians varied for the respective focus areas. The total time (working hours) of each of the dietitians spent on their tasks amounted to 100% of their working time. Time spent on disease-specific nutrition support and counselling (0 - 100%), maternal nutrition (0 - 20%), youth and adolescent

nutrition (0 - 20%), food service management (0 - 100%), nutrition education promotion and advocacy (0 - 30%), infant and young child feeding (0 - 70%), micronutrient control (0 - 20%) and nutrition information (0 - 10%), community-based nutrition interventions (0 - 20%), human resource planning (0 - 30%), administration and finances (0 - 80%). Fifty-nine percent ($N = 19$) of the hospital dietitians indicated that they spent less than 10% of their time in meetings and forty-one percent spent between 10 and 20%. Less than 10% of time was spent on training and workshops by 66% ($N = 21$) of the hospital dietitians and 34% ($N = 11$) indicated that they spent between 10 to 30% on training and workshops. Fifty-nine percent ($N = 19$) of hospital dietitians spent more than 30% of their time on counselling of clients and 41% ($N = 13$) spent less than 30% of time on this activity. One quarter of staff ($N = 8$) indicated that they required training on: BFHI, media liaison, nutrition surveillance, project management and micronutrient control. The highest percentage of staff (37%, $N = 12$) indicated the need for business plan training.

3.2.4.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated by the 32 hospital dietitians were: Four (12%) on salary level 6, 56% ($N = 18$) on level 7 and 32% ($N = 10$) on salary level 8. The distribution of job ranks indicated that the majority of the district dietitians were in senior dietitians' posts (56%, $N = 18$), 10 principal dietitians (31%), and 4 (12%) community service dietitians (Table 3.27). The appointment status that was described by hospital dietitians indicated that 72% ($N = 23$) were permanent and 28% ($N = 9$) on contract. Ninety-four percent ($N = 30$) of the dietitians had job descriptions and 6% ($N = 2$) did not have such a description. The reason provided for not having job descriptions was that they had contract appointments ($N = 2$). Staff performance management systems and individual performance plans were in place for 89% ($N = 28$) and not for 12% ($N = 4$) of the hospital dietitians. The reasons indicated by those who did not have them in place were due to contract appointments ($N = 2$), and community service appointments ($N = 2$).

Table 3.27: Distribution of job ranks /titles of hospital dietitians in the Western Cape province

Job Titles /Job Ranks	N	%
Senior dietitian	18	56
Community service dietitian	4	12
Principal dietitian	10	31
Total	32	100

There was no standard job rank that hospital dietitians reported to administratively. The supervisors varied and included principal dietitians, assistant directors, hospital dietetic unit heads, the head of social work and medical superintendents. Technical support with nutrition programming and INP policies was given, dietitians indicated, by assistant directors or principal dietitians in the INP, and dietetic unit heads. The availability of resources indicated that hospital dietitians largely shared offices (66%, $N = 21$) and telephones (62%, $N = 20$) (Table 3.28). The response rate of the total group ($N = 21$) to whether they had transport available for their duties, indicated that only 48% had such a facility available, but this low response rate can be attributed to the lack of need for such a facility in their working environment.

Hospital dietitians (44%, $N = 14$) indicated key challenges in their work environment and possible solutions to overcome them (Table 3.29).

Table 3.28: Hospital dietitian resources in the Western Cape province

Resources available	[N; (%)]			
	Yes	No	Shared	Totals
Own office	11(34)	0(100)	21(66)	32(100)
Own telephone	11(34)	1(3)	20(62)	32(100)
Own e-mail	22(69)	6(19)	4(12)	32(100)
Own internet access	3(9)	17(53)	11(34)	32(100)
Own storage space	15(49)	6(19)	10(32)	31(100) §§§§§§§§
Transport for duties	10(48)	11(52)	0(100)	21(100) *****

§§§§§§§§ No responses can be attributed to lack of relevance in work environment
 ***** No responses can be attributed to lack of relevance in work environment

Table 3.29: Key challenges and solutions in the work environment identified by hospital dietitians in the Western Cape province

Key Challenges:
Limited resources i.e. offices, budget
Not enough interaction between hospital dietitians and dietitians in the community (districts)
Inadequate number of posts for the workload, leading to poor service delivery and time management
Not enough experienced dietitians in specialised units
Inadequate number of dietitians in districts to counsel patients, thus patients return to tertiary services
Poor salaries affecting morale and motivation
Lack of acknowledgement and recognition for nutrition and dietitians by staff.
Lack of support from administrative and supply chain management.
RT 9 Tender - inappropriate feeder sets on tender
Management of stock of the nutrition supplementation programme
Dedicated dietetic unit manager to coordinate service in facility
Key solutions proposed:
Appointment of experienced personnel in specialised units
Appointment of permanent staff
Allocate realistic budgets for nutrition based on needs
Have dedicated unit heads to support dietitians
Provide basic resources i.e. office space, e-mail
Increase advocacy for nutrition and train nurses in basic nutrition
Improve conditions of service and salaries to retain staff, investigate implementation of financial incentives to motivate staff
Increase the number of posts for dietitians.

3.2.5 Profile of food service managers

3.2.5.1 *Demographics*

The number of food service managers who responded was 24 [(out of a total of 46); 21 females and 3 males]. Their ages ranged from 23 – 58, with 21% ($N = 5$) aged under 30 years, 54% ($N = 13$) under 40 years and 24% ($N = 6$) over 40 years of age. In the whole province, there were 20 (83%) food service managers in the Metropole region, 1 (4%) in Southern Cape Karoo region, 1 (4%) in West Coast Winelands region, and 2 (8%) in the Boland Overberg region. The distribution of home languages amongst managers was 46% ($N = 11$) Afrikaans, 25% ($N = 6$) Xhosa and 29% ($N = 7$) English. The distribution of ethnicity

was 50% ($N = 12$) white, 1% ($N = 4$) Indian, 21% ($N = 5$) African and 25% ($N = 6$) Coloured. The marital status of food service managers was indicated as, 42% ($N = 10$) single, 8% ($N = 2$) divorced, 4% ($N = 1$) widowed and 46% ($N = 11$) married. None of the food service managers reported any type of disability.

3.2.5.2 **Qualifications and experience**

The food service managers' qualifications varied within the national qualifications framework. One (4%) manager was on level 1 (standard 7 or grade 9 qualification), 1 (4%) on level 3 (standard 9 or grade 11, or technical N 1), 2 (8%) on level 6 (first degrees/higher diplomas), 5 (20%) on level 7 (higher degrees/professional qualification) and the majority of food service managers ($N = 15$; 63%) on level 5 (Diplomas/Occupational certificates). Three (12%) food service managers were professionally registered with a health council i.e. Health Professions Council of South Africa (HPCSA) and 87% ($N = 21$) were not registered. Their professional experience indicated that 21% ($N = 5$) of the food service managers had less than 5 years experience and 25% ($N = 6$) were in their present positions for less than a year (Table 3.30).

Table 3.30: Professional experience and years in present position of food service managers in the Western Cape province

Number of years in the profession and position	[N; (%)]	
	Professional Experience	Years in present position
Less than a year		6(25)
One to 4 years	5(21)	6(25)
Five to 9 years	4(17)	5(21)
Ten to 14 years	4(17)	0(0)
Fifteen years and more	11(46)	6(25)
Total	24(100)	24(100)

The key training courses in the INP attended were evaluated and 96% ($N = 4$) of the food service managers indicated that they had not completed the INP induction course. The majority of the food service managers (67%, $N = 16$) had completed the food service policy training (Table 3.31). Fifty-eight percent ($N = 14$) of the food service managers had not completed assessor training. The majority of food service managers 71% ($N = 17$) had attended courses in the last year. Other courses ($N = 13$, 54%) that were attended in the last year included: Logistical training, first aid, labour relations, food service management guidelines, leadership, 20 hour breastfeeding training and disciplinary measures. Other

areas of expertise which were indicated by 9 of the 24 food service managers were tutoring, lecturing, counselling and public speaking.

Table 3.31: Courses attended by food service managers in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	1(4)	23(96)	24(100)
Hazard analysis critical control point (HACCP)	12(50)	12(50)	24(100)
Occupational health	13(54)	11(46)	24(100)
Food service policy	16(67)	8(33)	24(100)
Kitchen cleaner	8(33)	16(67)	24(100)
Assessor course	10(42)	14(58)	24(100)
Attended Courses in the last year	17(71)	7(29)	24(100)

3.2.5.3 Skills and competencies

Generic competencies included for all personnel, and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for food service managers, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated for food service managers, which indicated highly and sufficiently skilled ratings (33%, $N = 33$) and (67%, $N = 16$) for applied strategic thinking respectively. Low skilled ratings were indicated for budget and financial administration (21%, $N = 5$), diversity management (4%, $N = 1$), planning and organising (4%, $N = 1$), control, analysis and management of planning, implementation and evaluation of food service units, guidance to junior staff (12%, $N = 3$), food service quality standards (8%, $N = 2$), managing human resources – supervision (8%, $N = 2$), and financial control and implementation of saving measures to stay within allocated budget (8%, $N = 2$). Twelve percent ($N = 3$) of the managers indicated that they were not skilled in diversity management (Table 3.32).

Table 3.32: Skills and competencies of food service managers in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total
Applied strategic thinking	8(33)	16(67)	0(0)	0(0)	24(100)
Budget and financial management	5(21)	14(58)	5(21)	0(0)	24(100)
Diversity management	7(29)	13(54)	1(4)	3(12)	24(100)
Planning and organising	12(50)	11(46)	1(4)	0(0)	24(100)
Problem solving and decision making	9(36)	14(58)	0(0)	1(4)	24(100)
Control, analyze and manage the planning, implementation and evaluation of food service units	15(63)	8(33)	1(4)	0(0)	24(100)
Guidance to junior staff	15(63)	6(25)	3(12)	0(0)	24(100)
Food service quality standards	13(54)	9(37)	2(8)	0(0)	24(100)
Managing human resources - supervision	14(58)	8(33)	2(8)	0(0)	24(100)
Financial control and implementation of saving measures to stay within allocated budget	7(29)	14(58)	2(8)	1(4)	24(100)

Seven of the 24 managers indicated that the following interventions would be required to ensure that they have the necessary skills and competencies to implement the Health Care 2010 Plan: managing and leading human resource management, training on first aid, team building, diversity management and addressing resource needs i.e. budgets, training of personnel and filling of posts.

3.2.5.4 Time spent on the Integrated Nutrition Programme

Fourteen (58%) of the food service managers indicated that they spent 100% of their time on food service management. The total time (working hours) of each of the food service managers' time spent on their tasks amounted to 100% of their working time. The remaining 10 food service managers (42%) divided their time between the other focus areas and support systems. Time spent on disease-specific nutrition support and counselling (40%), maternal nutrition (0%), youth and adolescent nutrition (0%), food service management (25 - 85%), nutrition education promotion and advocacy (5 - 20%), infant and young child feeding

(5 - 10%), micronutrient control (0%) and nutrition information (10%), community-based nutrition interventions (2%), human resource planning (10 - 35%), administration and finances (10 – 30%). Seventy- five percent of managers ($N = 18$) indicated that they spent between 10 -30% of their time in meetings. The areas indicated as requiring training by more than 25% ($N = 6$) of the food service managers were: project management; financial management; analysis of menus; utilizing software; monitoring food quality standards with reference to nutritional, sensory and microbial characteristics; compilation of food service budget and conducting plate waste studies.

3.2.5.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated by the 24 food service managers were: ten (42%) on salary level 7, 50% ($N = 12$) on level 8 and 8% ($N = 2$) on salary level 9. The distribution of job ranks indicated that the majority of the food service managers were at the rank of food service manager (50%, $N = 12$), chief food service manager ($N = 10$; 42%), assistant director food service ($N = 1$, 4%) and one senior dietitian ($N = 1$, 4%), (Table 3.33). Seventy-nine percent ($N = 19$) of the food service managers were permanently appointed and 5 (21%) on probation. Twenty-three of the 24 food service managers had job descriptions with only one not having such a description in place. The reason given for the absence of a job description was that it was never received. Staff performance management systems and individual performance plans were in place for 87% ($N = 21$) of the food service managers. The reason indicated by those who did not have them in place was their probation appointment ($N = 3$).

Table 3.33: Distribution of job ranks /titles of food service managers in the Western Cape province

Job Titles /Job Ranks	N	%
Chief food service manager	10	42
Assistant director: Food services	1	4
Food service manager	12	50
Senior dietitian	1	4
Total	24	100

Administrative supervision indicated for food service managers was provided by: assistant directors, medical superintendents and administrative heads. Food service managers indicated that technical support (nutrition programming, INP policies), was given by assistant directors or principal dietitians in the INP. The availability of resources indicated that the

majority of food service managers had offices (67%, $N = 16$) (Table 3.34). Food service managers (41%, $N = 13$) indicated key challenges in their work environment and possible solutions to overcome them (Table 3.35).

Table 3.34: Food service manager resources in the Western Cape province

Resources available	[N; (%)]			
	Yes	No	Shared	Totals
Own office	16(67)	0(0)	8(33)	32(100)
Own telephone	15(63)	0(0)	9(37)	32(100)
Own e-mail	22(92)	1(4)	1(4)	32(100)
Own internet access	6(25)	16(66)	2(8)	32(100)
Own storage space	10(43)	8(35)	5(22)	23(100) +++++++
Transport for duties	19(86)	2(9)	1(4)	22(100) +++++++

+++++++ No responses can be attributed to lack of relevance in work environment
 ##### No responses can be attributed to lack of relevance in work environment

Table 3.35: Key challenges and solutions in the work environment identified by food service managers in the Western Cape province

Key Challenges:
Lack of support from administration and procurement units
Resource constraints - budget, equipment and human resources
Shortage of staff, posts not filled, too many contract appointees due to posts not being filled and posts indicated in the CSP are not enough
No career path for food service workers and managers
Too many task teams that require input and put pressure on time management
Administrative procedures not clear
Old equipment, no proper ventilation in the kitchen
Low skill levels of staff
Shortage of offices
Lack of staff motivation
No relief staff when food service supervisors are on leave
Discrepancy in salary levels of food service supervisors
Key solutions proposed:
Develop a plan to replace old equipment and to renovate kitchens
Staff doing the same work to be on the same salary level e.g. Food service supervisors all to be on level 4
Improve salary levels and evaluate job titles
Improve procurement systems
Employ more permanent staff
Train staff to use the equipment, encourage diversity management, and work as a team
Regular meetings and explanation of protocols and procedures

3.2.6 Profile of Food service workers

3.2.6.1 Demographics

The number of food service workers who responded was 509 [(out of a total of 578); 385 females and 124 males], whose ages ranged from 20 – 70 years (Figure 3.41). Twenty three percent of food service workers were between the ages of 45 and 50 years.

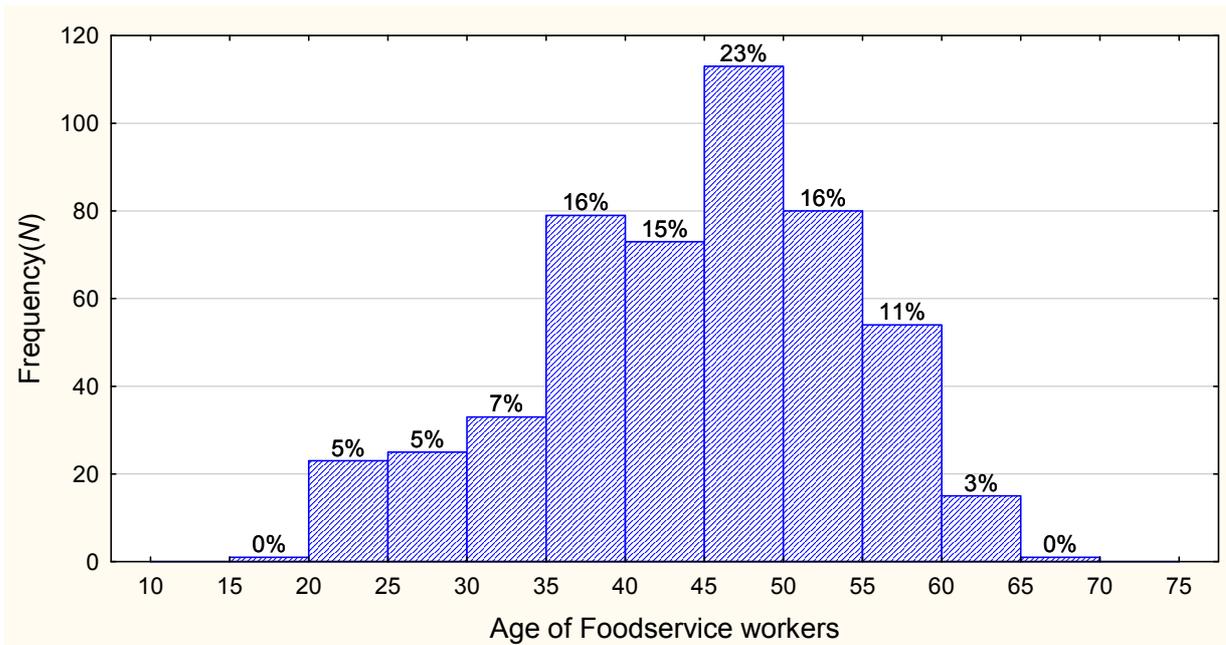
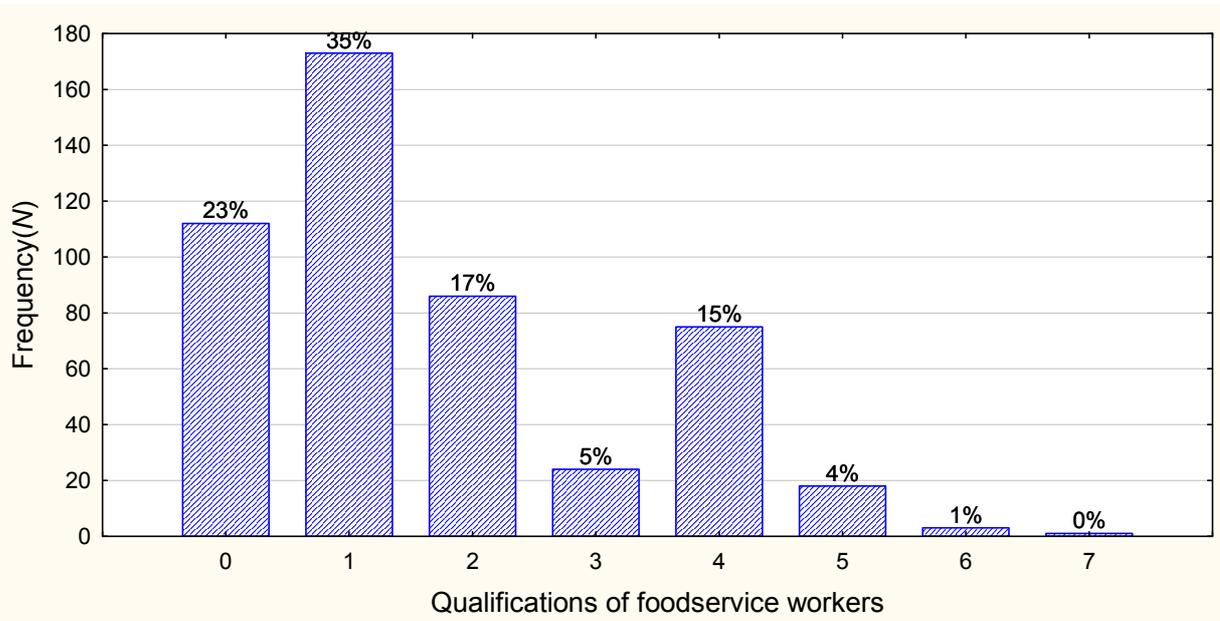


Figure 3.41: Age distribution of food service workers in the Western Cape province

The distribution of food service workers across the province in the respective regions was: 306 (60%) in the Metropole region, 69 (13%) in Southern Cape Karoo region, 55 (11%) in West Coast Winelands region and 79 (15%) in the Boland Overberg region. The distribution of home languages amongst food service workers was 79% ($N = 405$) Afrikaans, 3% ($N = 16$) English, 17% ($N = 85$) Xhosa and 1% ($N = 3$) other. The distribution of ethnicity was 6% ($N = 30$) white, 19% ($N = 97$) African and 75% ($N = 382$) Coloured. The marital status of food service workers was indicated as 44% ($N = 226$) married, 12% ($N = 63$) divorced, 6% ($N = 30$) widowed and 33% ($N = 168$) single. Ten (2%) indicated disability. Disabilities described were, physical disability due to polio ($N = 1$), visual ($N = 1$) and hearing impairment ($N = 1$). The remaining 7 food service workers did not specify the nature of their disabilities.

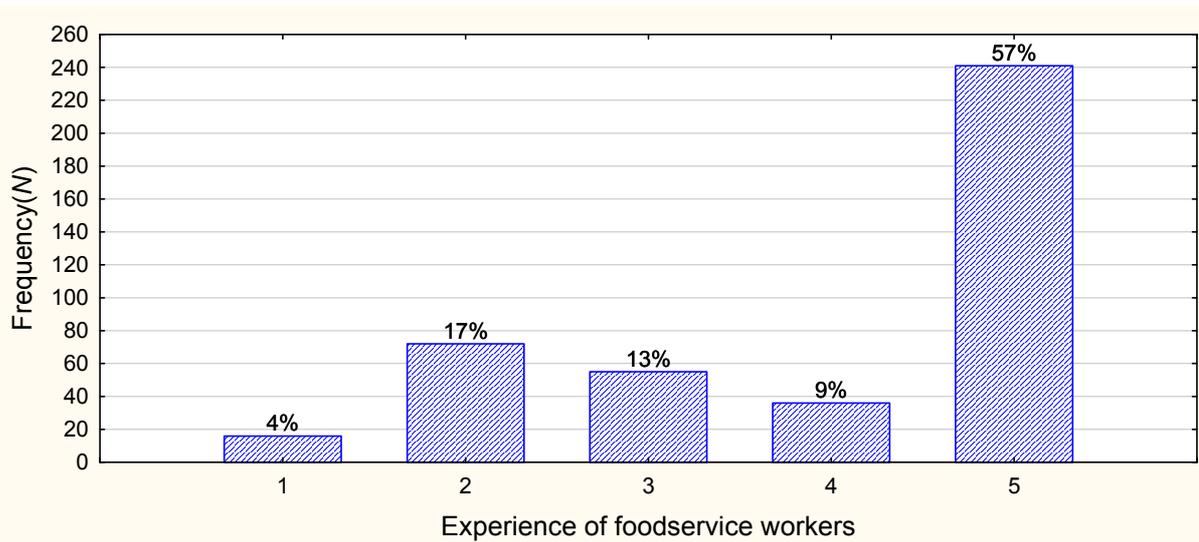
3.2.6.2 *Qualifications and experience*

The food service workers' qualifications varied from Adult Based Education and Training (ABET) to higher degrees/professional qualification (Figure 3.42). Sixty percent ($N = 305$) of the food service workers had standard 7/grade 9/ABET 4 or lower. None of the food service workers was professionally registered with health councils. Their professional experience (Figure 3.43) indicated that 47% ($N = 241$) of food service workers had more than 15 years experience and 44% ($N = 222$) had been in their present positions (Figure 4.44) for 15 years and more.



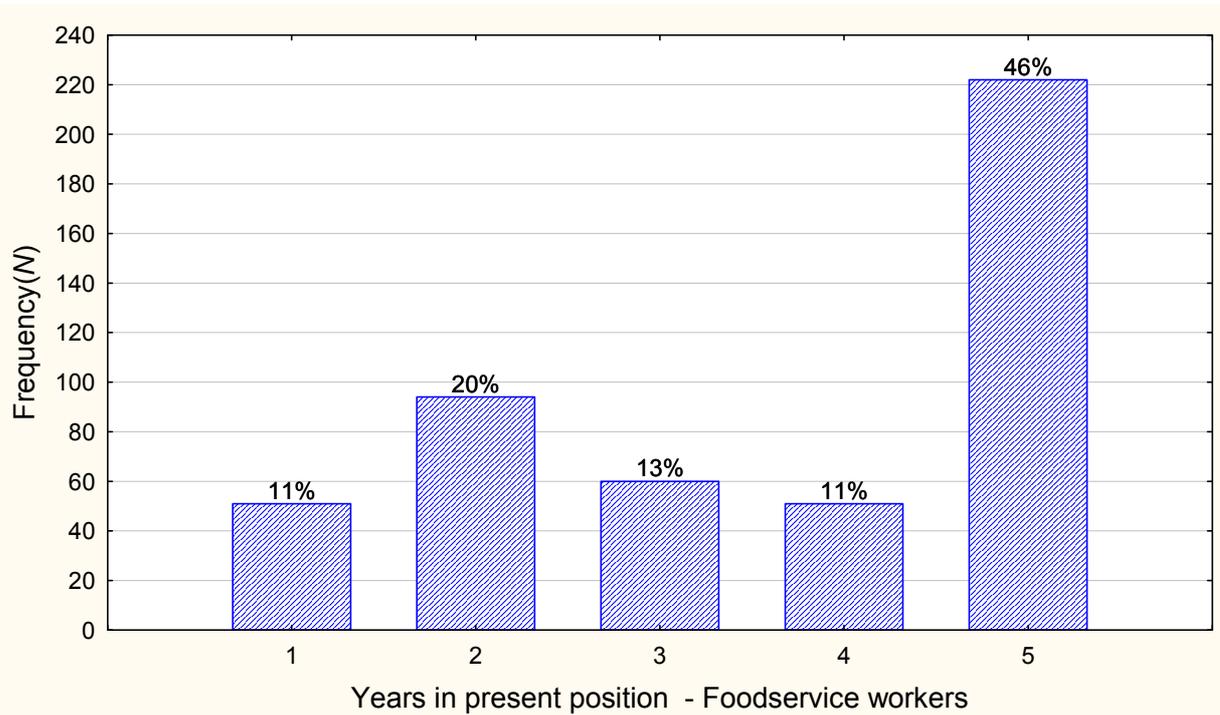
0 = Adult basic education and training 3 and lower, grade 5/6 or standards 3/4,
 1 = Standard 7 or grade 9 or lower, adult based education and training 4,
 2 = Standard 8 or grade 10 or Technical N1
 3 = Standard 9 or grade 11 or Technical N2
 4 = Standard 10 or grade 12 or Technical N3
 5 = Occupational certificates, Diplomas, N 4 – N6
 6 = First degrees, Higher diplomas
 7 = Higher Degrees, Professional qualifications
 8 = Doctorates/Further research degrees

Figure 3.42: Qualifications of food service workers in the Western Cape province



1= less than one year,
 2 = One to 4 years,
 3 = Five to 9 years,
 4 = Ten to 14 tears,
 5 = 15 years and more

Figure 3.43: Experience of food service workers in the Western Cape province



1= less than one year,
 2 = One to 4 years,
 3 = Five to 9 years,
 4 = Ten to 14 years,
 5 = Fifteen years and more

Figure 3.44: Food service workers: years in present position in the Western Cape province

The evaluation of key training courses in the INP indicated that 97% ($N = 492$) of the food service workers did not complete the INP induction course and 3% ($N = 17$) indicated that they had completed it. The majority of food service workers had not completed the food service policy training (55%, $N = 282$) and 45% ($N = 227$) had completed the training (Table 3.36). The majority of food service workers 53% ($N = 272$) had not attended courses in the last year. Other food service workers indicated that they had attended the following courses in the last year: client care; health and safety; computer courses; life skills; hand washing; labour relations; disciplinary measures; assistant chef and diversity management. Other areas of expertise which were indicated by 62 of the 509 food service workers were: peer education, catering, pastoral counselling, community mobilization and participation in sports.

Table 3.36: Courses attended by food service workers in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	17(3)	492(97)	509(100)
Hazard analysis critical control point (HACCP)	49(10)	460(90)	509(100)
Occupational health	89(17)	420(83)	509(100)
Food service policy	227(45)	282(55)	509(100)
Kitchen cleaner	265(52)	224(48)	509(100)
Assessor course	7(1)	502(99)	509(100)
ABET	13(3)	496(97)	509(100)
Attended Courses in the last year	237(47)	272(53)	509(100)

3.2.6.3 Skills and competencies

Generic competencies included for all personnel, and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for food service workers, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated for food service workers (Table 3.37). All of the 509 food service workers did not rate themselves on all of the areas of skills and competence which accounted for some no responses. Forty percent ($N = 166$) of respondents rated themselves as not skilled in diversity management. The respondents who were low skilled and not skilled in areas relating specifically to food service, were cumulatively fewer than the respondents who were sufficiently and highly skilled. These areas were: knowledge on how to hygienically prepare food, stock, stores and food; safety and general hygiene in food service, portioning and distribution and serving of food and following a cleaning programme.

Fifty-two of the 509 (10%) food service workers indicated the following interventions required to ensure that they have the necessary skills and competencies to implement Health Care 2010 Plan: training in all areas of food service management, life skills training in change management and stress, computer literacy, improvements in the work environments e.g. staff rest rooms and increasing the number of permanent filled posts.

Table 3.37: Skills and competencies of food service workers in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total \$\$\$\$\$\$\$\$
Customer focus and responsiveness	84 (19)	130 (30)	70 (16)	152 (35)	436 (100)
Diversity management	59 (14)	109 (26)	81 (20)	166 (40)	415 (100)
Managing interpersonal conflict and resolving conflict	82 (19)	154 (35)	73 (17)	127 (29)	436 (100)
Self management	132 (29)	169 (37)	55 (12)	103 (22)	459 100
Understanding the department's mandate and strategies	77 (17)	165 (36)	95 (20)	126 (27)	463 (100)
Knowledge on how to hygienically prepare food, stock, stores food	174 (37)	227 (48)	44 (9)	26 (5)	471 (100)
Safety and general hygiene in food service	167 (34)	254 (52)	59 (12)	8 (2)	488 (100)
Portioning, distribution and serving of food	166 (36)	238 (51)	46 (10)	15 (3)	465 (100)
Internal ordering of stock and storing items	79 (19)	123 (30)	74 (18)	132 (32)	408 (100)
Following cleaning programme	172 (36)	248 (52)	44 (10)	12 (2)	476 (100)

3.2.6.4 Time spent on the Integrated Nutrition Programme

The responses on time spent on focus areas on the INP and on activities listed were few emphasized by the number of missing values for focus areas including food service management. For instance, for disease-specific nutrition support and counselling there were 505 missing values; for maternal nutrition, 505 values missing; youth and adolescent nutrition, 506 values missing; food service management, 163 values missing; nutrition

\$\$\$\$\$\$\$\$ no responses out of total sample of 509

education promotion and advocacy, 505 no responses; infant and young child feeding, 506 values missing; micronutrient control, 506 values missing; nutrition information, 506 values missing; community based nutrition interventions, 506 values missing; human resource planning, 502 values missing and administration and finances, 499 missing values.

3.2.6.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated by the 509 food service workers were: ten (2%) on salary level 1, 54% ($N = 273$) on level 2, 22% ($N = 110$) on level 3, 21% ($N = 107$) on level 4 and 2% ($N = 9$) on salary level 5. The validity of job ranks of respondents was confirmed on the Persal database for food service workers. The majority of the food service workers were Food service Aids II, (65%, $N = 334$), followed by Senior Food service Supervisors (20%, $N = 101$), (Table 3.38). Ninety percent ($N = 460$) of the food service workers were permanently appointed, 3% ($N = 14$) on contract, 6% ($N = 33$) on probation and 2 missing values. Ninety-eight percent ($N = 489$) of the respondents ($N = 498$) had job descriptions in place and 2% ($N = 9$) did not. The reasons provided for the absence of job descriptions were that they were never received ($N = 3$) and that staff were on contract ($N = 2$). Ninety-five percent ($N = 469$) of respondents ($N = 489$) indicated that they had staff performance management systems (SPMS) and individual performance plans (IPDP) in place. Contract appointment was the reason given by those who did not have SPMS and IPDP in place.

Table 3.38: Distribution of job ranks /titles of food service workers in the Western Cape province

Job Titles /Job Ranks	N	%
Principal food service supervisor	8	2
Senior food service supervisor	101	20
Food service supervisor	17	3
Food service aid II	334	65
Food service Aid I	42	8
Food service Aid	5	1
Housekeeper	1	1
Total	509	100

Administrative supervision for food service workers was provided by: assistant directors: admin; medical superintendents; food service managers and administrative heads. Food service workers indicated that technical support (nutrition programming, INP policies) was

provided by the Assistant director, INP, principal dietitians and food service managers. The responses on the availability of resources indicated that the majority of food service workers did not have their own offices, own telephones, own e-mail and internet access (Table 3.39).

Food service workers (17%, $N = 89$) indicated key challenges in their work environment and possible solutions to overcome them (Table3.40).

Table 3.39: Food service workers, resources in the Western Cape province

Resources available	[N; (%)]			
	Yes	No	Shared	Totals ^x
Own office	32(7)	354(78)	65(14)	451(100)
Own telephone	46(10)	240(52)	174(38)	460(100)
Own e-mail	21(5)	417(94)	7(1)	445(100)
Own internet access	5(1)	433(99)	7(1)	445(100)
Own storage space	305(69)	117(26)	23(5)	445(100)
Transport for duties	250(60)	141(33)	29(7)	420(100)

No responses can be attributed to lack of relevance in work environment

Table 3.40: Key challenges and solutions in the work environment identified by food service workers in the Western Cape province

Key Challenges
Unity amongst staff, diversity, different cultures in the team
Resource constraints, budget, equipment and human resources
Shortage of staff and absenteeism
No career path for food service workers
Communication
Administrative and procurement procedures
Old equipment, no proper ventilation in the kitchen, lifts not working - wastes time
Low skill levels of staff
Shortage of staff, overworked, untrained, agency staff
Staff motivation
Discrepancy in salary levels of food service supervisors
Key solutions proposed
Training of staff on Bathe Pele, discipline, cooking, diversity management and team building
Improve salary levels
Implement disciplinary procedures
Replace old equipment and provide training on using equipment
Renovate kitchens
Employ more government staff
Improve procurement processes
Improve staff establishments to address shortages when food service supervisors are on leave
Improve communication through regular meetings.

3.2.7 Profile of auxiliary workers

3.2.7.1 Demographics

The number of auxiliary service workers who responded was 28 [(out of a total of 36); 27 females and 1 male] and their ages ranged from 37 – 63 years with 18% ($N = 5$) aged under 40 years of age and 82% ($N = 23$) over 40 years of age. Eleven (39%) of the auxiliary workers who responded, were in the Metropole region, and 17 (61%) in the Southern Cape Karoo region. The distribution of home languages amongst managers was 78% ($N = 22$) Afrikaans, 11% ($N = 3$) English and 11% ($N = 3$) Xhosa. The distribution of ethnicity was 7% ($N = 2$) white, 14% ($N = 4$) African and 78% ($N = 22$) Coloured. The responses on the marital status of auxiliary service workers indicated that 61% ($N = 17$) were married, 11% ($N = 3$)

single, 21% ($N = 6$) divorced and 7% ($N = 2$) widowed. Two auxiliary service workers reported visual and hearing impairment.

3.2.7.2 *Qualifications and experience*

The auxiliary service workers' qualifications varied from Standard 8/grade 10 or technical N1 (28%, $N = 8$), Standard 9/grade 11 or technical N2, (11%, $N = 3$), Standard 10/grade 12 or technical N3, (50%, $N = 14$) and Occupational certificates, diplomas or N4-N6 (11%, $N = 3$). None of the auxiliary service workers were professionally registered with health councils. The professional experience of the group was 75% ($N = 21$) 15 years and more, 14%, $N = 4$ ten to 14 years, and 11%, $N = 3$ five to 9 years. Sixty-one percent of the auxiliary service workers indicated that they had been in their present positions for 15 years and more, 18%, $N = 5$ ten to 14 years, and 21%, $N = 6$ five to 9 years.

The evaluation of key training courses in the INP indicated that 54% ($N = 15$) of the auxiliary service workers completed the INP induction course and 46% ($N = 13$) indicated that they had not completed it. The majority of the auxiliary service workers completed the 2 year nutrition adviser training (61%, $N = 17$) and 39 % ($N = 11$) had not completed the training (Table 3.41). The majority of auxiliary service workers 64% ($N = 18$) have not attended courses in the last year. Other courses that had been attended in the last year were: Integrated management of childhood illness (IMCI), Diabetes, Food-based dietary guidelines, 20 hour breastfeeding course and chronic diseases. Other areas of expertise which were indicated by 17 of the 28 auxiliary service workers were: counselling, public speaking, radio presenting and IMCI.

Table 3.41: Courses attended by auxiliary services workers in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course.	15(54)	13(46)	28(100)
Health facility based nutrition programme policy	15(54)	13(46)	28(100)
BFHI assessor course	10(36)	18(64)	28(100)
Lactation management	22(79)	6(21)	28(100)
Infant and young child feeding	21(75)	7(25)	28(100)
Nutrition adviser 2 year training	17(61)	11(39)	28(100)
SINJANI	4(14)	24(86)	28(100)
Nutrition surveillance	10(36)	18(64)	28(100)
Micronutrient malnutrition control	19(68)	9(32)	28(100)
Growth monitoring and promotion	28(100)	0(100)	28(100)
Nutrition HIV and Aids	26(93)	2(7)	28(100)
Attended Courses in the last year	10(36)	18(64)	28(100)

3.2.7.3 Skills and competencies

Generic competencies, included for all personnel, and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for auxiliary service workers, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated for auxiliary workers (Table 3.42). Twenty-one percent ($N = 6$) of the auxiliary service workers rated themselves as not skilled in providing advisory service to institutions, and 11% ($N = 3$) in understanding the department's mandate and strategies in nutrition promotion. The majority of auxiliary workers, who responded, indicated that they were highly or sufficiently skilled in nutrition screening (71%, $N = 20$), nutrition promotion (60%, $N = 17$) and nutrition assessment of communities (50%, $N = 14$).

Table 3.42: Skills and competencies of auxiliary services officers in the Western Cape province

Generic and specific skills and competencies	[N; (%)]				
	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total *****
Customer focus and responsiveness	8 (32)	13(52)	2(8)	2(8)	25(100)
Diversity management	4 (17)	12 (52)	5 (22)	2 (9)	23 (100)
Managing interpersonal conflict and resolving conflict	9(33)	11(41)	5(18)	2(8)	27(100)
Self management	15(60)	7(28)	3(12)	0(0)	25(100)
Understanding the department's mandate and strategies	8(31)	13(50)	2(8)	3(11)	26(100)
Nutrition assessment in communities	14(50)	12(44)	1(3)	1(3)	28(100)
Advisory service to institutions	8(29)	11(39)	3(11)	6(21)	28(100)
Nutrition education to groups	17(61)	11(39)	0(0)	0(0)	28(100)
Nutrition promotion	17(60)	8(29)	0(0)	3(11)	28(100)
Nutrition screening	20(71)	7(25)	1(3)	0(0)	28(100)

Interventions that would be required to ensure that auxiliary service workers have the necessary skills and competencies to implement Health Care 2010 Plan were provided by 6 of the 28 auxiliary service workers. These interventions were: yearly updates to be organized for nutrition advisers; provision of accredited nutrition training and training on integrated areas e.g. home-based care and integrated management of childhood illnesses.

3.2.7.4 Time spent on the Integrated Nutrition Programme

The percentage time spent on the different focus areas by the auxiliary service workers varied for the respective focus areas. The total time (working hours) of each of the, auxiliary service workers spent on their tasks amounted to 100% of their working time. The indicated time spent on disease-specific nutrition support and counselling was between 3 -40%; maternal nutrition 10 - 40%; youth and adolescent nutrition 3 - 15%; food service management 1 - 10%; nutrition education promotion and advocacy 3 - 50%; infant and young child feeding 7 - 44%; micronutrient control 1 - 10% and nutrition information 1 - 30%;

***** no responses out of total sample of 28

community-based nutrition interventions 2 - 50%; human resource planning 8 - 20%; administration and finances 5 – 10%. The auxiliary workers who responded (70%, $N = 17$) indicated that they spent less than 10% of their time in meetings. Less than 10% of time was spent on training and workshops by 50% ($N = 13$) of the respondents. None of the auxiliary services workers spent less than 10% of their time on nutrition education and promotion, whereas 25% ($N = 6$) indicated that they spent 20 - 30% respectively on these specific activities. The areas that 25% of the respondents ($N = 7$ of 28) identified where training was required in order for them to perform their tasks were: financial management; nutrition surveillance; project management; business planning; staff management; provision of technical support to other departments; media liaison and provision of food service advice to groups.

3.2.7.5 Salaries, job ranks, appointment status, job descriptions and resources

The salary levels indicated by the 28 auxiliary service workers were: Thirty nine percent ($N = 11$) on salary level 4, 11% ($N = 3$) on level 5 and 50% ($N = 14$) on level 6. The validity of job ranks of the respondents was confirmed on the Persal database for auxiliary service workers and the title varied amongst the group, with the majority classified as chief health promoting officers (43%, $N = 12$) (Table 3.43). All the auxiliary service workers were permanently appointed and had job descriptions in place. Only one of the auxiliary services officers did not have an individual development plan in place.

Table 3.43: Distribution of job ranks /titles of auxiliary service workers in the Western Cape province

Job Titles /Job Ranks	N	%
Chief health promoting officer	12	43
Principal health promoting officer	1	4
Health promoting officer	5	18
Chief auxiliary services officer	1	4
Principal auxiliary services officer	2	7
Senior auxiliary services officer	5	18
Auxiliary services officer	2	7
Total	28	100

There was no standard administrative supervisor indicated for the group. Supervisors indicated were: assistant directors: INP, facility managers and dietitians. Technical support

(nutrition programming, INP policies) was reportedly given to auxiliary service workers by the Assistant director: INP and dietitians. The availability of resources indicated that the majority of auxiliary workers had their own offices (62% of respondents). None of the respondents had access to the internet and 4% ($N=1$) had access to email (Table 3.44).

Auxiliary service workers (32%, $N = 9$) indicated key challenges in their work environment and possible solutions to overcome them (Table 3.45).

Table 3.44: Auxiliary service workers' resources in the Western Cape province

Resources available	[N; (%)]			
	Yes	No	Shared	Totals +++++
Own office	16(62)	(0)	10(38)	26(100)
Own telephone	9(33)	11(41)	7(26)	27(100)
Own email	1(4)	25(96)		26(100)
Own internet access		27(100)		27(100)
Own storage space	10(38)	13(50)	3(12)	26(100)
Transport for duties	12(48)	8(32)	5(20)	25(100)

+++++ No responses can be attributed to lack of relevance in work environment

Table 3.45: Key challenges and solutions in the work environment identified by auxiliary service workers in the Western Cape province

Key Challenges:
Time management
Limited technical support
Workload does not allow for effective service delivery
No career path for nutrition advisers
Service area too wide and covering too many clinics
Limited resources e.g. no pin numbers for telephones
Registration with a Health Council
Key solutions proposed:
Registration of nutrition advisers as nutrition assistants
Allocation of dedicated post per facility
Training programmes for nutrition advisers
Dedicated to nutrition programme only
Have coordination meetings with other departments and quarterly inter-regional meetings

3.2.8 Profile of administrative workers

3.2.8.1 *Demographics*

All fifteen administrative workers (12 females and 3 males) placed within nutrition units in the province responded. Their ages ranged from 24 – 55 years, with 60% ($N = 9$) aged under 40 years and 40% ($N = 6$) over 40 years. The administrative personnel were located in the provincial office 2 (13%) and 13 (87%) in the Metropole. The home languages amongst administrative workers were 7% ($N = 46$) Afrikaans, 20% ($N = 3$) Xhosa and 33% ($N = 5$) English. The distribution of ethnicity was 15% ($N = 1$) white, 20% ($N = 3$) African and 73% ($N = 11$) Coloured. The marital status indicated was 53% ($N = 8$) married, 13% ($N = 2$) divorced and 33% ($N = 15$) single. Ninety-three percent ($N = 14$) indicated no disability and 3% indicated disability ($N = 1$).

3.2.8.2 *Qualifications and experience*

The administrative personnel's qualifications varied from Standard 8/grade 10 or technical N1 (13%, $N = 2$), Standard 10/grade 12 or technical N3, (60%, $N = 9$), Occupational certificates, diplomas or N4 – N6, (13%, $N = 2$) and first degrees, higher diplomas (13%, $N = 2$). None of the administrative workers were professionally registered with health councils. The professional experience of the group was 27% ($N = 4$) 15 years and more, 6% ($N = 1$) ten to 14 years, 40% ($N = 6$) five to 9 years, 20% ($N = 3$) one to 4 years, and 6% ($N = 1$) less

than a year. Twenty- seven percent ($N = 4$) had been in their present position for 15 years and more, 6% ($N = 1$) ten to 14 years, 27% ($N = 4$) five to 9 years, 27% ($N = 4$) one to 4 years, and 13% ($N = 2$) less than a year.

The evaluation of key training courses in the INP indicated that 100% ($N = 15$) of the administrative workers had not completed the INP induction course. The majority (>80%) of the administrative workers had not completed their prescribed training (Table 3.46). However, the majority of administrative workers 67% ($N = 10$) have attended courses in the last year. Courses that had been attended in the last year were: office management; basic Xhosa, Syspro (procurement system); Access for beginners; stress management; self defence; clinicom (patient statistics programme); Sinjani (routine health information data management system); MS Word and Excel courses. Other areas of expertise which were indicated by 3 of the 15 administrative workers were: public speaking; organising and counselling.

Table 3.46: Courses attended by administrative workers in the Western Cape province

Courses completed	[N; (%)]		
	Yes	No	Total
INP induction course	0(0)	15(100)	15(100)
Logistical information system	1(7)	14(93)	15(100)
Basic Accounting System(BAS)	3(20)	12(80)	15(100)
Sinjani	3(20)	12(80)	15(100)
Nutrition surveillance	0(0)	15(100)	15(100)
Attended Courses in the last year	10(67)	5(33)	15(100)

3.2.8.3 Skills and competencies

Generic competencies, included for all personnel, and specific skills and competencies in relation to the job outputs and in terms of the code of remuneration guidelines for administrative workers, were evaluated through self rating. The ratings were numbered from 1 – 4 (1 = not skilled, 2 = low skilled, 3 = sufficiently skilled and 4 = highly skilled). Ten of the generic and specific skills and competencies were evaluated for administrative workers (Table 3.47). Twenty-one percent of the administrative workers rated themselves as low or not skilled, for technical proficiency in administration. Administrative workers rated themselves as sufficiently skilled in understanding the department's mandates (53%, $N = 8$),

customer focus and responsiveness (40%, $N = 6$), but 13% ($N = 2$) indicated that they were not skilled in diversity management, with 60% ($N = 9$) indicating that they had limited skills.

Table 3.47: Skills and competencies of administrative workers in the Western Cape province

[N; (%)]					
Generic and specific skills and competencies	Highly skilled	Suffi - ciently skilled	Low skilled	Not skilled	Total *****
Customer focus and responsiveness	6(40)	6(40)	2(13)	1(7)	15(100)
Diversity management	0(0)	4(27)	9(60)	2(13)	15(100)
Managing interpersonal conflict and resolving conflict	3(20)	8(53)	3(20)	1(7)	15(100)
Self management	4(27)	9(60)	1(7)	1(7)	15(100)
Understanding the department's mandate and strategies	1(7)	8(53)	4(27)	2(13)	15(100)
Technical proficiency in administration	1(7)	5(36)	3(21)	3(21)	14(100)
Creative thinking	4(27)	9(60)	2(13)	0(0)	15(100)
Understanding routine memos and notes	4(27)	10(66)	1(7)	0(0)	15(100)
Performing structured routine tasks	7(47)	7(47)	0(0)	1(7)	15(100)
Basic literacy	6(40)	7(47)	1(7)	1(7)	15(100)

Interventions that would be required to ensure that they have the necessary skills and competencies to implement Health Care 2010 Plan were provided by 3 of the 15 administrative workers. These interventions were: training in other administrative departments, team membership and computer training.

3.2.8.4 Time spent on the Integrated Nutrition Programme

The administrative workers indicated the focus areas that were relevant to them which highlighted the following: no time was allocated to disease-specific nutrition support and

***** no responses out of total sample of 15

counselling; maternal nutrition; youth and adolescent nutrition; infant and young child feeding; micronutrient control and nutrition education, promotion and advocacy. The administrative workers indicated time spent on food service management (27%, $N = 4$), community-based nutrition interventions (7%, $N = 1$), and administration and finances (60%, $N = 1$; 100%, $N = 4$). Twenty-percent of the administrative workers indicated that they spent less than 10% of their time in meetings and the majority indicated that they spend 100% ($N = 8$) of their time on administration. The areas that 25% of the respondents ($N = 4$ of 15) identified as training needs to perform their tasks were: compilation of minutes (53%, $N = 8$) and maintaining the nutrition database (25%, $N = 4$).

3.2.8.5 Salaries, job ranks, appointment status and resources

The salary levels indicated by the 15 administrative workers were: six (40 %) on salary level 4, 11% ($N = 2$) on level 5, 13% ($N = 2$) on level 6 and 13% ($N = 2$) on level 7. The validity of job ranks of respondents was confirmed on the Persal database for administrative workers, but the title varied amongst the group with the majority classified as admin clerk senior grade III (53%, $N = 8$) (Table 3.48). Thirteen (87%) of the administrative workers were in permanent positions and 2 (13%) on probation. All administrative workers had job descriptions and staff performance management systems in place.

Supervisors indicated by the group varied and included the assistant director INP, deputy director INP, administrative officers and chief food service manager. Technical support (nutrition programming, INP policies), administrative workers indicated, was given by assistant director INP, deputy director INP, administrative officers and chief food service managers. Responses to the availability of resources indicated that the majority of administrative workers had their own offices (40%), telephone (53%) and email (64%) (Table 3.49).

Administrative workers (20%, $N = 3$) indicated key challenges in their work environment and possible solutions to overcome them (Table 3.50).

Table 3.48: Distribution of job ranks /titles of administrative workers in the Western Cape province

Job Titles /Job Ranks	N	%
Principal typist	1	7
Admin clerk senior grade I	8	53
Admin clerk senior grade II	2	13
Admin clerk senior grade III	2	13
Chief admin clerk	1	7
Admin officer	1	7
Total	15	100

Table 3.49: Administrative workers, resources in the Western Cape province

Resources available	[N; (%)]			
	Yes	No	Shared	Totals ^x
Own office	6(40)	4(27)	5(33)	15(100)
Own telephone	8(53)	6(40)	1(7)	15(100)
Own email	9(64)	3(21)	2(15)	14(100)
Own internet access	9(64)	2(15)	3(21)	14(100)
Own storage space	6(46)	2(14)	0(0)	13(100)
Transport for duties	7(70)	3(30)	0(0)	10(100)

Table 3.50: Key challenges and solutions in the work environment identified by administrative workers in the Western Cape province

Key Challenges:
Not enough computers
Absenteeism
No movement to higher notches if top notch was reached
Access to the internet
Poor salary and workload
Clarity on job, promotion of staff
Key solutions proposed:
Improve salaries and career path of administrative workers

No responses can be attributed to lack of relevance in work environment

C FINANCIAL IMPLICATIONS OF THE NUTRITION WORKFORCE

3.3 Cost Analysis of Workforce

A cost analysis was done based on the 5 personnel categories: administrative workers ($N = 15$), managers ($N = 31$), dietitians ($N = 64$), auxiliary workers ($N = 28$) and food service workers ($N = 509$). The costing was based on the Persal database as at 17 June 2008. The annual recurring expenditure (including basic salary and benefits) within the Persal database was used for the calculations. The annual recurring expenditure indicated a total annual cost for personnel of R 53 223 654.07 (Table 3.51).

A number of personnel who responded ($N = 31$) could not be found in the Persal database, and for these personnel the corresponding salary levels in the Persal system were used for the costing. The missing Persal numbers in Persal could be attributed to the system being a “live” system which means that data can be added and removed from the system on a daily basis. The personnel administration is decentralized and changes can be affected at any level. Any report that is drawn at a given time is a snapshot of the personnel situation at that particular point in time. Other reasons are: personnel not being registered on the system on the date that the report was drawn, as well as job titles outside the specifications provided to the Persal administrators, job title changes that occurred due to correction of data and alignment of posts, as well as restructuring and contract appointments not added to the system.

The total expenditure for the different categories indicates that 64% of the expenditure is used for food service workers, followed by dietitians, managers, auxiliary service workers and administrative workers.

Table 3.51: Annual recurring expenditure per nutrition personnel category in the Western Cape province

Personnel Categories	Annual recurring expenditure per category in Rand	Annual recurring expenditure percentage of the total cost per category (%)
ADMIN	1 478 359.18	2.63%
Managers (MX)	5 687 452.13	10.12%
Dietitians (DT)	10 269 789.06	18.27%
Auxiliary service workers (ASO)	2 931 249.57	5.21%
Food service workers (FSW)	35 856 804.13	63.78%
Total Rand	56,223,654.07	100 %

D MAP OF THE WORKFORCE OF THE WESTERN CAPE

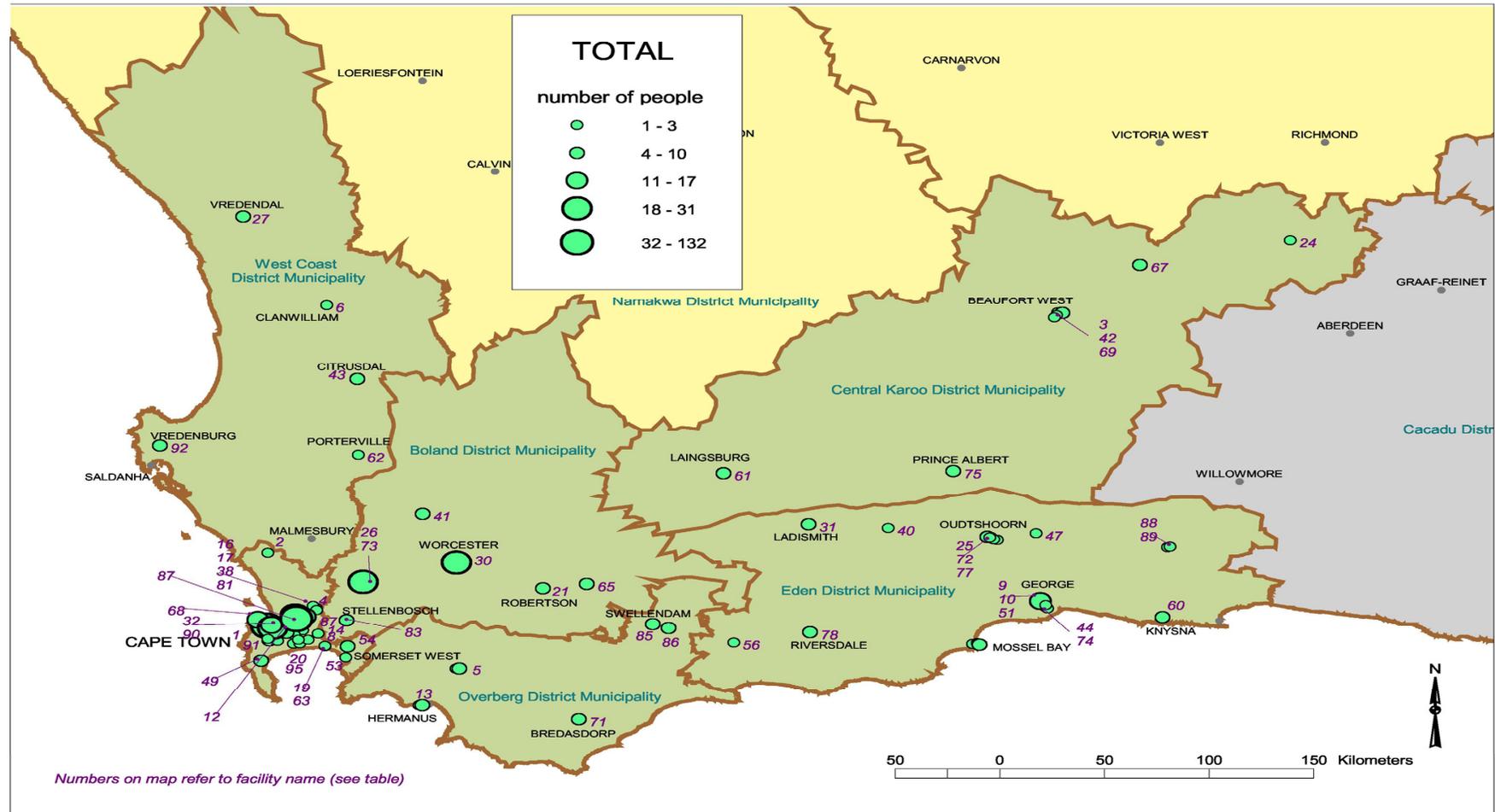
3.4 Development of Maps for the Workforce

An electronic database in Excel of all the nutrition workers, as well as those participating in the study, was developed. This was completed by summarizing the individual coding sheets per health facility, which was then used to code and send out the questionnaires. The maps were developed with the assistance of a senior cartographer who used rcView 3.3 [Geographic Information System (GIS)] software from the Environmental and Spatial Research Institute (ESRI) software. Each facility's GIS coordinates were determined, given a facility number and plotted on a map (Table 3.52). The number of personnel per facility was depicted by means of scaled circles (indicating the total number of a personnel category) according to the facility number (Table 3.52) The range of the scaled circles that was used was 0 - 2, 3 - 9, 10 - 17, 18 - 30 and 31 - 105 personnel.

A provincial map and 5 individual maps according to the 5 personnel categories were developed as follows;

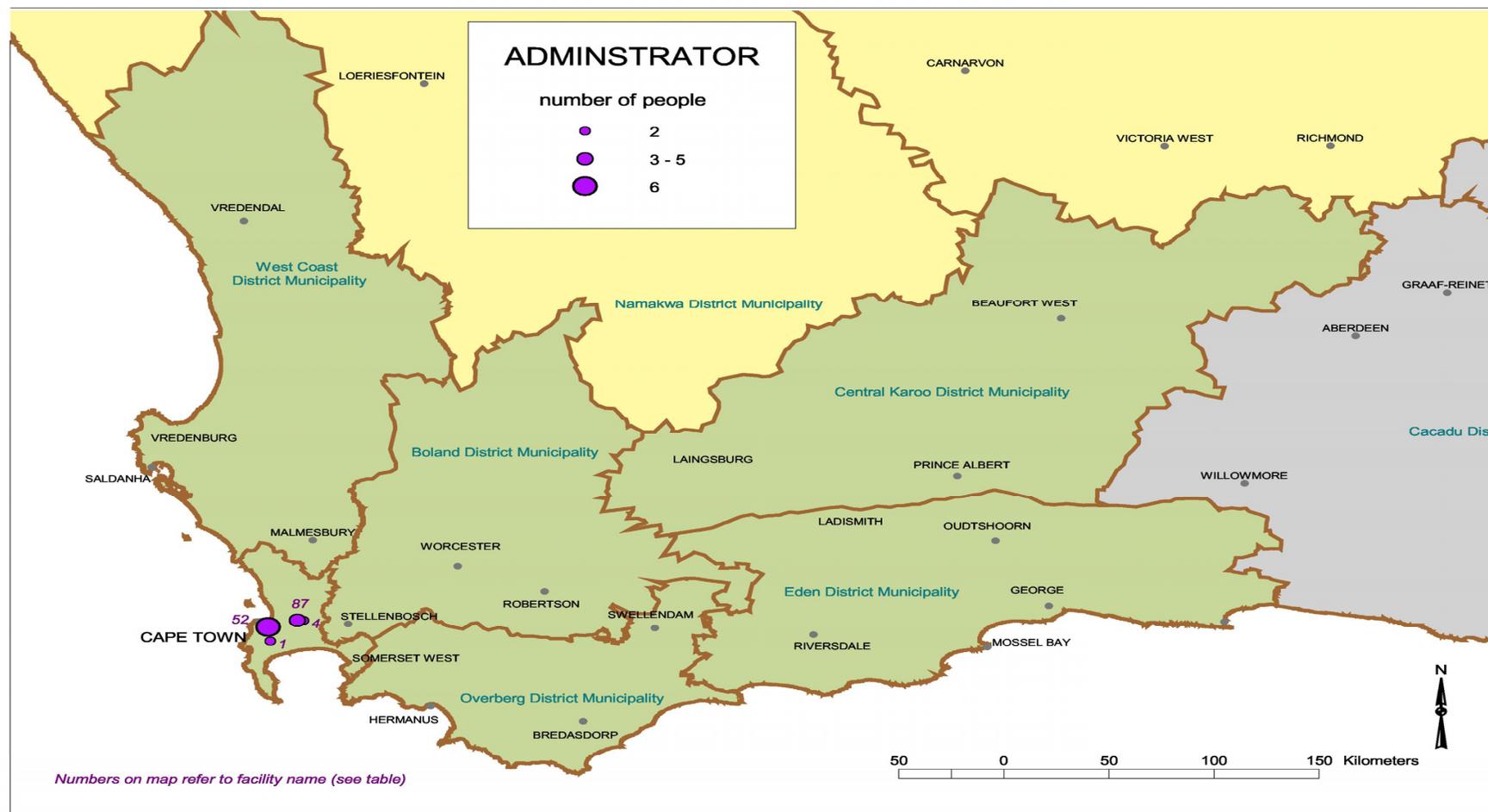
- Map of the Western Cape workforce (Figure 3.45)
- Map of administrative personnel in nutrition in the Western Cape province (Figure 3.46)
- Map of managers in nutrition in the Western Cape province (Figure 3.47)
- Map of dietitians in nutrition in the Western Cape province (Figure 3.48)
- Map of auxiliary service workers in nutrition in the Western Cape province (Figure 3.49)
- Map of food service workers in nutrition in the Western Cape province (Figure 3.50)

Figure 3.45: Map of the Western Cape nutrition workforce \$\$\$\$\$\$\$\$\$\$



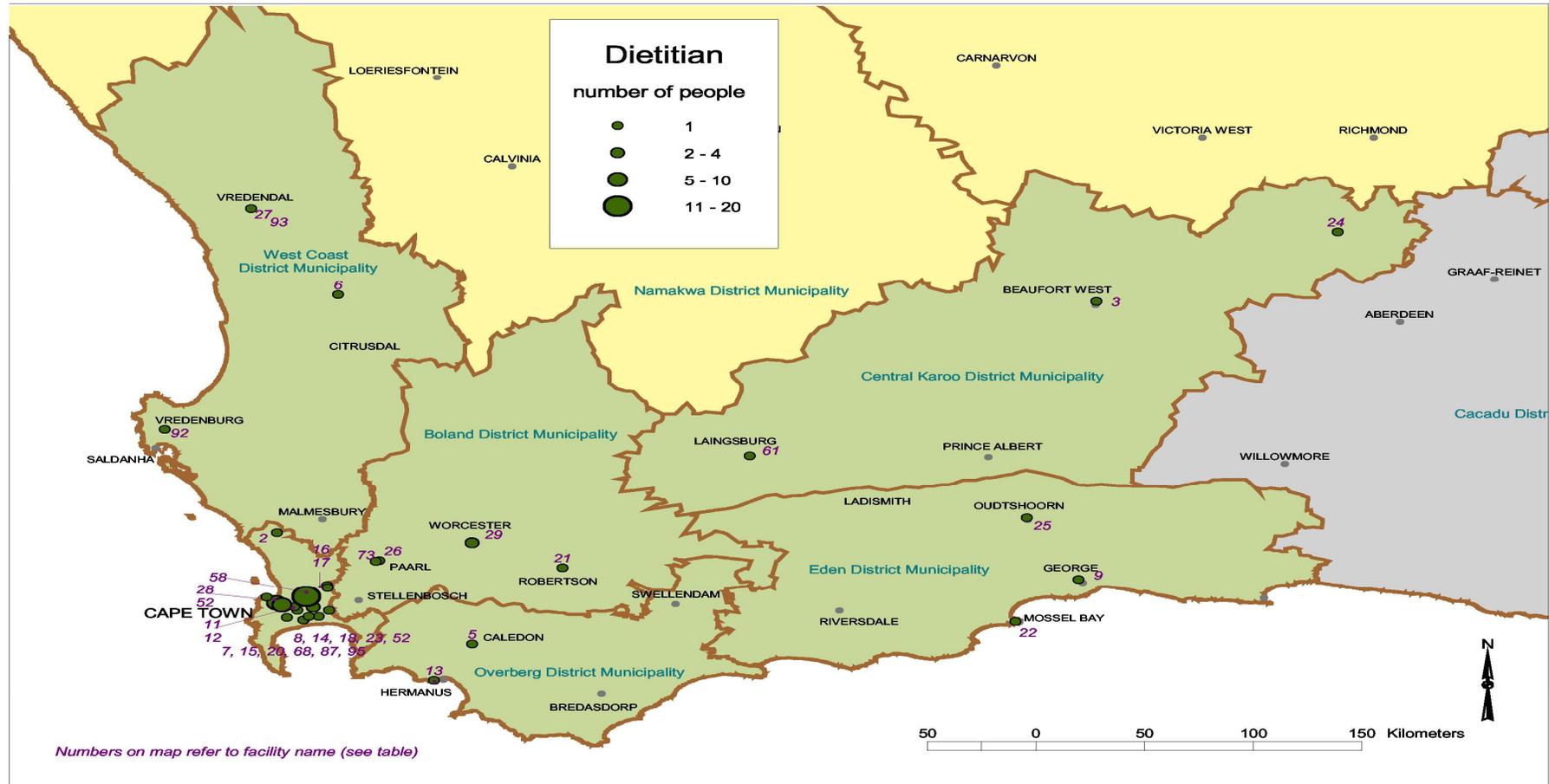
\$\$\$\$\$\$\$\$\$\$\$ Numbers on the table refer to facility names (refer to Table 3.52), circles represent the number of personnel in the facility

Figure 3.46: Map of administrative personnel in nutrition in the Western Cape province *****



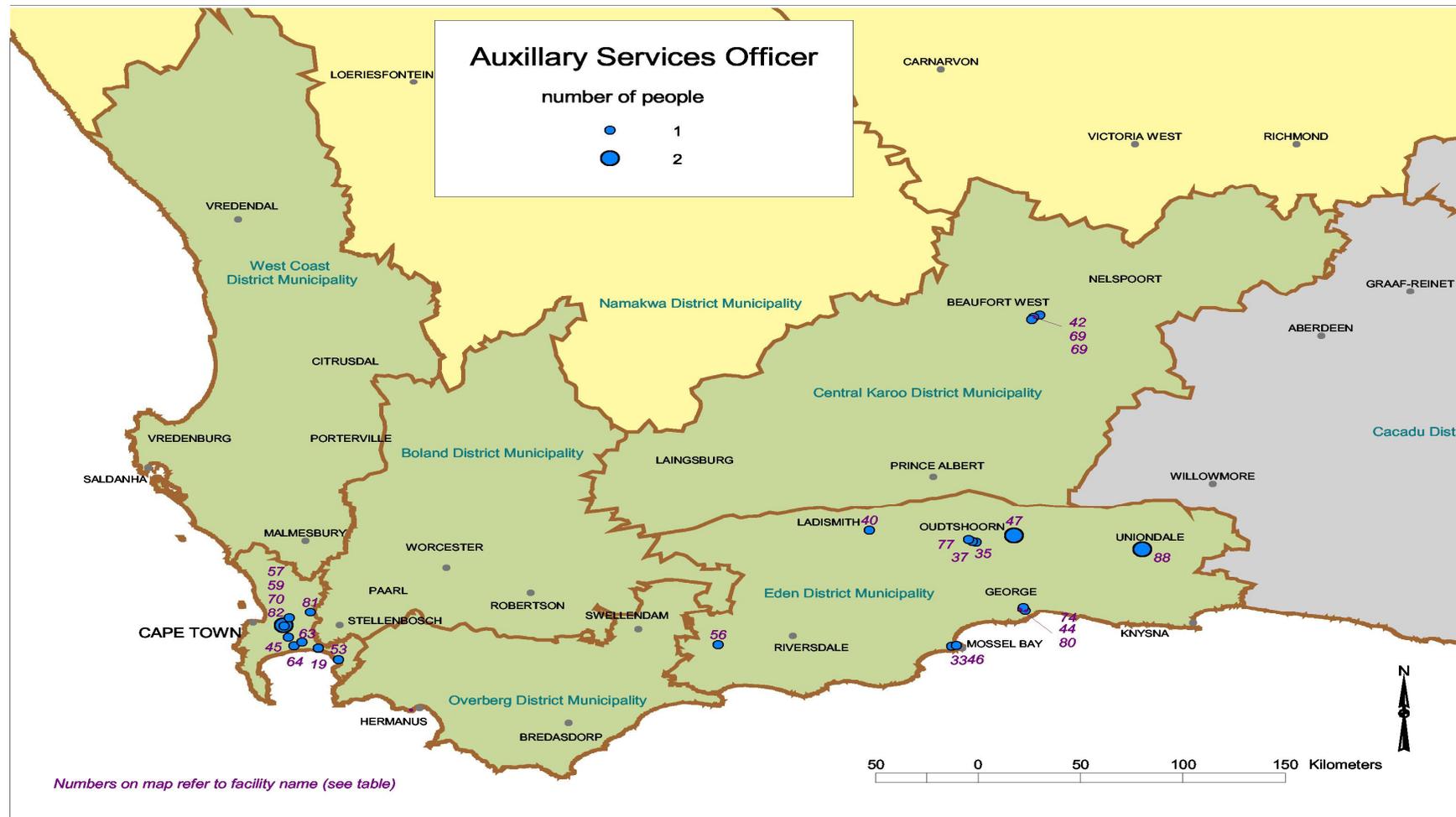
***** Numbers on the table refer to facility names (refer to Table 3.52), circles represent the number of personnel in the facility

Figure 3.48: Map of dietitians in nutrition in the Western Cape province#####



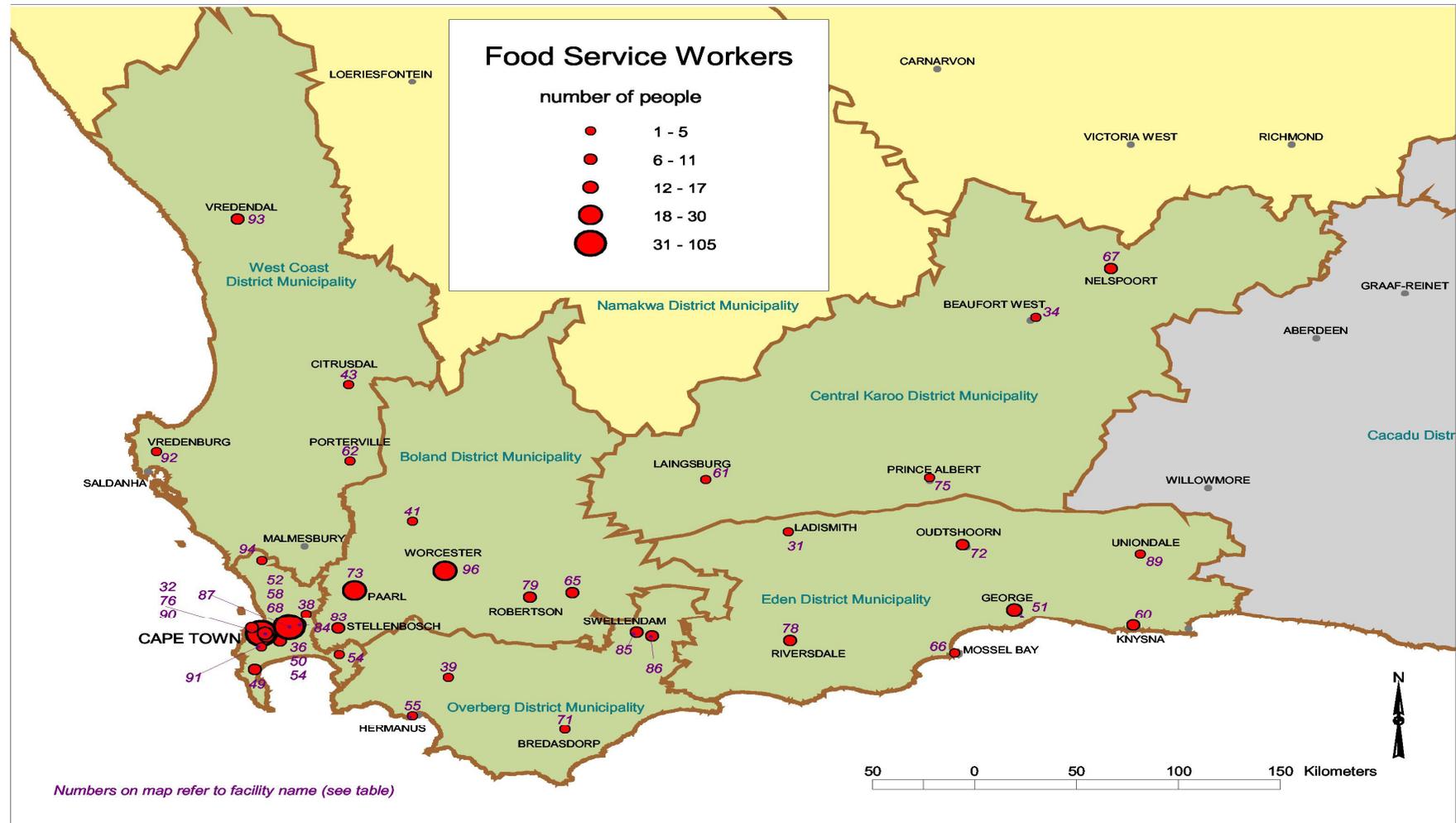
Numbers on the table refer to facility names (refer to Table 3.51), circles represent the number of personnel in the facility

Figure 3.49: Map of auxiliary service workers in nutrition in the Western Cape province



Numbers on the table refer to facility names (refer to Table 3.52), circles represent the number of personnel in the facility

Figure 3.50: Map of food service workers in nutrition in the Western Cape province *****



***** Numbers on the table refer to facility names (refer to Table 3.51); circles represent the number of personnel in the facility

Table 3.52: Facility numbers on maps of the Western Cape province

No	FACILITY	Y-coordinates	X-coordinates
1	PROVINCIAL OFFICE	-34.021389	18.465556
2	WESTERN SUBDISTRICT, WESFLEUR	-33.536667	18.495278
3	BEAUFORT WEST DISTRICT	-32.348333	22.583056
4	REGIONAL OFFICE	-33.915000	18.644167
5	THEEWATERSKLOOF SUBDISTRICT	-34.223889	19.416389
6	CEDERBERG SUBDISTRICT	-32.183611	18.890833
7	TYGERBERG DISTRICT	-33.973889	18.641944
8	EASTERN SUBDISTRICT EERSTE RIVIER	-33.997500	18.718889
9	GEORGE SUBDISTRICT	-33.952778	22.451389
10	REGIONAL OFFICE	-33.951944	22.450278
11	KLIPFONTEIN SUBDISTRICT	-33.988611	18.563611
12	KLIPFONTEIN SUBDISTRICT 2	-33.966667	18.548333
13	OVERSTRAND SUBDISTRICT	-34.422222	19.211389
14	WESTERN SUBDISTRICT	-34.028056	18.665556
15	KHAYELITSHA SUBDISTRICT	-34.028056	18.665556
16	NORTHERN SUBDISTRICT	-33.853333	18.721667
17	SOUTHERN DISTRICT	-33.866111	18.722222
18	SOUTHERN DISTRICT 2	-34.026389	18.507500
19	EASTERN SUB DISTRICT	-34.068056	18.748889
20	MITCHELLS PLAIN SUBDISTRICT	-34.045833	18.589444
21	BREEDE RIVIER SUBDISTRICT	-33.804444	19.891389
22	MOSELBAY SUBDISTRICT	-34.187500	22.129167
23	SOUTHERN DISTRICT 3	-34.046389	18.588889
24	CENTRAL KAROO DISTRICT	-31.962500	23.769167
25	OUDTSHOORN SUBDISTRICT	-33.590278	22.205833
26	DRAKENSTEIN SUBDISTRICT	-33.723056	18.987500
27	MATZIKAMA SUBDISTRICT	-31.669444	18.504722
28	WESTERN SUBDISTRICT	-33.931944	18.449167
29	BREEDE VALLEY SUBDISTRICT	-33.640556	19.454833
30	REGIONAL OFFICE	-33.645556	19.458056
31	ALAN BLYTH HOSPITAL	-33.495833	21.272778
32	ALEXANDRA HOSPITAL	-33.931944	18.483889
33	ALMA CLINIC	-34.180833	22.092222
34	BEAUFORT WEST HOSPITAL	-32.352778	22.607500
35	BONGELETHU CLINIC	-33.606667	22.238333
36	BREWELSKLOOF HOSPITAL	-33.621111	19.456944
37	BRIDGTON CLINIC	-33.602500	22.220833
38	BROOKLYN CHEST HOSPITAL	-33.842222	18.705556
39	CALEDON HOSPITAL	-34.224333	19.433167
40	CALITZDORP	-33.528056	21.681389
41	CERES HOSPITAL	-33.363056	19.300833
42	BEAUFORT WEST COMMUNITY HEALTH CENTRE	-32.364444	22.577500
43	CITRUSDAL HOSPITAL	-32.598889	19.017500
44	CONVILLE CLINIC	-33.981944	22.473889
45	CROSSROADS COMMUNITY HEALTH CENTRE	-33.997778	18.597500
46	D'ALMEIDA PRIMARY HEALTH CARE CLINIC	-34.176667	22.116667

Table 3.52: Facility numbers on maps of the Western Cape province (Cont'd)

47	DYSSELSDORP CLINIC	-33.575000	22.439722
48	ELSIES RIVER COMMUNITY HEALTH CENTRE	-33.931667	18.577500
49	FALSE BAY HOSPITAL	-34.131111	18.414444
50	G F JOOSTE HOSPITAL	-33.984444	18.558333
51	GEORGE HOSPITAL	-33.951944	22.450278
52	GROOTE SCHUUR HOSPITAL	-33.941111	18.461667
53	GUSTROW COMMUNITY HEALTH CENTRE	-34.134722	18.851944
54	HELDERBERG HOSPITAL	-34.074722	18.865833
55	HERMANUS HOSPITAL	-34.422667	19.228056
56	HEIDELBERG SLANGRIVIER CLINIC	-34.137222	20.858333
57	INP METROPOLE REGIONAL OFFICE	-33.892500	18.609722
58	KARL BREMER HOSPITAL	-33.891944	18.609167
59	KASSELSVLEI COMMUNITY HEALTH CENTRE	-33.936667	18.578611
60	KNYSNA HOSPITAL	-34.052222	23.078333
61	LAINGSBURG HOSPITAL	-33.194444	20.850278
62	LAPA MUNNIK HOSPITAL	-33.018056	18.994444
63	MACASSAR COMMUNITY HEALTH CENTRE	-34.066944	18.749444
64	MITCHELLS PLAIN COMMUNITY HEALTH CENTRE	-34.046667	18.622222
65	MONTAGU HOSPITAL	-33.786389	20.117500
66	MOSELBAY HOSPITAL	-34.185833	22.127500
67	NELSPOORT HOSPITAL	-32.088333	23.005833
68	NEW SOMERSET HOSPITAL	-33.904722	18.415833
69	NUWEVELD BFWEST	-32.375833	22.567222
70	NOLUNGILE COMMUNITY HEALTH CENTRE	-34.028056	18.665278
71	OTTO DU PLESSIS HOSPITAL	-34.536333	20.033667
72	OUDTSHOORN HOSPITAL	-33.588889	22.188889
73	PAARL HOSPITAL	-33.726389	18.970278
74	PARKDENE CLINIC	-33.991944	22.486389
75	PRINS ALBERT HOSPITAL	-33.216667	22.025833
76	RED CROSS HOSPITAL	-33.954444	18.487778
77	REGENT STR CLINIC	-33.592778	22.201389
78	RIVERSDAL HOSPITAL	-34.093611	21.254722
79	ROBERTSON HOSPITAL	-33.801667	19.891333
80	ROSEMOOR CLINIC	-33.972222	22.478056
81	SCOTTSDENE CHC	-33.866111	18.722222
82	SITE B CLINIC	-34.028056	18.665278
83	STELLENBOSCH HOSPITAL	-33.930556	18.870278
84	STIKLAND HOSPITAL	-33.901111	18.660000
85	SWARTLAND HOSPITAL	-34.020833	20.445167
86	SWELLENDAM	-34.046000	20.526000
87	TYGERBERG HOSPITAL	-33.911111	18.612222
88	UNIONDALE HAARLEM	-33.662778	23.113056
89	UNIONDALE HOSPITAL	-33.659444	23.125556
90	VALKENBURG	-33.938889	18.482500
91	VICTORIA HOSPITAL	-34.012778	18.458333
92	VREDENBURG	-32.913611	17.990833
93	VREDENDAL HOSPITAL	-31.669444	18.504722
94	WESFLEUR HOSPITAL	-33.536667	18.495278
95	WESTERN CAPE REHAB CENTRE	-34.026111	18.615833
96	WORCESTER HOSPITAL	-33.640556	19.454833

CHAPTER 4: DISCUSSION

4.1 Discussion

The crisis and study of the health workforce has become more important in both developed and developing countries, in that the relationship between human resource issues and health system effectiveness has been acknowledged.⁶⁶ Chronic shortages of well trained staff are acutely felt, but more specifically in countries that need it most. Large gaps have been identified in the literature that limit strategic and intelligence-based workforce development, especially in developing countries.⁶⁷ Dr Lee Joung-wook, Director-General of the World Health Organisation, highlighted this issue in his message in the World Health Report 2006, *Working together for health*, when he said: "People are a vital investment in the strengthening of health systems".⁵⁰ South Africa and its government have set themselves the goal to achieve better health for all.⁴⁰ and have thus indirectly committed to invest in resources, including human resources, for Health.

This study aimed to determine the current staffing levels and categories within the nutrition workforce in the Western Cape province. The Department of Health in the province is in the process of restructuring and implementing the District Health System. In view of the latter, this study has become increasingly relevant and important to provide evidence-based information for this process. The demand for services in the Western Cape continues to exceed the extent that services can be provided from the resources available. This not only includes financial resources, infrastructure, goods and services, but also human resources. The needs for the latter are likely to increase due to the current burden of disease, coupled with the migration of clients from neighboring provinces, especially the Eastern Cape, using facilities and impacting on resources of the province. The Comprehensive Service Plan has been approved to reshape the service and to ensure optimal use of resources. The restructuring of the health services in the province into a solid base of primary health care, integrated with other levels of care, necessitated the reappraisal of the nutrition workforce in the province. The implementation of the District Health System and the restructuring of the regional offices into district offices bring another dimension, as the components responsible for directing and supporting health services in the districts.⁴⁰

The findings of the present study, the first of its kind in the province, adds to current knowledge and will assist with the planning in the provincialisation of services and the provision of personal primary health care services throughout the province by one authority. The findings are also of significance in terms of identifying key areas for interventions in terms of the human resource development process. The key emphasis of human resource planning/strategy is to have the right staff at the right places with the skills and competencies that would be required to provide the desired outcomes.⁴⁰

A national skills audit of the INP and a local study on its implementation have been conducted in the country prior to 2003.⁶⁴ Since 2003 the INP has changed, particularly in that the primary school nutrition programme was transferred to the Department of Education and the crèche and on site feeding programmes have been transferred to the Department of Social Development in the Western Cape. Burden of disease information has become available for the country and the province. This data influences what input is required at the various levels of service for addressing issues of infant mortality, chronic disease and HIV/AIDS. No provincial study has been done on integrating and evaluating the aspects of demography, qualifications, skills, competence, experience, post structure, salary structure, human resource support and supervision at all the levels of health care.

The implementation of the strategic framework in the Western Cape has reached a level of momentum, where its development, through the comprehensive service plan and the human resource plan, is in its final stages. Knowledge of the current situation will benefit the planning and implementation of the framework and will provide guidance for developing models for planning of the nutrition workforce. Persal data is limited in terms of what is available on the system. The following available data on Persal, which can be accessed quickly, include region, placement in terms of office, post numbers, component numbers, Persal numbers, names, surnames, appointment status, ethnicity, gender, appointment dates, years in service, pay points, date of birth, job title, ranks, language and annual recurring expenditure. The system has its limitations in that the personnel administration is decentralised and data can be changed. No data on the skills, competency and qualifications are included, thus not giving a full picture of who the staff member is, whether they are correctly placed and have the necessary skills and competencies for the job. The present study has provided an electronic database of these issues and can be updated. The specifications for nutrition have been determined and regular updates can now be extracted for the Persal database, by administrators.⁶⁷ Even though human resource statistics are variable due to staff movement, the database can be used as a baseline for evaluation and monitoring of change. The study will assist in providing evidence-based data in anticipation of a provincial human resource plan that is in the process of being developed and will be aligned with the CSP. The study will be providing evidence-based information for consultations with stakeholders and will provide further input in terms of training and planning for equity.

The significant differences recorded in available resources between urban and rural districts, in general, and the area differences with regard to staff categories as well as skills, will contribute to planning processes at local level. The situation pertaining to specific staff

categories and the needs have been identified, and can be used in planning key areas for training and development. A number of human resource administrative processes have been identified that require attention in terms of streamlining processes, such as the Policy position for staff who are on contract and do not have clear job descriptions; the provision of support to personnel by a number of different supervisors both administratively and technically and infrastructural and resource constraints.

The inclusion of all personnel categories, as they were known, within the INP policy framework was important. The study, having achieved an 86% response rate, provides a good representation of all the personnel. The mean response rate amongst mail surveys published in medical journals is approximately 60%.⁶⁸ Response rates to these types of surveys vary according to the subject studied and the techniques used. The achieved response in this study can be attributed to the investigator using reminder techniques which included, making copies available of questionnaires and sending reminders to managers. Using the reminder techniques is associated with improved response rates of 13%, when compared with surveys that do not use reminder techniques.⁶⁸

Finally, the service maps developed in the study will provide a quick reference on the density and distribution of the human resources and where programme implementation is taking place.

4.1.1 Composition of the nutrition workforce

The study found that the nutrition workforce is composed of: INP managers, administrative personnel working in INP and the large food service units, dietitians responsible for the INP at district and subdistrict level, heads of dietetic units in hospitals, hospital dietitians primarily responsible for clinical nutrition, auxiliary services workers or nutrition advisers placed at clinics and community health centres, food service managers in charge of food service units, food service supervisors and food service aids. However, it should be borne in mind, that not all of the potential categories of staff were part of the study as indicated in the national Human Resource Framework for Nutrition, since there are no nutritionists who are currently employed in the workforce of the Western Cape.¹² The Western Cape's population, according to STATS SA Community Survey 2007, has increased from 4 524 335 to 5 278 585 people and comprises about 10% of the South African population. The uninsured Western Cape population (who would utilize public health services) has been estimated as 4 157 358 in the 2007/2008 financial year. Sanders and Lloyd have reported that in Sub Saharan Africa there is one health worker per 1000 population, of which physicians are 32 per 100 000 population and 135 nurses per 100 000 population.⁵¹ Applying this principle to

the number of dietitians indicating that the dietitians covers 0.01 per 1000 or 1.5 per 100 000 of the uninsured population. Registered nurses implement PHC and basic nutrition related care at facility and community levels. Nurses are in some instances the only health professionals to implement nutrition related protocols e.g. growth monitoring, promotion and support, integrated management of childhood illness, vitamin A supplementation, nutrition supplementation and breastfeeding promotion and support due to unavailability of nutrition workers. Nationally targets have been set to increase the number of dietitians/nutritionists by 2010. The CSP in the Western Cape province is a good first effort to address the staffing needs to implement nutrition programmes and provide nutrition services across the service platform (FBS and CBS). The policy framework of the CBS platform is defined, but it is not clear what the role of the different cadres of nutrition workers other than generalists will be. It can be assumed with a fair degree of certainty that the demand for nutrition services will escalate following the expansion of services at community and level 1 care together with the expected increased burden of disease and the contribution of nutrition support in disease prevention and treatment. The approaches utilised, i.e. needs-based, utilization-based, population-based and workload indicators in determining the nutrition human resource needs in the CSP has however not been effectively tested.^{14,61,69} The largest proportion of the nutrition workforce in this study was food service workers placed in hospitals to deliver food services to clients. The CSP has determined targets for food service workers, but has not taken into account the type of food service system which will determine the service need and work load. The increasing needs specifically in district hospitals have been identified by the workforce as a priority in the challenges faced and solutions needed in their work environment.

The management and administrative workers were found to be a small number and administrative workers within nutrition units were only available in the Metropole. The study found that auxiliary workers were still functioning as nutrition advisers in the Metropole and the Southern Cape Karoo districts. The posts in the other two regions have been changed to accommodate generalists and all nutrition adviser posts were reclassified from specialised auxiliary service workers to generalists, with no structure and career path determined. The role that mid level workers, i.e. assistant nutritionists, play in service delivery has been recognised nationally in draft documents, but the lack of finality and standardisation of their deployment has led to variable approaches in districts causing low staff morale and frustration amongst this group of nutrition workers.⁵⁵

Significant differences in age in the respective personnel categories have been found within the groups, with dietitians being the youngest and food service workers and auxiliary workers

the oldest groups. The dietitians are young in comparison to other categories, a situation that creates the potential for movement and migration.⁷¹ It is known that the quality of health care is affected by the ability to recruit and retain staff.⁴⁰ The age of the groups, however, does not pose a threat of an aging work population. Immediate measures are not required for this study population to train younger staff to fill the places of older staff who are due for retirement.⁷⁰ The proportion of younger workers was larger than that of older workers. This has been shown to be generally the cases in countries, such as Germany and Canada.⁷⁰ Younger workers have fewer family responsibilities and the promise of higher salaries and incentives in a given country may lead to increased migration with attendant staff shortages in that country.^{70, 71} Shortages of staff measured by the number of unfilled posts exists in both developed and developing countries and rural areas are the more adversely affected.⁷¹

The home language and ethnicity of the nutrition workforce was significantly different across the province in terms of geographical distribution, as well as in personnel categories. The differences found in this study have a potential impact on the quality of service and the management of diversity, with 74% ($N = 481$) of the workforce being Afrikaans speaking. The distribution of languages can also have an effect on service delivery, as the clients serviced in the province are diverse. The background of health workers recruited has been linked to performance outcomes in that they must be compatible with the sociocultural and linguistic profiles of the population that they serve.⁵⁰ The workforce has been found to be predominantly female in all categories and in both rural and urban districts. The significance of gender in the different categories does not necessarily have an impact on the work performance itself, but does affect gender equality. The notably high proportion of women employed in the health sector has been found across countries, where the female distribution is as high as 85%.⁷¹ The study found that the marital status was significantly different, which may have consequences in relation to migration of staff.⁷¹

4.1.2 Location, placement, qualifications, experience and skills of the nutrition workforce

The study found that the workforce was significantly larger in the urban Metropole district. The difference between the urban and rural distribution, experience, skills and competence was found to be significant. Rural districts were found to be further “marginalized” since the personnel in urban districts were found to have higher educational qualifications and to be more experienced than staff in urban districts.

The personnel in rural districts had attended fewer courses than those in urban districts and had rated their generic skills and competencies (communication and information

management and applying technology) lower than their urban counterparts. The resources in urban and rural districts were found to be significantly different, with rural districts having fewer resources than their colleagues in urban districts. Differences between urban and rural settings have been found in all countries, rich and poor, indicating that the largest concentration of staff is in urban and wealthier areas. It has been stated in literature that urban areas attract more professional personnel for their proportional social, cultural and professional advantages. Large metropolitan areas offer more opportunities for career and educational advancement and better employment prospects for professionals and their families.⁷¹ It has been reported in literature that, because of these inequalities, public health interventions suffer and are impacted negatively when health workers are scarce.⁵⁰

Assessing the education levels of the health workforce have been found to be a key element for policy makers, as the knowledge and skills acquired affect the quality of service.⁷⁰ The qualifications recorded in the respective categories indicated that service workers and auxiliary service workers were the lowest qualified, which was correlated with the minimum qualifications of the post. The differences in qualifications were in line with what has been found in the national human resource study.¹² This study found a variation in the qualifications of managers, ranging from a Standard 8 certificate to a professional qualification. This finding can be associated with the implementation of Code of Remuneration (CORE) and the replacement of the Personnel Administration System (PAS) so that there is flexibility in the prerequisites for employment in terms of qualifications and experience. The workers with the lowest qualifications had the longest years of experience, had served in their present positions for the longest period of time and had attended the least number of courses in the last year.

Training is an important aspect for any workforce. It was found in the study that there were significant differences in the categories of staff who had attended training. In all categories a large percentage of workers had not attended training in the last year, especially in the rural districts. The lower levels of staff, which were also found to be the longest in the service, had been affected more specifically. Among the challenges in their workplace, this group of personnel have indicated the need for structured training which can provide career paths for them. This lack of training - imparting and transferring knowledge and providing updates - affects the service delivery and staff morale. The application of technology was found to have a low rating in terms of skill and competence by the nutrition workforce. It has been stated in literature, that the skills, competencies and experience of health workers should reflect educational and non-technical qualities (compassion and motivation) for effective service delivery.⁵⁰ The development of these workers' skills can potentially and positively affect their

morale and motivation. The study found a low skill rating for customer focus and responsiveness amongst the nutrition workforce, which is in potential conflict with the core values of the Department of Health i.e. respect for other people and Batho Pele principles.

The study found that in all categories of staff, the key courses identified for nutrition have been poorly attended. These courses should be providing the basis for the practice and implementation of the INP. The findings in terms of training were similar to the national nutrition skills audit and review of programme implementation done in 2003.^{48, 64} The study identified training needs, areas of poor competency, interventions required for the implementation of Health Care 2010 programmes amongst all categories of staff. The areas identified by INP managers of low skill and requiring intervention for Health Care 2010 were; budget and financial management, technical dietetic quality control, management, time management, exposure to tertiary service environment and focus on key priorities. District dietitians indicated low skill in therapeutic nutrition and diversity management, and required further training on business planning and financial management. Interventions identified for Health Care 2010 were Xhosa training, an increase in the number of posts, improvement of resources and distribution of staff. The paucity of skill level in therapeutic nutrition, identified by district dietitians could be attributed to the inexperience and exposure of district dietitians to clinical nutrition due to their placement. In the context of HC 2010, this gap particularly needs to be addressed, as the number of patients who would require therapeutic nutrition interventions will increase with the devolvement of clients to level 1 care. Dietetic unit managers and hospital dietitians were found to have low skill in total parental nutrition. Total parental nutrition is a specialist area, but of importance in level 2 and 3 settings. Dietetic unit managers need clarity in the expectations of services at the different levels of care and require training on project management and the implementation of micronutrient control. Dietetic unit heads require regular updates in nutrition, funding for research, mentoring of community service dietitians and training in business planning. Food service managers indicated that they have low skills in budget and financial management and diversity management. They also indicated that interventions for Health Care 2010 are addressing training and resource needs and filling of posts for the services. Diversity management was found to be the area of low skill amongst food service workers and they require training and interventions on the utilization of new equipment, change in management, computer literacy, and filling of posts. The auxiliary service workers were found to have low skills in advisory services to institutions, and require accredited training in nutrition and regular updates in nutrition, especially in areas of integration. Other training areas that were identified were financial management, nutrition surveillance, project management, staff management, support to other departments, guidance to groups on food service management and media

liaison. The study found areas of low skill amongst administrative workers in technical proficiency in administration and diversity management. Administrative workers were found to be needing training in computer programmes, standard administrative processes of the department, compilation of minutes and maintaining the nutrition database. The areas identified and highlighted for the implementation of HC 2010 by the respective nutrition personnel categories need to be recognised and issues of equity and diversity need to be managed in the current changing environment.

4.1.3 Time spent on the Integrated Nutrition Programme

Nutrition services are implemented through the INP. The different categories of personnel focus on specific areas of defined priority in order to have the desired outcome of improving the nutritional status of the population. The evaluation of time, spent on respective focus areas, was not previously done amongst the different categories of nutrition workers in the Western Cape. The study found great variations in time spent on the defined focus areas amongst the different categories of staff. The evaluation of time spent in meetings was 10% throughout the province and counselling clients 40% amongst dietitians. Disease-specific nutrition support and counselling are key interventions implemented by dietitians, and the largest percentage of time was spent on these by them as a group. Nutrition education promotion and advocacy were key focus areas of priority for auxiliary workers and it was found that they spend the majority of their time on nutrition education and promotion amongst the groups. The management of time is of importance and the priority should be that of service delivery. The study indicated that staff at the policy/care implementation level, do not seem to have been limited in the execution of their duties by administrative processes, although the time spent in meetings by the nutrition workforce varied from a minimum of 10% to a maximum of 50%.

There are currently no known norms and standards in terms of time spent on different focus areas, as the INP is implemented on the basis of the triple A cycle of assessment, analysis and action. Scope of practice and job descriptions is available for dietitians to guide processes. The Western Cape Health Department is in the process of reform i.e. implementation of PHC, Health Care 2010 plan, decentralised management and service priorities. The study has found a significant variation of time spent on the respective focus areas amongst staff categories, which implies that there is a need for clear clarification of roles and responsibilities in the presence of the scope of practice, as well as job descriptions and time spent on key priorities in the INP. The relationship between health sector reform and human resource issues have been highlighted in other studies, which in general terms conclude that if there is an understanding of the interactions, a better integration of human

resource strategies into the health reform process can be achieved. This in turn can help to build a better institutional capacity for human resource development.⁷² The evaluation of roles, responsibilities, production and training have been documented mainly for nurses, as they form the bulk of the health workforce in public health facilities, together with doctors and pharmacists. Service documentation and norms and standards with regard to nutrition workers have been documented in Canada and America, modelling the roles in dietetic services, in primary health care, health promotion, disease prevention and behavioral care.^{73,74,75,76,77,78,79,80} Limited documentation of human resource needs, roles and functions of nutrition workers are available in South Africa and can thus be seen as more reactive in nature and lacking coherent strategy.

The performance of the workforce is critical, as it has an immediate impact on health service delivery and ultimately the health of the population. It is documented that a well-performing workforce is one that works in ways that are responsive, fair, and efficient to achieve the best health outcomes possible, given available resources and circumstances. Factors that influence workforce performance include; those which are job related i.e. job descriptions, norms and codes of conduct, skills matched with tasks and supervision, those related to support systems i.e. remuneration, information and communication, infrastructure and supplies and those related to the enabling environment i.e. lifelong learning, team management, responsibility and accountability.⁵⁰ The present study found that in the evaluation of factors that influence workforce performance, service workers received the lowest remuneration and professional groups were on the highest salary level. Discrepancies were observed amongst job ranks and salaries which have the potential for creating conflict, low morale and poor work ethics amongst personnel fulfilling the same functions. It has been documented in literature that workers, who receive less pay, feel aggrieved and resentful in this situation.⁵⁰

The appointment status of personnel in all categories and districts was found to be significantly different with high percentages of contract workers amongst dietitians and food service workers. The lack of permanency in appointment, may affect the workforce and the sustainability of services negatively. Job descriptions and supportive supervision were found to be lacking for all staff which can affect job satisfaction and compliance. It has been indicated in literature that job descriptions that clearly set out objectives, responsibilities, authority and lines of reporting are consistently associated with improved achievement of work goals for all workers. The available resources for nutrition personnel were found to be significantly different amongst personnel categories. It has been documented that no matter how staff are motivated, they are not in a position to do their work properly without having the

required resources. A large proportion of personnel were sharing offices, and access to electronic means of communication was limited. The lack of, or inadequate logistical support was consistent with the findings of a previous study.^{48,50}

The study identified common themes amongst the challenges and possible solutions presented by the workforce that must be addressed. The common challenges amongst all groups of personnel were; unavailability of training courses, poor access to government transport, high turnover and lack of retention of dietetic staff, lack of support by management, limited resources, poor referrals, low morale because of a lack of promotional opportunities, inadequate staff posts for all categories of staff, discrepancy in post levels, limited interaction between district and hospital dietitians, inexperienced dietitians in specialised units, constraints with goods and services on tenders and intervention programmes, no system of replacing old equipment, communication, motivation of staff, staff shift schedules, career path of nutrition advisers and inadequate to salary notches.

Possible solutions identified by the respondents in the study included: standardized accredited training programmes for personnel, allocated resources based on needs, an increase in the number of allocated posts, an improvement in salaries, allocation of needs-based budgets, employment of experienced staff in specialised units, increase in advocacy for nutrition, staff performing the same duties placed on the same salary level and registration of nutrition advisers as assistant nutritionists.

A publication by Lehmann and Makhanya has indicated that in order to cope with the changing and increasing disease burden, staffing and skills mixes have to be regenerated and reconfigured. The inclusion particularly of cadres of community and mid level workers and their respective roles should be addressed. The supervision, support, skills development, training, mentoring and coaching remains crucial. Management capacity has also been shown to obstruct successful implementation of policy. High quality of managers is required to manage the challenges throughout the system.^{81,82}

4.1.4 Expenditure of the nutrition workforce

Personnel costs form the primary cost driver in health. The quality of service is dependent on the personnel within the system and can represent up to 70% of the health expenditure. Therefore the ability to operate within the allocated budget is vital to the appointment of key personnel.⁶⁹ The study identified the costs in terms of the respective personnel categories within nutrition.

4.1.5 Maps of the nutrition workforce

The maps that were developed in the study can be utilised as a quick reference, indicating the density and distribution of respective nutrition workers in the Western Cape. The tool should be used by human resource planners, district and programme managers as a guide to the location of services across districts. The data base developed allows for the inclusion of other critical HRH data. Similar work is currently ongoing by the World Health Organisation (WHO) and in Canada.^{50,79} WHO developed a tool called Service Availability Mapping system (SAM) which captures critical information on health resources and provides updated maps of health services.⁵⁰

2.4 Limitations of the study

The limitations of the study include the exclusion of other categories of personnel that make a contribution to nutrition, with specific reference to nurses, doctors and generalist health promoters. Furthermore, comparative analysis with regard to approaches and models to determine optimum allocation of different categories of staff was outside the objectives set for this thesis, as was the inclusion of nutritionists for whom there were no such posts in the Western Cape province. Comparison of the data with existing service models will improve forward planning and will indicate the gaps between the current status and approved proposals.

The methods used to evaluate the skills and competencies of the nutrition workforce per categories was limited to self reporting and provided primarily subjective data .Although this study identified areas of low skill and competence among nutrition professionals, the data could not be triangulated with other sources of information, methods and tools e.g. suggestive input from supervisors, actual skills assessments, peer review and or direct practice observation. The inclusion of multiple assessment methods was outside the scope of the study and could be considered in follow up studies. The data included in the Provincial maps was limited to placement of staff per nutrition personnel category and it is envisaged that other human resource data can be added i.e. number of filled and unfilled posts and posts allocated in the CSP..

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Planning for human resources is complex and multi-faceted approaches are needed to coordinate and monitor the size, structure and composition. There is no gold standard for assessing sufficiency, although various models and approaches have been proposed and applied, i.e. those based on needs, utilization/demand, health workforce to population ratio, service targets, an adjusted service target approach and workload indicators for staffing needs.^{61,84} Limited testing and application of these models in the nutrition context still have to be evaluated in the context of the South African nutrition workforce.

The findings of the present study indicate the importance of following processes for developing the workforce that receive the same consideration and intensity as all other interventions. Input, in terms of research, information and knowledge from various sources, is required to inform decision makers on developing protocols to prevent reactionary planning, and foster the development of a coherent strategy for nutrition.⁸³ The areas of significance and difference in this study were coherent with much of the literature. The service platform and service needs determine the size and composition of the nutrition workforce. This is critical in assessing the provision of adequate nutrition services and planning of human resources for the implementation of the INP in the expected service design and platform.

The importance of human resource data collected in this study can be used by policy makers to effectively address the issues of access, supply, cost and barriers to care. The maps developed further provide a snap shot view of the distribution of staff pictorially and allow for the inclusion of other critical HR data to identify gaps and prioritise staffing needs. The tool can be used by human resource planners, district and programme managers as it provides a rich picture of the location of services and INP programme implementation across districts. The qualifications of the job should be linked to the expected output, which indicates that minimum qualifications should be determined and standardized for posts. The skills and competencies of staff need to be standardized by ensuring a certain level of knowledge and expertise for the implementation of nutrition programmes. Appropriate training and development programmes need to be available to prepare the nutrition workforce.

Factors identified in this study which can adversely influence the nutrition workforce performance, morale and retention included the lack of standardised human resource systems and process, inequitable salary structures, limited job ranks, lack of career progression, job description availability, poor staff performance management system implementation, appointment status, lack of supportive supervision and mentoring, inadequate infrastructure, inadequate human resource development and training, lack of

change management, communication, and availability of adequate resources. The competency and skills of the workforce remain crucial for delivery of evidence-based high quality nutrition service and programming. It is important that nutrition workers feel confident when delivering services and implementing policies, in view of the importance of nutrition in prevention, management and treatment of disease throughout the human lifecycle.

5.2 Recommendations

On the basis of the findings of the present study, the following recommendations are made:

- The results can be used to develop immediate-, medium- and long-term strategies to address key issues raised by the various categories of nutrition staff.
- The areas that were identified for training and developing competence can be addressed through the development of training curricula and plans to enhance workplace skills.
- The situation analysis information can be used at national and provincial levels for nutrition service planning, programme implementation and development of HRH nutrition service projection models.
- Regular updating of the database established for the nutrition workforce.
- Specific facility profiles of the nutrition workers can be compiled and used for planning and intervention at facility, sub-district and district level.
- The strategic framework (Health Care 2010), restructuring, implementation of the DHS, PHC and CSP has implications for the dietetic profession, nutritionists as well as assistant nutritionists as mid level workers in the future. The roles of the different categories of nutrition workers can be evaluated, specifically that of mid level workers, and the possibility of specialist mid level worker should be further investigated to inform policy and improve service coverage in the Western Cape Department of Health.
- The minimum qualifications of managers should be reviewed and the discrepancies that exist need to be addressed. This is an issue that influences career pathing and should be addressed by the Department of Health Qualifications Committee.
- The resource (financial, human, goods) inputs and the value attached to achieving the desired outcomes of reducing malnutrition can be assessed in the long term.
- The need for standardization in terms of line function and support systems for personnel can be addressed.
- Plans can be developed to retain and recruit staff and at the same time issues in terms of equity, language, distribution, salaries, job title/ranks and qualifications can be addressed.
- Minimum norms and standards should be set to address the variations in orientation and induction, training programmes and qualifications of nutrition workers.

- The career path of lower ranks of personnel levels, in particular, should be addressed and personnel should be encouraged to attend accredited skills development programmes to enable them to progress in the organisation. This strategy can contribute to the improvement of the qualifications of personnel.
- The results of this study can be applied in providing evidence-based information for the development of the Department of Health, Western Cape Human Resource Plan and the integration of nutrition therein.
- The maps developed in this study can be further developed and used as a quick reference, pictorial view of the distribution of personnel and adding critical HR data to the database.

REFERENCES

1. Allen L, Gillespie S, What works? A review of the efficacy and effectiveness of Nutrition Interventions; ACC/SCN Nutrition policy paper 19 ABD nutrition and development Series No 5; September 2001.
2. Nutrition Essentials: A guide for Health Managers, World Health Organisation, Basics, UNICEF, 1999, reprinted 2004; contract No HRN-C-00-99-00007-00.
3. Department of Health. South African National Guidelines on Nutrition for people living with HIV, Aids, TB and other chronic debilitating conditions. Pretoria: Nutrition.2007.
4. Department of Agriculture. The integrated food security strategy for South Africa. Department of Agriculture, South Africa.17 July 2002.
5. WHO. Preventing chronic diseases a vital investment. World Health Organisation, Geneva.2005.
6. Black RE, Hopkins Bloomberg J .The Lancet Series on Maternal and Child Undernutrition, Executive summary. Lancet 2008 Jan 19; 371:1-10 Available from <http://www.the.lancet.com> .Accessed 28 May 2008.
7. Department of health. Human resources for Health, A strategic Framework for the Human Resources for Health Plan, Draft for discussion. Pretoria: Department of Health. 2003.
8. Department of Health. Policy Framework: A Guideline to Human Resource planning. Western Cape Department of Health. November 2004.
9. Department of Health. A National Human resource for planning framework. Department of Health South Africa ;2006
10. Department of Health. Integrated Nutrition programme, Policy and implementation Guidelines, 2nd edition. Pretoria: Department of health. January 2005.
11. Department of Health. Framework for implementation of nutrition interventions for people living with TB, HIV and AIDS, Draft inputs. Western Cape Department of health. 2006.
12. Department of health. Human resource Development framework for nutrition Workers in South Africa .Draft discussion document. Pretoria: Department of Health.2004.
13. Department of Health. Western Cape policy for Food service Management in Hospitals, Western Cape Department of Health. 2005.
14. Department of Health .Comprehensive service plan for the Implementation of health Care 2010, Provincial Government Western Cape .May 2007.
15. Department of Health. Nutrition and Food security Policy for South Africa. Working document draft 1. Pretoria: National Directorate for Nutrition.2007.

16. Black RE, Allen LH, Bhutta ZA, Caulfield LE, De Onis M, Ezzati M, Rivera J. Maternal and Child Undernutrition: global and regional exposures and health consequences. *Lancet* 2008 Jan 19;371: 243 – 257.
17. Victoria CG, Adair L, Fall C, Hallal PC, Sachdev HS. Maternal and Child Undernutrition: consequences for adult health and human capital. 2008 Jan 19; 371:340-353. Available from <http://www.the.lancet.com> .Accessed 28 May 2008.
18. Food Security Analysis Unit for Somalia (FSAU). Nutrition: A guide to data collection, analysis, interpretation and use. 2nd ed. FSAU; 2005.
19. Department of Health. Infant and young Child Feeding Policy. Pretoria: Directorate Nutrition. 2007.
20. Academy of Science of South Africa. HIV/AIDS, TB and nutrition. Pretoria: ASSAF. July 2007.
21. Steyn NP, Bradshaw D, Norman R, Joubert JD, Schneider M, Steyn K. Dietary changes and the health transition in South Africa: implications for health policy. Chronic Diseases and Lifestyle Unit and Burden of Disease Research Unit of the South African Medical Research Council. 2006.
22. Food and Agriculture Organisation of the United Nations. The double burden of malnutrition, Case studies from six developing countries. FAO, Rome. 2006.
23. Sanders D, Reynolds L, Westwood T, Eley B, Kroon M, Zar H, Davies M, Nongena P, Van Heerden T. Decreasing the Burden of Childhood Disease. Volume 7. Final Report, Western Cape Burden of disease reduction project. June 2007.
24. Naledi T, Myers J. Overview of the Western Cape Burden of Disease Reduction Project. Volume 1. Final Report, Jun 2007.
25. Corrigan J, Pienaar D, Matzopoulos R, Bourne D, Bradshaw D, Draper B, Chopra M, Sanders D. Western Cape Burden of Disease Reduction Project: Executive summaries of volumes 2 – 7. Final report, Jun 2007.
26. Bradshaw D, Bourne D, Nannan N. What are the leading causes of death among South African. MRC policy brief No 3. Cape Town: Medical Research Council. 2003
27. Kennedy K, Nantel G, Shetty P. Assessment of the double burden of malnutrition in six case study countries. Food and Nutrition Paper. FAO. 2006. p 1-18.
28. Bradshaw D, Groenewald P, Laubscher R, Nannan N, Nojilana B, Norman R, Pieterse D, Schneider M. Initial estimates from the South African National Burden of disease study, 2000. MRC policy brief No 1. Cape Town: Medical Research Council. 2003.
29. Bradshaw D, Norman S, Schneider M, Pieterse D, Groenewald P. Revised burden of disease estimates for the comparative risk assessment, South Africa 2000. Burden of

- Disease Research Unit of the South African Medical Research Council, 2006. Available from <http://www.mrc.ac.za/bod.bod.htm>. Accessed 9 August 2008.
30. Steyn NP, Mbenyane XB. Workforce development in South Africa with a focus on public health nutrition. *Public Health Nutr.* 2008; 11(8): 792– 800.
 31. Lehman U. Human Resource Development for restructuring the Health Services. Introduction and Framework for Human Resource Development for Health. Course material, Human resource information systems, University of Western Cape. 2007.
 32. Van Der Waldt G, Du Toit DFP. Managing for excellence in the public health sector. Stroh EC, consulting editor. *Management applications*. South Africa: Juta & CO, LTD; 1997, p 297 – 300.
 33. Department of Health. A synopsis of Health Policies and Legislation: 1994 – 2000, July 2000. Available from: <http://www.doh.gov.za/docs/policy/synopsis/html>. Accessed: 10 August 2006.
 34. Republic of South Africa. The Constitution. Act 108 of 1996. Government printer, Pretoria by Formaset printers Cape Town: 1996.
 35. National Health Act, 2004. No 61 of 2003. Government Gazette, Cape Town 23 July 2004. No 26595: 16-18.
 36. Department of Health. White paper for the transformation of the health system in South Africa. 1995. Available from <http://www.doh.gov.za/docs/policy/whitepaper/healthsys9701.html>. Accessed 19 June 2006.
 37. Department of Health. Integrated Nutrition Programme: A Foundation for Life, Issue 3. Pretoria: Department of Health. 2002.
 38. Department of Health. Integrated Nutrition programme. Available from <http://www.capegateway.gov.za/eng/yourgovernment/gsc/305/services/11512/6451>. Accessed 31 March 2006.
 39. Department of Health. Healthcare 2010: Health Western Cape's plan for ensuring equal access to quality of care. Health Western Cape 2003.
 40. Department of Health. Annual Performance Plan 2008/2009. Provincial Government of the Western Cape. 2008.
 41. Department of Health. Comprehensive service plan progress at December 2007. Provincial Government Western Cape. Available from http://intrawp.pgwc.gov.za/health/articles/showquestion.asp?faq=412&fldAuto=5105&archive_param=false. Accessed 19 May 2008.
 42. Department of Health. Healthcare 2010 – an overview. Available from <http://www.capegateway.gov.za/health>. Accessed 19 May 2008.
 43. Department of Health. Nutrition and Food security Policy for South Africa. Working document draft 1. Pretoria: Directorate Nutrition. 2007.

44. Labadarios D, Steyn NP, maunder E, Macintire U, Swart R, Gericke G, Huskinson J, Dannhauser A, Voster HH, Nesamvumi EA. The National Food consumption survey (NFCS): Children aged 1 – 9 years, South Africa 1999. Pretoria: Department of Health. 2000.
45. Reddy SP, Panday S, Swart D. The 1st youth risk behaviour survey 2002. Cape Town: Medical research council. 2003.
46. Department of Health. South Africa Demographic and Health Survey. Pretoria: Department of Health. 2003.
47. South African vitamin A consultative group. Children aged 6 – 71 months in South Africa, 1994: Their Anthropometric, Vitamin A, Iron and immunization coverage status. Stellenbosch: University of Stellenbosch.
48. Kama N. Review of the processes followed on translating the Integrated Nutrition Programme policy into implementation with a special focus on Human Resources [M thesis], South Africa. University of Western Cape, 2003.
49. Kabene SM, Orchard C, Howard JM, Soriano MA, Leduc R. The importance of human resource management in health care: a global context. Human Resources for Health. 2006; 4:20. Available from <http://www.human-resources-health.com/content/4/1/20>. Accessed 11 July 2007.
50. WHO. World Health Report 2006: Working together for Health, World Health Organisation, Geneva, Switzerland 2006.
51. Sanders D, Lloyd B. Human resources: international context. South African Health review. 2005. Available from <http://www.hst.org.za/publications/uploads/files/sahr05chapter6.pdf>. Accessed 8 August 2008.
52. Hall TL, Mejia A. WHO monograph, Health Manpower planning: Principles, Methods, Issues, WHO; 1978. Available from www.hrtoolkit.fumerone.com.
53. WHO. Human Resources for health: Toolkit for planning, training and management. Available from http://hrhtoolkit.fumerone.com/mstr_hrh_data/hrhdata-03.html
54. Matthews V. Information for human resource management. South African Health review. 2005. Available from <http://www.hst.org.za/publications/uploads/files/sahr05chapter14.pdf>. Accessed 8 August 2008.
55. Department of Health. National Policy on mid level workers in South Africa. Draft 2. Department of Health South Africa; 2006.
56. Mbyenane XG. Progress report with the register for Nutritionists .HPCSA, Professional board of dietetics: South Africa. 20 October 2005.
57. Government Notice No 726. Regulations relating to the qualifications for registration of Nutritionists. Government Gazette, 4 July 2008. No 31213:3-6.

58. Pick WM, Nevhulalu K, Cornwall JT, Masuku M. Human Resources for Health, A National Strategy. Department of Health South Africa; 2001.
59. Department of Health .Development and implementation of the code of remuneration (CORE) and the occupational classification system. Circular no H 95/99. Western Cape department of Health and social services.1999.
60. Department of Public service and Administration: Code of Remuneration Guidelines, Volume 1.1999.
61. Dreesch N, Dolea C, Dol Poz MR, Gouvarev A, Adams O, Aregawi M, Bergstrom K. Fogstad H, Sheratt D, Linkins J, Scherpbier R, Youseef-Fox M. An approach of estimating human resource requirements to achieve the Millennium Development Goals. London school of Hygiene and tropical medicine. August 2005.
62. La Cock C, Divisional office skills audit questionnaire, Western Cape Department of Health, June 2007.
63. La Cock C.A. Skills audit of personnel in the division: District health services and programmes, Western Cape province, To determine their capability to implement divisional, departmental and provincial strategies[M thesis].South Africa: University of Stellenbosch ,2007
64. Department of Health. Skills audit Questionnaire. Pretoria: Directorate Nutrition.2002.
65. Department of health. Hospital dietitians working conditions survey. Dietitians, Kwazulu Department of Health, August – September 2007.
66. Fritzen SA. Strategic management of the health workforce in developing countries: what have we learned. Human resources for health 2007, 5:4. Available from <http://www.human-resources health.com/content/4/1/12>. Accessed 11 July 2007.
67. Department of Health. Persal database of personnel categories. Western Cape Department of Health. 17 June 2008.
68. Ash DA, Jedreziwski MK, Christakis NA. Response rates of mail surveys published in medical journals, Journal of clinical epidemiology.1997; 50(10): 1129 -1136, Available from www.sciencedirect.com. Accessed 25 October 2007.
69. Daviaud E, Chopra M. How much is not enough? Human resources requirements for primary health care: a case study from South Africa. WHO bulletin.2008, 86:46-51.
70. Diallo K, Zurn P, Gupta N, Poz MD. Assessing human resources for health: what can be learned from labour force surveys? Human Resources for Health.2003; 1:5. Available from <http://www.human-resources health.com/content/1/1/5>. Accessed 11 July 2007.
71. Dissault G, Franceschini MC. Not enough there, too many here: understanding geographical imbalances in the distribution of the health workforce. Human

- Resources for Health.2006; 4:12. Available from <http://www.human-resources-health.com/content/4/1/12>. Accessed 11 July 2007.
72. Dussault G, Rigoli F. The interface between health sector reform and human resources in health. Human Resources for Health.2003; 1:9. Available from <http://www.human-resources-health.com/content/1/1/9>. Accessed 11 July 2007.
 73. Cantwell B, Clarke C, Bellmann J. Building a vision of dietitians in Primary Health Care.Can J Diet Pract Res. 2006; Suppl:S 47-53.
 74. Brauer P, Dietrich L, Davidson B. Nutrition in primary Health Care: Using a Delphi process to design new interdisciplinary services. Can J Diet Pract Res.2006; Suppl:S 14-29.
 75. Marcason W. What is the ADA's staffing ratio for clinical dietitians? JADA. 2006; 106(11): 1916.
 76. McCaffree J. Clinical staffing: Determining the right size. JADA. 2006; 106(1): 25 - 26
 77. American Dietetic Association. Position of the American Dietetic Association: The roles of registered dietitians and dietetic technicians, registered in health promotion and disease prevention. 2006: 106: 1875-1884.
 78. Emersen M, Kerr P, Del Carmen Soler M,Anderson Girard T,Hoffinger R,Pritchett E,Otto M. American Dietetic standards of professional performance for registered dietitians (generalist, speciality and advanced) behavioral care.2006: 106(4): 608-613.
 79. Fox A, Chenhall C, Traynor M, Scythes C, Bellman J. Public health nutrition practice in Canada: a situational assessment. Public Health Nutr.2008; 11 (8): 773-781.
 80. Haughton B, George A. The Public Health Nutrition workforce and its future challenges: the US experience. Public Health Nutr.2008; 11(8): 782-791.
 81. Lehmann U, Makhanya N. Building the skills base to implement the district health system. South African Health review.2005. Available from [http://www.hst.org.za/publications/uploads/files/sahr05 chapter 10.pdf](http://www.hst.org.za/publications/uploads/files/sahr05%20chapter%2010.pdf). Accessed 8 August 2008.
 82. Palmero C, Mc Call. The role of mentoring in public health nutrition workforce development. Perspectives of advanced - level practitioners. Public Health Nutr.2008; 11(8): 801–806.
 83. Hughes R. Workforce developments: Challenges for practice, professionalization and progress. Public Health Nutr. 2008; 11(8): 765-767.
 84. WHO. Workload indicators of staffing need (WISN), A manual for implementation. World Health Organisation, Division of Human resources Development and Capacity Building, Geneva, Switzerland .1998.

APPENDICES

Appendix 1: Personnel coding sheet

Enquiries: Mrs HD Goeiman (Deputy Director: Integrated Nutrition Programme)
Contact details: Tel : 021 4835663/083 333 1320 , Fax:021 483 2682,
E mail: hgoeiman@pgwc.gov.za

Re: Integrated Nutrition Programme (INP): Human resource strategy development coding sheet

A human research project for nutrition workers has been approved by the Department of Health, Western Cape. A profile will be established for all categories of staff working in the nutrition speciality area.

Attached please find an individual coding sheet that was developed to confirm the staff in the respective categories in your facility and or district.

Managers are required to complete the coding sheet for the facility and or respective district and forward the completed sheet by **14 March 2008 to Ms B Williams via fax at 021 483 2682 or e mail to bawillia@pgwc.gov.za.**

Instructions for the completion of the attached coding sheet :

1. Your facility details, first 7 little squares of the code, in the example below appear as numbers 1234567; already filled in).

Facility code						
1	2	3	4	5	6	7

2. The next eight digits indicate the Persal number, which in the example appears as 589212245 (please fill in).

Persal number							
5	8	9	1	2	2	4	5

3. The next five digits indicate the Job title code which in the example appear as 36238 (see coding sheet and fill in please)

Job Title code				
3	6	2	3	8

4. You will now have 3 SEPARATE sets of squares one with 7 and the second with 8 little squares and the third 5 squares i.e.

Facility code						
1	2	3	4	5	6	7

Persal Number							
5	8	9	1	2	2	4	5

Job Title Code				
3	6	2	3	8

5. In the coding form you will now need to fill in the Persal number, job title code and the last three empty little squares of the code by inserting incrementally the employee number (i.e. **ALL** employees in your establishment starting with 1 to Xn). For example,

the first employee will be 001 and last employee 010 if you have 10 staff in employment i.e.:

Facility Code							Persal number					Job Title code				Staff Questionnaire number						
1	2	3	4	5	6	7	5	8	9	1	2	2	4	5	3	6	2	3	8	0	0	1

6. The coded square of the page will therefore read 1234567 58912245 36238 001. In the adjacent square "name" insert the name of the employee e.g. "Mr J Jones". The coded square of the page will therefore read "1234567 58912245 36238 001 Mr J Jones" Please do the same now for all the employees in your establishment.

Facility Code							Persal number					Job Title code				Staff Questionnaire number			Staff Name				
1	2	3	4	5	6	7	5	8	9	1	2	2	4	5	3	6	2	3	8	0	0	1	John Jones

7. The coding form, when completed, must be sent to Mrs B Williams at Bawillia@pgwc.gov.za or faxed at 021 - 483 2682.
8. Should you have any enquiries, do not hesitate to contact Mrs. H D Goeiman at 021 483 5663, or send an e-mail to hgoeiman@pgwc.gov.za.

THANK YOU FOR YOUR TIME AND SUPPORT

Coding sheet to be completed by INP Managers/Unit heads

Please fax to Ms B Williams at 021 – 483 2682 or contact Mrs H Goeiman at 021 – 483 5663/ 083 333 1320

Completed by: _____

Institution/Facility/District/ name: _____

Facility code							Persal Number							Job Title Code <i>Refer list below and insert appropriate code</i>					Staff questionnaire number			Staff name	
Example																							
1	2	3	4	5	6	7	5	8	9	1	2	2	4	5	3	6	2	3	8	0	0	1	John Jones
1	2	3	4	5	6	7	5	0	9	9	9	8	8	7	3	7	3	6	2	0	0	2	Mattie April

Facility code							Persal Number							Job Title Code <i>Refer list below and insert appropriate code</i>					Staff questionnaire number			Staff name	

JOB CODES: ADMINISTRATIVE WORKERS		JOB CODES: SUPPLEMENTARY AND SUPPORT PERSONNEL		JOB CODES: SERVICE WORKERS	
Code	Job Title on rank /post	Code	Job Title on rank /post	Code	Job Title on rank /post
36238	ADMIN CLERK GRI	37239	AUX.SERVICES OFF I	36866	FOOD SERVICES MANAGER
36244	ADMIN CLERK GR II	37241	AUX.SERV.OFFICER II	36867	FOOD SERV MAN SL7
36250	ADMIN CLERK GR I SNR	37243	AUX.SERV.OFF SNR	36868	FOOD SERV MAN: CHIEF
36258	ADMIN CLERK GR II SNR	37245	AUX.SERV.OFF. PRINC	36869	FOOD SERV MAN: ASD
36266	ADMIN CLERK GR III SR	37247	AUX.SERV.OFF. CONTRL	36894	FOOD SERVICES AID I
36274	ADMIN CLERK CHIEF	37599	AUX SERV OFFICER CHI	36896	FOOD SERVICES AID II
JOB CODES: PROFESSIONALS		38224	HEALTH PROMOTER	36898	FOOD SERVICES SUPERV
Code	Job Title on rank /post	38227	HEALTH PROMOTER: PRI	36900	FOOD SERV SUPERV SNR
35379	DIETICIAN	38228	HEALTH PROMOTER: CHI	36902	FOOD SERV.SUPERV PRI
35381	DIETICIAN SENIOR	29705	SASO	37362	FOOD SERVICES AID
35383	DIETICIAN PRINCIPAL	29721	SASO: PRINCIPAL	OTHER JOB TITLES : PLEASE CONTACT MRS HD GOEIMAN FOR CODE	

Appendix 2 : Questionnaires

Facility Code	Persal number	Job Title code	Staff Questionnaire number

INDIVIDUAL STAFF QUESTIONNAIRE REGIONAL/DISTRICT MANAGEMENT: INP MANAGERS
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INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE

Date completed..... Date of questionnaire receipt

Please note that the questions are based and/ or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands		Boland Overberg		Southern Cape Karoo			
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day			Month			Year		
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998, skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						
14. Ethnic group Mark block with X	White								
	Coloured								
	African								
	Indian								

15. Home language Mark block with X	Afrikaans		
	English		
	Xhosa		
	Other, specify		
16. Marital status Mark block with X	Single		
	Married		
	Widowed		
	Divorced		
	Other		
2.FORMAL QUALIFICATIONS and EXPERIENCE			
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.			
2.1. What are your highest educational qualifications?		NQF Level	Mark choice with an X
CHOOSE ONE ONLY			
General Education and Training (GET)	ABET ^a 3 and Lower (grade 5/6 or standard 3/4)	0	
	Std 7 or grade 9 and lower ABET4	1	
Further Education and training (FET)	Std 8 or Grade 10 or Technical N1	2	
	Std 9 or Grade 11 or Technical N2	3	
	Std 10 or Grade 12 or Technical N3	4	
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5	
	First Degrees, Higher diplomas	6	
	Higher degrees(Honours, Masters) Professional qualifications	7	
	Doctorates/Further research Degrees	8	
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?			
Yes		No	
If yes, provide details			
2.3. Work experience, please tick one			
Number of years in profession	X	Number of years in present position	X
Less than a year		Less than a year	
One to 4 years		One to 4 years	
Five to 9 years		Five to 9 years	
Ten to 14 years		Ten to 14 years	
Fifteen years and more		Fifteen years and more	
Other (specify)		Other (specify)	
2.4. Please indicate by marking with X if you have completed the following courses			
INP ^b induction course		SINJANI ^c	
INP HFBNP ^d policy		Nutrition Surveillance	
BFHI ^e assessor course		Micronutrient malnutrition control	

- ^a ABET Adult basic education and training
^b INP Integrated Nutrition Programme
^c SINJANI Western Cape electronic data entry system at facility level
^d HFBNP Health facility based nutrition programme
^e BFHI Baby Friendly Hospital Initiative

Lactation management		Growth monitoring and promotion		
Infant and young child feeding		Nutrition, HIV and AIDS		
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3.GENERIC COMPETENCIES and SKILLS (MARK ONE ONLY)				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1.Applied strategic thinking				
2.Applying technology				
3.Budget and Financial management				
4.Communication and information management				
5.Continuous improvement				
6.Customer focus and responsiveness				
7.Developing others				
8.Diversity management				
9.Managing interpersonal conflict and resolving problems				
10.Team leadership				
11.Planning and organising				
12.Project management				
13.Problem solving and decision making				
14.Self management				
15. Understanding the departments mandate and strategies				
16.Policy analysis, understanding, application and implementation				
17.Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Plan nutrition programmes for communities				
2. Training of all health workers				
3. Monitor work of nutrition assistants and provide continued training				

4. Nutrition counselling of clients referred from higher levels of care				
5. Advisory service to institutions				
6. Programme implementation in districts				
7. Participation in nutrition surveys				
8. Guidance of junior colleagues				
9. Human resource management in section				
10. Planning of nutrition programmes inputs towards formulation of policy				
11. Implementation of nutrition programmes and financial control				
12. Coordination of training of students (Dietitians, Nutritionists)				
13. Nutrition promotion and education				
14. Referral of clients				
15. Project management				
16. Motivation of staff				
17. Food service management				
18. Therapeutic nutrition				
19. Technical dietetic quality control				
20. Communication				
4.2. Indicate what interventions (e.g. training and other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5.TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%				
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Disease specific Nutrition support and counselling				
2. Maternal nutrition				
3. Infant and Young child feeding				
4. Youth and Adolescent Nutrition				
5. Micronutrient control				
6. Food service management				
7. Nutrition Education Promotion and advocacy				
8. Community Based nutrition programming				
Support systems				
9. Nutrition information systems				
10. Human resource Plan				
11. Financial and administration system				
Total	100%			
5.2. Indicate time spend on the following activities. The total should add to 100%				
Activity	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Meetings				
2. Training and workshops				
3. Counselling clients				
4. Nutrition education				
5. Nutrition advocacy				
6. Research				
7. Monitoring				

8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list if there are any INP service areas, which are not addressed in your work environment at present?		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate: Column 1 - Currently perform task and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Human resource planning of programme		
3. Financial management of programme		
4. Nutrition surveillance – analyze and interpret data and identify risks		
5. Project management		
6. Business and operational planning		
7. Management of staff		
8. Nutrition technical support to other departments and agencies		
9. Liaison/Network with Media and other sectors		
10. Food service management planning for groups/institutions		
11. Compilation of food specifications		
12. Communication – oral and written/electronic medium		
13. Develop nutrition information, education and communication materials and strategies		
14. Infant and young child feeding services		
15. Provide lactation management services		
16. Apply international code of Marketing breast milk substitutes		
17. Implementation of BFHI		
18. Explaining causes of malnutrition		
19. Growth Monitoring and promotion		
20. Implementing Micronutrient Supplementation programmes		
21. Engage in Nutrition related research		
22. Determination of nutritional status of individuals and groups		
23. Review, implement, recommend and evaluate nutrition care plans to clients with specific disease conditions and special needs		
List any other task		
6: GENERAL		
6.1. Do you think the dietitians post structure should be? Mark answer with X		
CSD → JNR → SNR → PRINCIPAL → MANAGER or	Yes	No
CSD/JNR/SNR → PRINCIPAL → CHIEF → MANAGER	Yes	No
OTHER		
6.2. Do you think the salary level for the post structure should be: Mark answer with X		
CSD (level 7); Junior (level 8); Senior (level 9); Principal (level 10); Manager (level 11) or	Yes	No

Facility Code	Persal number	Job Title code	Staff Questionnaire number

**INDIVIDUAL STAFF QUESTIONNAIRE
DISTRICT DIETITIANS**

INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE

Date completed..... Date of questionnaire receipt

Please note that the questions are based and/ or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands		Boland Overberg		Southern Cape Karoo			
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day		Month		Year				
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998,skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						
14. Ethnic group Mark block with X	White								
	Coloured								
	African								
	Indian								

15. Home language Mark block with X	Afrikaans		
	English		
	Xhosa		
	Other, specify		
16. Marital status Mark block with X	Single		
	Married		
	Widowed		
	Divorced		
	Other		
2.FORMAL QUALIFICATIONS and EXPERIENCE			
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.			
2.1. What are your highest educational qualifications?		NQF Level	Mark choice with an X
CHOOSE ONE ONLY			
General Education and Training (GET)	ABET ^h 3 and Lower (grade 5/6 or standard 3/ 4)	0	
	Std 7 or grade 9 and lower ABET ¹ 4	1	
Further Education and training (FET)	Std 8 or Grade 10 or Technical N1	2	
	Std 9 or Grade 11 or Technical N2	3	
	Std 10 or Grade 12 or Technical N3	4	
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5	
	First Degrees, Higher diplomas	6	
	Higher degrees(Honours, Masters) Professional qualifications	7	
	Doctorates/Further research Degrees	8	
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?			
Yes		No	
If yes, provide details			
2.3. Work experience, please tick one			
Number of years in profession	X	Number of years in present position	X
Less than a year		Less than a year	
One to 4 years		One to 4 years	
Five to 9 years		Five to 9 years	
Ten to 14 years		Ten to 14 years	
Fifteen years and more		Fifteen years and more	
Other (specify)		Other (specify)	
2.4.Please indicate by marking with X if you have completed the following courses			
INP ^j induction course		SINJANI ^k	
INP HFBNP ^l policy		Nutrition Surveillance	

^h ABET Adult basic education and training

ⁱ INP Integrated Nutrition Programme

ⁱ SINJANI Western Cape electronic data entry system at facility level

ⁱ HFBNP Health facility based nutrition programme

BFHI ^m assessor course		Micronutrient malnutrition control		
Lactation management		Growth monitoring and promotion		
Infant and young child feeding		Nutrition, HIV and AIDS		
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3.GENERIC COMPETENCIES and SKILLS (MARK ONE ONLY)				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1.Applied strategic thinking				
2.Applying technology				
3.Budget and Financial management				
4.Communication and information management				
5.Continuous improvement				
6.Customer focus and responsiveness				
7.Developing others				
8.Diversity management				
9.Managing interpersonal conflict and resolving problems				
10.Team leadership				
11.Planning and organising				
12.Project management				
13.Problem solving and decision making				
14.Self management				
15. Understanding the departments mandate and strategies				
16.Policy analysis, understanding, application and implementation				
17.Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
Rate your own competencies and skills.				

Specific competencies and skills	Very good	Good	Fair	Poor
1. Plan nutrition programmes for communities				
2. Training of all health workers				
3. Monitor work of nutrition assistants and provide continued training				
4. Nutrition counselling of clients referred from higher levels of care				
5. Advisory service to institutions				
6. Programme implementation in districts				
7. Participation in nutrition surveys				
8. Guidance of junior colleagues				
9. Human resource management in section				
10. Planning of nutrition programmes inputs towards formulation of policy				
11. Implementation of nutrition programmes and financial control				
12. Coordination of training of students (Dietitians, Nutritionists)				
13. Nutrition promotion and education				
14. Referral of clients				
15. Project management				
16. Motivation of staff				
17. Food service management				
18. Therapeutic nutrition				
19. Technical dietetic quality control				
20. Communication				
4.2. Indicate what interventions (e.g. training and other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5.TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%				
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Disease specific Nutrition support and counselling				
2. Maternal nutrition				
3. Infant and Young child feeding				
4. Youth and Adolescent Nutrition				
5. Micronutrient control				
6. Food service management				
7. Nutrition Education Promotion and advocacy				
8. Community Based Nutrition programming				
Support systems				
9. Nutrition information systems				
10. Human resource Plan				
11. Financial and administration system				
Total	100%			
5.2. Indicate time spend on the following activities. The total should add to 100%				

Activity	Percentage Time spent (TOTAL MUST ADD TO 100%)	
1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list if there are any INP service areas, which are not addressed in your work environment at present?		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate: Column 1 - Currently perform task and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Human resource planning of programme		
3. Financial management of programme		
4. Nutrition surveillance – analyze and interpret data and identify risks		
5. Project management		
6. Business and operational planning		
7. Management of staff		
8. Nutrition technical support to other departments and agencies		
9. Liaison/Network with Media and other sectors		
10. Food service management planning for groups/institutions		
11. Compilation of food specifications		
12. Communication – oral and written/electronic medium		
13. Develop nutrition information, education and communication materials and strategies		
14. Infant and young child feeding services		
15. Provide lactation management services		
16. Apply international code of Marketing breast milk substitutes		
17. Implementation of BFHI		
18. Explaining causes of malnutrition		
19. Growth Monitoring and promotion		
20. Implementing Micronutrient Supplementation programmes		
21. Engage in Nutrition related research		
22. Determination of nutritional status of individuals and groups		
23. Review, implement, recommend and evaluate nutrition care plans to clients with specific disease conditions and special needs		
List any other task		
6: GENERAL		

6.1. Do you think the dietitians post structure should be? Mark answer with X					
CSD → JNR → SNR → PRINCIPAL → MANAGER or			Yes	No	
CSD/JNR/SNR → PRINCIPAL → CHIEF → MANAGER			Yes	No	
OTHER					
6.2. Do you think the salary level for the post structure should be: Mark answer with X					
CSD (level 7); Junior (level 8); Senior (level 9); Principal (level 10); Manager (level 11) or			Yes	No	
CSD & Dietitian (Junior / Senior) (level 7); Principal (level 8); Chief (level 9); Manager (level 10)			Yes	No	
OTHER					
6.3. Do you have a job description?			Yes	No	
If no, please explain?					
6.4. Do you have the SPMS ⁿ and IPDP ^o systems in place			Yes	No	
If no please give reasons why these systems are not in place?					
6.5. Please indicate the rank of your direct supervisor /person you report to Administratively i.e.(leave, SPMS, daily reporting)and for Technical support i.e.(Nutrition programming, INP policies)					
Administratively			Technical support		
6.6. Please indicate by marking/ticking answer with an X in the box provided whether the following are available in your work environment?					
Available in work environment	Yes	No	Shared	Shared by how Many	
Own Office	Yes	No	Shared		
Own Telephone	Yes	No	Shared		
Own E – mail access	Yes	No	Shared		
Own Internet access	Yes	No	Shared		
Own Storage space	Yes	No	Shared		
Access to reliable transport for duties i.e. Home visits, If no give reasons	Yes	No	Shared		
6.7. Please highlight any matter and main challenge that impact on service delivery that you have experienced and indicate possible solutions					
Challenge			Possible solutions		
7. ESTABLISHMENT					
7.1 Kindly complete the table below indicating current staff establishment for your SUB DISTRICT include for the following categories: Food service workers and clerks? ADD more ROWS if needed or attach separate sheet with the information					
Individual posts category on establishment	Post number	Salary Level of post	Post Filled	Vacant posts	
				Post vacant	Name of person who was in the post IF known
7.2. In your opinion do you have adequate staff to deliver the required nutrition and dietetic services?			Yes	No	
Please explain your answer?					
7.3. Please provide financial information for your unit /nutrition programme?					

ⁿ SPMS

Staff performance management system

^o IPDP

Individual personal development plan

Total Equitable share budget allocated to nutrition (Rand)	Total regional budget (Rand)	Total personnel budget (Rand))	Don't know

Thank you for completing the INP human resource assessment questionnaire for district and sub district dietitians.

Facility Code	Persal number	Job Title code	Staff Questionnaire number

**INDIVIDUAL STAFF QUESTIONNAIRE
DIETETIC SERVICES IN HOSPITALS: UNIT MANAGER**

INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE

Date completed..... Date of questionnaire receipt

Please note that the questions are based and/ or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands	Boland Overberg	Southern Cape Karoo					
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day		Month		Year				
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998,skills development act no 97 of 1998									

12. What is your Gender?	Male		Female	
13. Do you have a disability?	Yes	No	If Yes, specify	
14. Ethnic group Mark block with X	White			
	Coloured			
	African			
	Indian			
15. Home language Mark block with X	Afrikaans			
	English			
	Xhosa			
	Other, specify			
16. Marital status Mark block with X	Single			
	Married			
	Widowed			
	Divorced			
	Other			
2.FORMAL QUALIFICATIONS and EXPERIENCE				
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.				
2.1. What are your highest educational qualifications?			NQF Level	Mark choice with an X
CHOOSE ONE ONLY				
General Education and Training (GET)	ABET ^P 3 and Lower (grade 5/6 or standard 3/ 4)		0	
	Std 7 or grade 9 and lower ABET ¹ 4		1	
Further Education and training (FET)	Std 8 or Grade 10 or Technical N1		2	
	Std 9 or Grade 11 or Technical N2		3	
	Std 10 or Grade 12 or Technical N3		4	
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6		5	
	First Degrees, Higher diplomas		6	
	Higher degrees (Honours, Masters)		7	
	Professional qualifications			
Doctorates/Further research Degrees		8		
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?				
Yes		No		
If yes, provide details				
2.3. Work experience, please tick one				
Number of years in profession		X	Number of years in present position	
			X	
Less than a year			Less than a year	
One to 4 years			One to 4 years	
Five to 9 years			Five to 9 years	
Ten to 14 years			Ten to 14 years	
Fifteen years and more			Fifteen years and more	
Other (specify)			Other (specify)	

^P ABET Adult basic education and training

2.4. Please indicate by marking with X if you have completed the following courses				
INP ^q induction course		SINJANI ^r		
INP HFBNP ^s policy		Nutrition Surveillance		
BFHI ^t assessor course		Micronutrient malnutrition control		
Lactation management		Growth monitoring and promotion		
Infant and young child feeding		Nutrition, HIV and AIDS		
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3.GENERIC COMPETENCIES and SKILLS (MARK ONE ONLY)				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1. Applied strategic thinking				
2. Applying technology				
3. Budget and Financial management				
4. Communication and information management				
5. Continuous improvement				
6. Customer focus and responsiveness				
7. Developing others				
8. Diversity management				
9. Managing interpersonal conflict and resolving problems				
10. Team leadership				
11. Planning and organising				
12. Project management				
13. Problem solving and decision making				
14. Self management				
15. Understanding the departments mandate and strategies				
16. Policy analysis, understanding, application and implementation				
17. Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				

^q INP

Integrated Nutrition Programme

^r SINJANI

Western Cape electronic data entry system at facility level

^s HFBNP

Health facility based nutrition programme

^t BFHI

Baby Friendly Hospital Initiative

4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Interview patient for diet history, food preferences and intolerance, height and mass (nutritional status).				
2. Modification and planning of diets to meet nutritional needs of patient after nutritional assessment.				
3. Dietary prescription and its implementation				
4. Therapeutic nutrition counselling				
5. Plan menus for therapeutic diets to meet the therapeutic nutritional requirements of the patient.				
6. Train Food Service Workers on therapeutic nutrition.				
7. Preparation of food for therapeutic nutrition and monitor the process.				
8. Knowledge of comprehensive field of clinical nutrition.				
9. Maintain standards of quality of food preparation.				
10. Training of Dietetic / Nutrition students				
11. Analyzing menus for therapeutic and normal diets, and ration scales to ensure adequate nutrient content.				
12. Monitoring of patients, evaluation of treatment and modification if needed				
13. Enteral feeding(tube feeds and supplementation)				
14. Total parental nutrition(TPN)				
15. Counsel clients re diet				
16. Interpret analytic test results				
17. select and evaluate nutrient content of food products / Enteral feeds for purchasing				
18. quality control to prevent nutrient losses and contamination				
19. Control (manage) therapeutic nutrition				
20. Financial management of section				
21. Planning of the budget and control all expenditure by means of cost effective measures				
22. Continuing education for colleagues in therapeutic nutrition				
23. Guidance to junior colleagues.				
24. Human resource management				
25. Training of all health workers, students				
26. Participation in nutrition surveys				
27. Referral of clients				
28. Project management				
4.2. Indicate what interventions (e.g. training and other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5.TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%				
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)			

1. Disease specific Nutrition support and counselling		
2. Maternal nutrition		
3. Infant and Young child feeding		
4. Youth and Adolescent Nutrition		
5. Micronutrient control		
6. Food service management		
7. Nutrition Education Promotion and advocacy		
8. Community Based Nutrition programming		
Support systems		
9. Nutrition information systems		
10. Human resource Plan		
11. Financial and administration system		
Total	100%	
5.2. Indicate time spend on the following activities. The total should add to 100%		
Activity	Percentage time spent (TOTAL MUST ADD TO 100%)	
1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list if there are any INP service areas, which are not addressed in your work environment at present?		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate:		
Column 1 - Currently perform task and Column 2 - Need training to perform the task		
Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Human resource planning of programme		
3. Financial management of programme		
4. Nutrition surveillance – analyze and interpret data and identify risks		
5. Project management		
6. Business and operational planning		
7. Management of staff		
8. Nutrition technical support to other departments and agencies		
9. Liaison/Network with Media and other sectors		

10. Food service management planning for groups/institutions				
11. Compilation of food specifications				
12. Communication – oral and written/electronic medium				
13. Develop nutrition information, education and communication materials and strategies				
14. Infant and young child feeding services				
15. Provide lactation management services				
16. Apply international code of Marketing breast milk substitutes				
17. Implementation of BFHI				
18. Explaining causes of malnutrition				
19. Growth Monitoring and promotion				
20. Implementing Micronutrient Supplementation programmes				
21. Engage in Nutrition related research				
22. Determination of nutritional status of individuals and groups				
23. Review, implement, recommend and evaluate nutrition care plans to clients with specific disease conditions and special needs				
List any other task				
6: GENERAL				
6.1. Do you think the dietitians <u>post structure</u> should be? Mark answer with X				
CSD → JNR → SNR → PRINCIPAL → MANAGER or	Yes	No		
CSD/JNR/SNR → PRINCIPAL → CHIEF → MANAGER	Yes	No		
OTHER				
6.2. Do you think the <u>salary level for the post structure</u> should be: Mark answer with X				
CSD (level 7); Junior (level 8); Senior (level 9); Principal (level 10); Manager (level 11) or	Yes	No		
CSD & Dietitian (Junior / Senior) (level 7); Principal (level 8); Chief (level 9); Manager (level 10)	Yes	No		
OTHER				
6.3. Do you have a job description?	Yes	No		
If no, please explain?				
6.4. Do you have the SPMS ^u and IPDP ^v systems in place	Yes	No		
If no please give reasons why these systems are not in place?				
6.5. Please indicate the rank of your direct supervisor /person you report to Administratively i.e.(leave, SPMS ,daily reporting)and for Technical support i.e.(Nutrition programming, INP policies)				
Administratively	Technical support			
6.6. Please indicate by marking/ticking answer with an X in the box provided whether the following are available in your work environment?				
Available in work environment	Yes	No	Shared	Shared by how Many
Own Office	Yes	No	Shared	
Own Telephone	Yes	No	Shared	
Own E – mail access	Yes	No	Shared	
Own Internet access	Yes	No	Shared	
Own Storage space	Yes	No	Shared	

^u SPMS

Staff performance management system

^v IPDP

Individual personal development plan

Access to reliable transport for duties i.e. Home visits, If no give reasons	Yes	No	Shared	
6.7. Please highlight any matter and main challenge that impact on service delivery that you have experienced and indicate possible solutions				
Challenge		Possible solutions		

7. ESTABLISHMENT					
7.1 Kindly complete the table below indicating current staff establishment for your HOSPITAL include for the following categories: Food service workers and clerks? ADD more ROWS if needed or attach separate sheet with the information					
Individual posts category on establishment	Post number	Salary Level of post	Post Filled	Vacant posts	
				Post vacant	Name of person who was in the post IF known
7.2. In your opinion do you have adequate staff to deliver the required nutrition and dietetic services?			Yes	No	
Please explain your answer?					

7.3. Please provide financial information for your unit /nutrition programme?			
Total Equitable share budget allocated to nutrition (Rand)	Total hospital budget (Rand)	Total personnel budget (Rand)	Don't know

Thank you for completing the INP human resource assessment questionnaire for Dietetic Unit Managers.

Facility Code	Persal number	Job Title code	Staff Questionnaire number

**INDIVIDUAL STAFF QUESTIONNAIRE
DIETETIC SERVICES IN HOSPITALS: HOSPITAL DIETITIAN**

INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE

Date completed..... Date of questionnaire receipt

Please note that the questions are based and/ or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS		West Coast Winelands		Boland Overberg		Southern Cape Karoo		
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day		Month		Year				
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998, skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						
14. Ethnic group Mark block with X	White								
	Coloured								
	African								
	Indian								
15. Home language Mark block with X	Afrikaans								
	English								
	Xhosa								
	Other, specify								
16. Marital status Mark block with X	Single								
	Married								
	Widowed								
	Divorced								
	Other								
2.FORMAL QUALIFICATIONS and EXPERIENCE									
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.									
2.1. What are your highest educational qualifications?							NQF Level	Mark choice with an X	
CHOOSE ONE ONLY									
General Education and Training (GET)		ABET ^w 3 and Lower (grade 5/6 or standard 3/4)				0			

^w ABET Adult basic education and training

	Std 7 or grade 9 and lower ABET ¹ 4	1		
Further Education and training (FET)	Std 8 or Grade 10 or Technical N1	2		
	Std 9 or Grade 11 or Technical N2	3		
	Std 10 or Grade 12 or Technical N3	4		
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5		
	First Degrees, Higher diplomas	6		
	Higher degrees (Honours, Masters) Professional qualifications	7		
	Doctorates/Further research Degrees	8		
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?				
Yes		No		
If yes, provide details				
2.3. Work experience, please tick one				
Number of years in profession	X	Number of years in present position	X	
Less than a year		Less than a year		
One to 4 years		One to 4 years		
Five to 9 years		Five to 9 years		
Ten to 14 years		Ten to 14 years		
Fifteen years and more		Fifteen years and more		
Other (specify)		Other (specify)		
2.4. Please indicate by marking with X if you have completed the following courses				
INP ^y induction course		SINJANI ^z		
INP HFBNP ^{aa} policy		Nutrition Surveillance		
BFHI ^{bb} assessor course		Micronutrient malnutrition control		
Lactation management		Growth monitoring and promotion		
Infant and young child feeding		Nutrition, HIV and AIDS		
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3.GENERIC COMPETENCIES and SKILLS (MARK ONE ONLY)				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled

^y INP

Integrated Nutrition Programme

^z SINJANI

Western Cape electronic data entry system at facility level

^{aa} HFBNP

Health facility based nutrition programme

^{bb} BFHI

Baby friendly hospital initiative

1.Applied strategic thinking				
2.Applying technology				
3.Budget and Financial management				
4.Communication and information management				
5.Continuous improvement				
6.Customer focus and responsiveness				
7.Developing others				
8.Diversity management				
9.Managing interpersonal conflict and resolving problems				
10.Team leadership				
11.Planning and organising				
12.Project management				
13.Problem solving and decision making				
14.Self management				
15. Understanding the departments mandate and strategies				
16.Policy analysis, understanding, application and implementation				
17.Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Interview patient for diet history, food preferences and intolerance, height and mass (nutritional status).				
2. Modification and planning of diets to meet nutritional needs of patient after nutritional assessment.				
3. Dietary prescription and its implementation				
4. Therapeutic nutrition counselling				
5. Plan menus for therapeutic diets to meet the therapeutic nutritional requirements of the patient.				
6. Train Food Service Workers on therapeutic nutrition.				
7. Preparation of food for therapeutic nutrition and monitor the process.				
8. Knowledge of comprehensive field of clinical nutrition.				
9. Maintain standards of quality of food preparation.				
10. Training of Dietetic / Nutrition students				
11. Analysing menus for therapeutic and normal diets, and ration scales to ensure adequate nutrient content.				
12. Monitoring of patients, evaluation of treatment and modification if needed				
13. Enteral feeding (tube feeds and supplementation)				
14. Total parental nutrition (TPN)				

15. Counsel clients re diet				
16. Interpret analytic test results				
17. Select and evaluate nutrient content of food products / Enteral feeds for purchasing				
18. Quality control to prevent nutrient losses and contamination				
19. Control (manage) therapeutic nutrition				
20. Financial management of section				
21. Planning of the budget and control all expenditure by means of cost effective measures				
22. Continuing education for colleagues in therapeutic nutrition				
23. Guidance to junior colleagues.				
24. Human resource management				
25. Training of all health workers, students				
26. Participation in nutrition surveys				
27. Referral of clients				
28. Project management				
4.2. Indicate what interventions (e.g. training and other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5.TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%				
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Disease specific Nutrition support and counselling				
2. Maternal nutrition				
3. Infant and Young child feeding				
4. Youth and Adolescent Nutrition				
5. Micronutrient control				
6. Food service management				
7. Nutrition Education Promotion and advocacy				
8. Community Based nutrition programming				
Support systems				
9. Nutrition information systems				
10. Human resource Plan				
11. Financial and administration system				
Total	100%			
5.2. Indicate time spend on the following activities. The total should add to 100%				
Activity	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Meetings				
2. Training and workshops				
3. Counselling clients				
4. Nutrition education				
5. Nutrition advocacy				
6. Research				

7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list if there are any INP service areas, which are not addressed in your work environment at present?		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate:		
Column 1 - Currently perform task and Column 2 - Need training to perform the task		
Do not tick column if you do not perform task		
Tasks		
	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Human resource planning of programme		
3. Financial management of programme		
4. Nutrition surveillance – analyze and interpret data and identify risks		
5. Project management		
6. Business and operational planning		
7. Management of staff		
8. Nutrition technical support to other departments and agencies		
9. Liaison/Network with Media and other sectors		
10. Food service management planning for groups/institutions		
11. Compilation of food specifications		
12. Communication – oral and written/electronic medium		
13. Develop nutrition information, education and communication materials and strategies		
14. Infant and young child feeding services		
15. Provide lactation management services		
16. Apply international code of Marketing breast milk substitutes		
17. Implementation of BFHI		
18. Explaining causes of malnutrition		
19. Growth Monitoring and promotion		
20. Implementing Micronutrient Supplementation programmes		
21. Engage in Nutrition related research		
22. Determination of nutritional status of individuals and groups		
23. Review, implement, recommend and evaluate nutrition care plans to clients with specific disease conditions and special needs		
List any other task		
6: GENERAL		
6.1. Do you think the dietitians post structure should be? Mark answer with X		
CSD → JNR → SNR → PRINCIPAL → MANAGER or		
CSD/JNR/SNR → PRINCIPAL → CHIEF → MANAGER		Yes No

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands		Boland Overberg		Southern Cape Karoo			
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day			Month			Year		
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998,skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						
14. Ethnic group Mark block with X	White								
	Coloured								
	African								
	Indian								
15. Home language Mark block with X	Afrikaans								
	English								
	Xhosa								
	Other, specify								
16. Marital status Mark block with X	Single								
	Married								
	Widowed								
	Divorced								
	Other								
2.FORMAL QUALIFICATIONS and EXPERIENCE									
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.									
2.1. What are your highest educational qualifications? CHOOSE ONE ONLY							NQF Level	Mark choice with an X	

General Education and Training (GET)	ABET ^{ee} 3 and Lower (grade 5/6 or standard 3/ 4)	0		
	Std 7 or grade 9 and lower ABET ¹ 4	1		
Further Education and training (FET)	Std 8 or Grade 10 or Technical N1	2		
	Std 9 or Grade 11 or Technical N2	3		
	Std 10 or Grade 12 or Technical N3	4		
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5		
	First Degrees, Higher diplomas	6		
	Higher degrees(Honours, Masters) Professional qualifications	7		
	Doctorates/Further research Degrees	8		
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?				
Yes		No		
If yes, provide details				
2.3. Work experience, please tick one				
Number of years in profession	X	Number of years in present position	X	
Less than a year		Less than a year		
One to 4 years		One to 4 years		
Five to 9 years		Five to 9 years		
Ten to 14 years		Ten to 14 years		
Fifteen years and more		Fifteen years and more		
Other (specify)		Other (specify)		
2.4. Please indicate by marking with X if you have completed the following courses				
INP ^{gg} induction course		SINJANI ^{hh}		
LOGIS ⁱⁱ		Nutrition Surveillance		
BAS ^{jj}				
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3. GENERIC COMPETENCIES AND SKILLS				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer. (MARK ONE ONLY)				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled

^{ee} ABET

Adult basic education and training

^{gg} INP

Integrated Nutrition Programme

^{hh} SINJANI

Western Cape electronic data entry system at facility level

ⁱⁱ LOGIS

Departmental procurement system, Logistical information system

^{jj} BAS

Basic accounting system

1.Applied strategic thinking				
2.Applying technology				
3.Budget and Financial management				
4.Communication and information management				
5.Continuous improvement				
6.Customer focus and responsiveness				
7.Developing others				
8.Diversity management				
9.Managing interpersonal conflict and resolving problems				
10.Team leadership				
11.Planning and organising				
12.Project management				
13.Problem solving and decision making				
14.Self management				
15. Understanding the departments mandate and strategies				
16.Policy analysis, understanding, application and implementation				
17.Technical proficiency for the occupational category				
Please add any other competencies which you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Customer service orientation				
2. Decision ,making				
3. Diversity Management				
4. Problem analysis and solving				
5. Team Membership				
6. Technical proficiency in administration				
7. Personality attributes(accepting responsibility, reliability)				
8. Understanding the departments mandates and strategies				
9. Creative thinking				
10. Understanding routine memos and notes				
11. Performing structured routine tasks				
12. Basic Literacy				
4.2. Indicate what interventions (e.g. training or other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions necessary to meet the goals and objectives of Health Care 2010.				

5 .TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE		
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%		
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)	
1. Disease specific Nutrition support and counselling		
2. Maternal nutrition		
3. Infant and Young child feeding		
4. Youth and Adolescent Nutrition		
5. Micronutrient control		
6. Food service management		
7. Nutrition Education Promotion and advocacy		
8. Community Based Nutrition programming		
Support systems		
9. Nutrition information systems		
10. Human resource Plan		
11. Financial and administration system		
Total	100%	
5.2. Indicate time spend on the following activities. The total should add to 100%		
Activity	Percentage time spent (TOTAL MUST ADD TO 100%)	
1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list any INP service areas which are not addressed in your work environment at present		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate: Column 1 - Currently performed INP tasks and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Financial management of programme		
3. Nutrition surveillance – analyze and interpret data and identify risks		
4. Project management		
5. Business and operational planning		
6. Compilation of Minutes		

7. Liaison/Network with Media and other sectors				
8. Communication – oral and written/electronic medium				
9. Develop nutrition information, education and communication materials and strategies				
10. Filling				
11. Maintaining of nutrition database				
12. Arranging logistics for meetings				
13. Capturing of data on Logis				
14. Summarise financial reports				
15. Typing				
List any other task				
6: GENERAL				
6.1. Do you have a job description?	Yes	No		
If no, please explain?				
6.2. Do you have the SPMS ^{kk} and IPDP ^{ll} systems in place	Yes	No		
If no please give reasons why these systems are not in place?				
6.3. Please indicate the rank of your direct supervisor /person you report to Administratively i.e. (for leave, SPMS, daily reporting) and for Technical support i.e. (Nutrition programming, INP policies)				
Administratively	Technical support			
6.4. Please indicate by marking/ticking answer with an X in the box provided whether the following are available in your work environment?				
Available in work environment	Yes	No	Shared	Shared by how Many
Own Office	Yes	No	Shared	
Own Telephone	Yes	No	Shared	
Own E – mail access	Yes	No	Shared	
Own Internet access	Yes	No	Shared	
Own Storage space	Yes	No	Shared	
Access to reliable transport for duties i.e. Home visits, if no give reasons	Yes	No	Shared	
6.5..Please highlight any matter and main challenge that impact on service delivery that you have experienced and indicate possible solutions				
Challenge	Possible solutions			

Thank you for completing individual staff assessment questionnaire

^{kk} SPMS

Staff performance management system

^{ll} IPDP

Individual personal development plan

Facility Code	Persal number	Job Title code	Staff Questionnaire number

FOOD SERVICES IN HOSPITALS
INDIVIDUAL STAFF QUESTIONNAIRE: FOOD SERVICE MANAGER
 INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE

Date Completed ----- **Date of questionnaire receipt** -----

Please note that the questions are based and or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility Code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands			Boland Overberg		Southern Cape Karoo		
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day			Month			Year		
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting			Permanent		Probation	
Required i.e. Employment equity Act no 55 of 1998,skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						
14. Ethnic group Mark block with X	White								
	Coloured								
	African								
	Indian								

15. Home language Mark block with X	Afrikaans		
	English		
	Xhosa		
	Other, specify		
16. Marital status Mark block with X	Single		
	Married		
	Widowed		
	Divorced		
	Other		
2.FORMAL QUALIFICATIONS and EXPERIENCE			
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.			
2.1. What are your highest educational qualifications?		NQF Level	Mark choice with an X
CHOOSE ONE ONLY			
General Education and Training(GET)	ABET ^{mm} 3 and Lower (grade 5/6 or standard 3/4)	0	
	Std 7 or grade 9 and lower ABET ^l 4	1	
Further Education and training(FET)	Std 8 or Grade 10 or Technical N1	2	
	Std 9 or Grade 11 or Technical N2	3	
	Std 10 or Grade 12 or Technical N3	4	
Higher Education and Training(HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5	
	First Degrees, Higher diplomas	6	
	Higher degrees(Honours, Masters) Professional qualifications	7	
	Doctorates/Further research Degrees	8	
2.2. Professional Registration and or other statutory requirements (i.e. health councils and statutory /legal bodies/organisations) needed to perform your relevant functions?			
Yes		No	
If yes, provide details			
2.3. Work experience, please tick one			
Number of years in profession	X	Number of years in present position	X
Less than a year		Less than a year	
One to 4 years		One to 4 years	
Five to 9 years		Five to 9 years	
Ten to 14 years		Ten to 14 years	
Fifteen years and more		Fifteen years and more	
Other(specify)		Other(specify)	
2.4.Please indicate by marking with X if you have completed the following courses			
INP ⁿⁿ induction course		Food service policy	
HACCP ^{oo}		Kitchen cleaner	
Occupational health		Assessor course	
Other (specify)		Other (specify)	

^{mm} ABET Adult basic education and training

ⁿⁿ INP Integrated Nutrition Programme

^{oo} HACCP Hazard analysis critical control point

2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquiring e.g. Voluntary service in church congregation, previous job etc		
3. COMPETENCIES and SKILLS				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1. Applied strategic thinking				
2. Applying technology				
3. Budget and Financial management				
4. Communication and information management				
5. Continuous improvement				
6. Customer focus and responsiveness				
7. Developing others				
8. Diversity management				
9. Managing interpersonal conflict and resolving problems				
10. Team leadership				
11. Planning and organising				
12. Project management				
13. Problem solving and decision making				
14. Self management				
15. Understanding the departments mandate and strategies				
16. Policy analysis, understanding, application and implementation				
17. Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Control, analyze and manage the planning, implementation and evaluation of Food Service Units				
2. Control of Food Service unit and production processes				
3. Plan menus and recipes for normal diets				
4. Supervise and control master orders, storage and issuing of products				

5. Inputs in the planning of Food Service Units				
6. Guidance to junior staff				
7. Food service quality standards				
8. Internal ordering of food stock and other items from the stores				
9. Managing Human resources - Supervision				
10. Training of staff				
11. Financial management				
12. Financial control and implement saving measures to stay within allocated budget.				
13. Knowledge of how to hygienically prepare food, stock, stores, use food.				
14. Preparation processes and use elementary equipment, wash dishes, deliver and serve food				
15. Preparation of therapeutic and normal diets				
16. Portioning, distribution and serving of food				
17. Issuing and control of all utensils, crockery, cutlery and dishes to wards				
18. Supervise and monitor the correct pre-preparation, preparation, portioning (dish-up), garnish, delivering and serving of food according to normal and therapeutic menus				
19. Communication				
20. Discipline				
21. Motivation of staff				
4.2. Indicate what interventions are required (e.g. training and resources) to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5. TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP?				
The total to add to 100%				
Components of the INP	Percentage time spent (TOTAL MUST ADD TO 100%)			
1. Disease specific Nutrition support and counselling				
2. Maternal nutrition				
3. Infant and Young child feeding				
4. Youth and Adolescent Nutrition				
5. Micronutrient control				
6. Food service management				
7. Nutrition Education Promotion and advocacy				
8. Community Based Nutrition programming				
Support systems				
9. Nutrition information systems				
10. Human resource Plan				
11. Financial and administration system				
Total	100%			
5.2. Indicate time spend on the following activities. The total should add to 100%				
Activity	Percentage time spent (TOTAL MUST ADD TO 100%)			

1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list any INP service areas, which are not addressed in your work environment at present?		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate: Column 1 - Currently performed INP tasks and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Project management		
2. Liaison/Network with Media and other sectors		
3. Compilation of food specifications		
4. Communication – oral and written/electronic medium		
5. Develop nutrition information, education and communication materials and strategies		
6. Apply international code of Marketing breast milk substitutes		
7. Implementing nutrition policies and programmes		
8. Human resource planning of programme		
9. Financial management of programme		
10. Nutrition surveillance – analyze and interpret data and identify risks		
11. Engage in Nutrition related research		
12. Conduct menu planning		
13. Conduct food procurement (i.e. food storage and issuing), production and distribution of food		
14. Analyze menu manually or using computer software programme		
15. Control of food procurement (i.e. food storage and issuing), production and distribution of food		
16. Develop recipes for specific needs of clients		
17. Standardise recipes		
18. Establish quality food standards		
19. Establish procedures to monitor food quality standards with reference to nutritional, sensory and microbiological characteristics		
20. Compile specifications for areas, space and equipment needed for optimal work flow and production based on the menu, purchasing and production policies		
21. Compile specifications for perishables and non perishables		
22. Use and interpret ration scales for different individuals		

23. Compile food service budget				
24. Develop and implement hygiene and safety plans				
25. Produce, schedule and plan food production				
26. Apply basic knowledge to food preparation				
27. Conduct plate waste studies				
28. Apply health and safety regulations				
29. Wash dishes, deliver and serve food				
30. Storage of supplies				
31. Specific cleaning tasks and apply hygiene as well as safety measures in the Food Service Unit				
32. Removal of kitchen waste crates and cartons				
33. Follow preparation processes and use elementary equipment,				
34. Pre-preparation, preparation, portioning (dish-up), garnish, delivering and serving of food according to normal and therapeutic menu				
35. Receiving and issuing of stock, including updating of stock-lists				
List any other task				
6: GENERAL				
6.1. Do you have a job description?	Yes	No		
If no, please explain?				
6.2. Do you have the SPMS ^{pp} and IPDP ^{qq} systems in place	Yes	No		
If no, give reasons why these systems are not in place?				
6.3. Please indicate the rank of your direct supervisor / person you report to Administratively (for leave, SPMS, daily reporting) and for technical support (i.e. Nutrition programming, INP policies)?				
Administratively	Technical support			
6.4. Please indicate by marking/ticking answer an X in the box provided whether the following are available in your work environment?				
Available in work environment	Yes	No	Shared	Shared by how many
Own Office	Yes	No	Shared	
Own Telephone	Yes	No	Shared	
Own E – mail access	Yes	No	Shared	
Own Internet access	Yes	No	Shared	
Own Storage space	Yes	No	Shared	
Access to reliable transport, if no give reasons	Yes	No	Shared	
6.5. Please highlight any matter that impact on service delivery that you have experienced and indicate possible solutions				
Challenge		Possible solutions		
7. STAFF ESTABLISHMENT				
7.1 Kindly complete the table below indicating current staff establishment for your Hospital include for the following categories: Food service workers and clerks? ADD more ROWS if needed or attach separate sheet with the information				

^{pp} SPMS

Staff performance management system

^{qq} IPDP

Individual personal development plan

Individual posts category on establishment	Post number	Salary Level of post	Post Filled	Vacant Posts	
				Post vacant	Name of person who was in the post IF known
7.2. In your opinion do you have adequate staff to deliver the required food service in the hospital?				Yes	No
Please explain your answer?					
7.3. Please provide financial information for your food service unit?					
Total Equitable share budget allocated to food service unit(Rand)	Total personnel budget (Rand)	Total hospital budget (Rand)	Don't Know		

Thank you for completing the INP human resource assessment questionnaire for Food service Managers.

Facility Code

Persal number

Job Title code

Staff Questionnaire number

FOOD SERVICES IN HOSPITALS

**INDIVIDUAL STAFF QUESTIONNAIRE: FOOD SERVICE WORKERS
INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE**

Date Completed ----- Date of questionnaire receipt -----

Please note that the questions are based and or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility Code							
2. Persal number							
3. What is your current age in years?							
4. Region	MDHS	West Coast Winelands	Boland Overberg	Southern Cape Karoo			

5. Contact details Telephone/Cell Number											
6. Facility/Directorate											
7. Area of Responsibility											
8. Job Title/ Rank											
9. What was the date that you entered into your present rank?	Day			Month			Year				
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10		
11. What type of appointment do you have?	Contract			Acting			Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998,skills development act no 97 of 1998											
12. What is your Gender?	Male						Female				
13. Do you have a disability?	Yes	No	If Yes, specify								
14. Ethnic group Mark block with X	White										
	Coloured										
	African										
	Indian										
15. Home language Mark block with X	Afrikaans										
	English										
	Xhosa										
	Other, specify										
16. Marital status Mark block with X	Single										
	Married										
	Widowed										
	Divorced										
	Other										
2.FORMAL QUALIFICATIONS and EXPERIENCE											
Mark by cross and or ticking the correct answer with an X. Write the appropriate answer or comment in the questionnaire in the space provided.											
2.1. What are your highest educational qualifications?							NQF Level	Mark choice with an X			
CHOOSE ONE ONLY											
General Education and Training (GET)	ABET ^{rr} 3 and Lower (grade 5/6 or standard 3/4)						0				
	Std 7 or grade 9 and lower ABET ¹ 4						1				
Further Education and Training (FET)	Std 8 or Grade 10 or Technical N1						2				
	Std 9 or Grade 11 or Technical N2						3				
	Std 10 or Grade 12 or Technical N3						4				
Higher Education and Training (HET)	Occupational Certificates, Diplomas include T or S or N4 – N6						5				
	First Degrees, Higher diplomas						6				
	Higher degrees (Honours, Masters) Professional qualifications						7				

^{rr} ABET

Adult basic education and training

	Doctorates/Further research Degrees	8		
2.2. Professional Registration and or other statutory requirements (i.e. health councils and statutory /legal bodies/organisations) needed to perform your relevant functions?				
Yes		No		
If yes, provide details				
2.3. Work experience, please tick one				
Number of years in profession	X	Number of years in present position	X	
Less than a year		Less than a year		
One to 4 years		One to 4 years		
Five to 9 years		Five to 9 years		
Ten to 14 years		Ten to 14 years		
Fifteen years and more		Fifteen years and more		
Other(specify)		Other(specify)		
2.4. Please indicate by marking with X if you have completed the following courses				
INP ^{ss} induction course		Food service policy		
HACCP ^{tt}		Kitchen cleaner		
Occupational health		Assessor course		
ABET ^{uu}				
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3. GENERIC COMPETENCIES and SKILLS				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1. Applied strategic thinking				
2. Applying technology				
3. Budget and Financial management				
4. Communication and information management				
5. Continuous improvement				
6. Customer focus and responsiveness				
7. Developing others				
8. Diversity management				
9. Managing interpersonal conflict and resolving problems				
10. Team leadership				
11. Planning and organising				

^{ss} INP Integrated Nutrition Programme
^{tt} HACCP Hazard analysis critical control point
^{uu} ABET Adult Basic Education and Training

12. Project management				
13. Problem solving and decision making				
14. Self management				
15. Understanding the departments mandate and strategies				
16. Policy analysis, understanding, application and implementation				
17. Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Plan menus and recipes for normal diets				
2. Master orders for ordering of supplies and control the storage as well as issuing thereof				
3. Financial control inputs and implement saving measures to stay within allocated budget.				
4. Quality standards				
5. Training of staff				
6. Guidance to junior staff				
7. Supervision of staff				
8. Knowledge of how to hygienically prepare food, stock, stores, use food.				
9. Preparation processes and use of elementary equipment, wash dishes, deliver and serve food				
10. Hygienic preparation of food, storing of stock, food preparation processes				
11. Preparation of therapeutic and normal diets				
12. Portioning, distribution and serving of food				
13. Supervise the receiving and issuing of stock, including updating of stock-lists				
14. Issuing and control of all utensils, crockery, cutlery and dishes to wards.				
15. Safety and general hygiene of Food Service				
16. Follow cleaning program				
17. Internal ordering of food stock and other items from the stores				
18. Supervise and monitor the correct pre-preparation, preparation, portioning (dish-up), garnish, delivering and serving of food according to normal and therapeutic menus				
4.2. Indicate what interventions are required (e.g. training and resources) to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				

5. TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE		
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total to add to 100%		
Components of the INP	Percentage time spent (TOTAL MUST ADD TO 100%)	
1. Disease specific Nutrition support and counselling		
2. Maternal nutrition		
3. Infant and Young child feeding		
4. Youth and Adolescent Nutrition		
5. Micronutrient control		
6. Food service management		
7. Nutrition Education Promotion and advocacy		
8. Community Based Nutrition programming		
Support systems		
9. Nutrition information systems		
10. Human resource Plan		
11. Financial and administration system		
Total	100%	
5.2. Indicate time spend on the following activities. The total should add to 100%		
Activity	Percentage time spent (TOTAL MUST ADD TO 100%) Office use	
1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list any INP service areas, which are not addressed in your work environment at present?		
5.4 Please tick columns 1 to 2 as indicated below with an X if appropriate Column 1 - Currently performed INP tasks and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Project management		
2. Liaison/Network with Media and other sectors		
3. Compilation of food specifications		
4. Communication – oral and written/electronic medium		

5. Develop nutrition information, education and communication materials and strategies		
6. Apply international code of Marketing breast milk substitutes		
7. Implementing nutrition policies and programmes		
8. Human resource planning of programme		
9. Financial management of programme		
10. Nutrition surveillance – analyze and interpret data and identify risks		
11. Engage in Nutrition related research		
12. Conduct menu planning		
13. Conduct food procurement (i.e. food storage and issuing), production and distribution of food		
14. Analyze menu manually or using computer software programme		
15. Control of food procurement (i.e. food storage and issuing), production and distribution of food		
16. Develop recipes for specific needs of clients		
17. Standardise recipes		
18. Establish quality food standards		
19. Establish procedures to monitor food quality standards with reference to nutritional, sensory and microbiological characteristics		
20. Compile specifications for areas, space and equipment needed for optimal work flow and production based on the menu, purchasing and production policies		
21. Compile specifications for perishables and non perishables		
22. Use and interpret ration scales for different individuals		
23. Compile food service budget		
24. Develop and implement hygiene and safety plans		
25. Produce, schedule and plan food production		
26. Apply basic knowledge to food preparation		
27. Conduct plate waste studies		
28. Apply health and safety regulations		
29. Wash dishes, deliver and serve food		
30. Storage of supplies		
31. Specific cleaning tasks and apply hygiene as well as safety measures in the Food Service Unit		
32. Removal of kitchen waste crates and cartons		
33. Follow preparation processes and use elementary equipment,		
34. Pre-preparation, preparation, portioning (dish-up), garnish, delivering and serving of food according to normal and therapeutic menu		
35. Receiving and issuing of stock, including updating of stock-lists		
List any other task		
6: GENERAL		
6.1. Do you have a job description?	Yes	No
If no, please explain?		
6.2. Do you have the SPMS ^{vv} and IPDP ^{ww} systems in place	Yes	No

^{vv} SPMS

Staff performance management system

If no, give reasons why these systems are not in place?				
6.3. Please indicate the rank of your direct supervisor / person you report to Administratively (i.e. Leave, SPMS, daily reporting) and for technical support (i.e. Nutrition programming, INP policies)?				
Administratively		Technical support		
6.4. Please indicate by marking/ticking answer an X in the box provided whether the following are available in your work environment?				
Available in work environment	Yes	No	Shared	Shared by how many
Own Office	Yes	No	Shared	
Own Telephone	Yes	No	Shared	
Own E – mail access	Yes	No	Shared	
Own Internet access	Yes	No	Shared	
Own Storage space	Yes	No	Shared	
Access to reliable transport, if no give reasons	Yes	No	Shared	
6.5. Please highlight any matter that impact on service delivery that you have experienced and indicate possible solutions				
Challenge			Possible solutions	
Thank you for completing the INP human resource assessment questionnaire for Food service Workers.				

Facility Code	Persal number	Job Title code	Staff Questionnaire number

**INDIVIDUAL STAFF QUESTIONNAIRE
ASSISTANT NUTRITIONISTS/ NUTRITION ADVISERS
INP HUMAN RESOURCE ASSESSMENT QUESTIONNAIRE**

Date completed..... Date of questionnaire receipt.....

Please note that the questions are based and/ or have been adapted from existing Provincial Human resource planning frameworks, skills audit questionnaires, national nutrition skills audit questionnaire, divisional office skills audit questionnaire and code of remuneration guidelines.

All the information will be treated as confidential and will be used for purposes of INP human resource strategy development only.

Please complete all sections and answer all questions. Personal information will be linked to data on Persal system for the purposes of this study only, it is thus important to complete all rows. Reply by marking the correct answer with an X. and or write the appropriate answer and/or comment in the space(s) provided.

1. DEMOGRAPHIC INFORMATION

1. Facility code									
2. Persal number									
3. What is your current age in years?									
4. Region	MDHS	West Coast Winelands		Boland Overberg		Southern Cape Karoo			
5. Contact details Telephone/Cell Number									
6. Facility/Directorate									
7. Area of Responsibility									
8. Job Title/ Rank									
9. What was the date that you entered into your present rank?	Day		Month		Year				
10. What is your current Salary level?	2	3	4	5	6	7	8	9	10
11. What type of appointment do you have?	Contract		Acting		Permanent		Probation		
Required i.e. Employment equity Act no 55 of 1998, skills development act no 97 of 1998									
12. What is your Gender?	Male					Female			
13. Do you have a disability?	Yes	No	If Yes, specify						

14. Ethnic group Mark block with X	White	
	Coloured	
	African	
	Indian	
15. Home language Mark block with X	Afrikaans	
	English	
	Xhosa	
	Other, specify	
16. Marital status Mark block with X	Single	
	Married	
	Widowed	
	Divorced	
	Other	

2.FORMAL QUALIFICATIONS and EXPERIENCE

Mark by cross and or ticking the correct answer with an X.

Write the appropriate answer or comment in the questionnaire in the space provided.

2.1. What are your highest educational qualifications?		NQF Level	Mark choice with an X
CHOOSE ONE ONLY			
General Education and Training(GET)	ABET ^{xx} 3 and Lower (grade 5/6 or standard 3/ 4)	0	
	Std 7 or grade 9 and lower ABET ¹ 4	1	
Further Education and training(FET)	Std 8 or Grade 10 or Technical N1	2	
	Std 9 or Grade 11 or Technical N2	3	
	Std 10 or Grade 12 or Technical N3	4	
Higher Education and Training(HET)	Occupational Certificates, Diplomas include T or S or N4 – N6	5	
	First Degrees, Higher diplomas	6	
	Higher degrees(Honours, Masters)	7	
	Professional qualifications		
	Doctorates/Further research Degrees	8	
2.2. Is Professional Registration and/or other statutory requirements (i.e. health councils and statutory/legal bodies/organisations) needed to perform your relevant functions?			
Yes		No	
If yes, provide details			
2.3. Work experience, please tick one			
Number of years in profession	X	Number of years in present position	X
Less than a year		Less than a year	
One to 4 years		One to 4 years	
Five to 9 years		Five to 9 years	
Ten to 14 years		Ten to 14 years	
Fifteen years and more		Fifteen years and more	
Other (specify)		Other(specify)	

^{xx} ABET

Adult basic education and training

2.4. Please indicate by marking with X if you have completed the following courses				
INP ^{yy} induction course		SINJANI ^{zz}		
INP HFBNP ^{aaa} policy		Nutrition Surveillance		
BFHI ^{bbb} assessor course		Micronutrient malnutrition control		
Lactation management		Growth monitoring and promotion		
Infant and young child feeding		Nutrition, HIV and AIDS		
Nutrition adviser 2 year training				
Other (specify)		Other (specify)		
2.5. Please list other courses that you have attended in the last year by completing the table below?				
Courses		Courses		
2.6. Please indicate if there are other knowledge areas in which you are recognised as possessing specific skills and or expertise? (Can be in the workplace or privately)				
Area of Expertise e.g. Counselling, public speaking, coaching		Means of acquired knowledge e.g. Voluntary service in church congregation, previous job etc		
3. GENERIC COMPETENCIES and SKILLS (MARK ONE ONLY)				
3.1. Kindly rate your own competency level in terms of the following by crossing (X) the appropriate answer.				
Generic Competencies	Highly skilled	Sufficiently Skilled	Low Skilled	Not Skilled
1. Applied strategic thinking				
2. Applying technology				
3. Budget and Financial management				
4. Communication and information management				
5. Continuous improvement				
6. Customer focus and responsiveness				
7. Developing others				
8. Diversity management				
9. Managing interpersonal conflict and resolving problems				
10. Team leadership				
11. Planning and organising				
12. Project management				
13. Problem solving and decision making				
14. Self management				
15. Understanding the departments mandate and strategies				

^{yy} INP

Integrated Nutrition Programme

^{zz} SINJANI

Western Cape electronic data entry system at facility level

^{aaa} HFBNP

Health facility based nutrition programme

^{bbb} BFHI

Baby friendly hospital initiative

16. Policy analysis, understanding, application and implementation				
17. Technical proficiency for the occupational category				
Please add any other competencies that you have identified that have not been listed above				
4. SPECIFIC COMPETENCIES AND SKILLS				
Kindly rate specific competency and skills in terms of ability to perform job functions to meet the goals and objectives of Health Care 2010 (Mark block with x)				
4.1. Rate your own competencies and skills.				
Specific competencies and skills	Very good	Good	Fair	Poor
1. Nutrition assessment in communities				
2. Dissemination of nutrition and health information				
3. Monitoring of nutrition adherence and support				
4. Collection of nutrition data and surveillance				
5. Advisory service to institutions				
6. Nutrition education to groups				
7. Participation in nutrition surveys				
8. Implementation of nutrition projects				
9. Nutrition promotion				
10. Referral of clients				
11. Nutrition screening				
12. Communication				
4.2. Indicate what interventions (e.g. training or other resources) are required to ensure that staff in your occupational group has the necessary competencies and skills to perform the Job functions to meet the goals and objectives of Health Care 2010.				
5. TIME SPENT ON INTEGRATED NUTRITION PROGRAMME/NUTRITION SERVICE				
5.1. Indicate in the table below the total amount of time spent by you on each of the components of the INP? The total should add to 100%				
Components of the INP	Percentage Time spent (TOTAL MUST ADD TO 100%)			
1. Disease specific Nutrition support and counselling				
2. Maternal nutrition				
3. Infant and Young child feeding				
4. Youth and Adolescent Nutrition				
5. Micronutrient control				
6. Food service management				
7. Nutrition Education Promotion and advocacy				
8. Community Based Nutrition programming				
Support systems				
9. Nutrition information systems				

10. Human resource Plan		
11. Financial and administration system		
Total	100%	
5.2. Indicate time spend on the following activities. The total should add to 100%		
Activity	Percentage Time spent (TOTAL MUST ADD TO 100%)	
1. Meetings		
2. Training and workshops		
3. Counselling clients		
4. Nutrition education		
5. Nutrition advocacy		
6. Research		
7. Monitoring		
8. Projects		
9. Administration		
10. Management		
Total	100%	
5.3. Please list any INP service areas which are not addressed in your work environment at present		
5.4. Please tick columns 1 to 2 as indicated below with an X if appropriate: Column 1 - Currently perform task and Column 2 - Need training to perform the task Do not tick column if you do not perform task		
Tasks	Column 1 Perform task	Column 2 Need training to perform task
1. Implementing nutrition policies and programmes		
2. Human resource planning of programme		
3. Financial management of programme		
4. Nutrition surveillance – analyze and interpret data and identify risks		
5. Project management		
6. Business and operational planning		
7. Management of staff		
8. Nutrition technical support to other departments and agencies		
9. Liaison/Network with Media and other sectors		
10. Food service management planning for groups/institutions		
11. Compilation of food specifications		
12. Communication – oral and written/electronic medium		
13. Develop nutrition information, education and communication materials and strategies		
14. Infant and young child feeding services		
15. Provide lactation management services		

16. Apply international code of Marketing breast milk substitutes				
17. Implementation of BFHI				
18. Explaining causes of malnutrition				
19. Growth Monitoring and promotion				
20. Implementing Micronutrient Supplementation programmes				
21. Engage in Nutrition related research				
22. Determination of nutritional status of individuals and groups				
23. Review, implement, recommend and evaluate nutrition care plans to clients with specific disease conditions and special needs				
List any other task				
6: GENERAL				
6.1. Do you have a job description?	Yes	No		
If no, please explain?				
6.2. Do you have the SPMS ^{ccc} and IPDP ^{ddd} systems in place	Yes	No		
If no please give reasons why these systems are not in place?				
6.3. Please indicate the rank of your direct supervisor /person you report to Administratively i.e.(leave, SPMS ,daily reporting)and for Technical support i.e.(Nutrition programming, INP policies)				
Administratively	Technical support			
6.4. Please indicate by marking/ticking answer with an X in the box provided whether the following are available in your work environment?				
Available in work environment	Yes	No	Shared	Shared by how Many
Own Office	Yes	No	Shared	
Own Telephone	Yes	No	Shared	
Own E – mail access	Yes	No	Shared	
Own Internet access	Yes	No	Shared	
Own Storage space	Yes	No	Shared	
Access to reliable transport for duties i.e. Home visits, if no give reasons	Yes	No	Shared	
6.5..Please highlight any matter and main challenge that impact on service delivery that you have experienced and indicate possible solutions				
Challenge	Possible solutions			

Thank you for completing individual staff assessment questionnaire

^{ccc} SPMS
^{ddd} IPDP

Staff performance management system
Individual personal development plan

Appendix 3: Instructions to complete questionnaires

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRES

Re: Integrated Nutrition Programme (INP): Human resource strategy development, Instructions on the process for completing questionnaires

This research project for nutrition workers has been approved by the Department of Health, Western Cape. The aim of the project is to establish a profile for all categories of staff working in the nutrition speciality area.

Individual questionnaires have been developed per post category and you are only required to **complete the questionnaire for your specific post(s)**. **ALL nutrition personnel in your facility must complete the questionnaire relevant to their post category. You must also please indicate the vacant posts currently in your facility.**

Attached please find, individual **pre - coded questionnaires** for the different staff categories for the named individual employees in your facility/district in attached coding sheet. The questionnaires themselves have only codes and **no names** on them. Managers are requested to hand individual questionnaires out to staff according to the coding sheet provided. If you are in doubt, you are welcome to phone Mrs. H D Goeiman at 021 483 5663 for additional clarification. The coding sheet must be treated confidentially at all times and returned together with the completed questionnaires. All questionnaires will be analysed with the code(s) only, and no names will appear in the database.

General instructions for the completion of questionnaire:

1. Participation is voluntary and consent will be accepted as given by the return of completed questionnaires.
2. All sections and questions of the questionnaire must be completed.
The sections are as follows:
 - Demographic information
 - Formal Qualifications
 - Competency and skills
 - Specific Competencies and skills
 - Time spent on Integrated Nutrition Programme service
 - General
 - Staff Establishments (please ensure that you also indicate the vacant posts currently in your facility in the appropriate section of the questionnaire)
3. Please answer all questions.
4. Complete blocks by writing/filling the answer in and/or ticking the appropriate block by marking it with an X.
5. The questionnaires are coded and the information will be managed confidentiality and no personal information will be used for any other purpose than this study.
 No personal information will be reported on, other than staff being grouped in the different staff categories on a facility basis.
6. Unit heads are requested to coordinate the process of providing copies, collecting completed questionnaires, assisting subordinates where needed and to inform Mrs Goeiman of any help that might be required.
7. Questionnaires must be submitted to **Mrs. B Williams** within two weeks after the date of receipt.
8. Inform **Mrs B Williams at Bawillia@pgwc.gov.za** or at telephone 483 2275 to make arrangements for the collection and or posting of completed documents.
9. Should you have any enquiries, do not hesitate to contact ,Mrs. H D Goeiman at 021 483 5663, or send an e-mail to hgoeiman@pgwc.gov.za

THANK YOU FOR YOUR TIME AND SUPPORT

Appendix 4: Questionnaire commentary sheet

Questionnaire number

Dear colleagues

Thank you for completing the self-administered questionnaire on the profile of nutrition staff.

Please provide comments on the following:

1. Was the questions easily understood? Yes No

2. How much time did you spend to complete the questionnaire?

 15 minutes 30 minutes 30 - 45 minutes

3. Provide any overall comments /impressions.

4. Do you have any suggestions to improve the questionnaire/understanding of questions?

Thank you for your inputs

HD Goeman

Appendix 5: Cover page for reviewers

Dear Colleagues

A number of changes in health care delivery have taken place in the province of which the approval of the Comprehensive Service Plan (CSP) in May 2007 is of utmost importance in the development of strategic plans. In order to meet the latter need in nutrition we are implementing this human resource study, which aims to provide a situational analysis regarding the nutrition personnel and services in the province.

You are considered one of the most appropriate persons in your environment to provide us with most valuable inputs in providing comments on the draft questionnaires.

The questionnaires will be completed by the different levels of management (middle to micro management) including all levels of health care services (primary, secondary and tertiary).

Individual questionnaires for the different levels have been developed which include:

1. Nutrition programme managers at regional level
2. District and Sub district personnel (dietitians)
3. Tertiary, secondary, specialised, psychiatric and TB hospital dietetic service heads.
4. Food service managers and or administration heads of food service units in all hospitals / clinics.

It would be appreciated if you can comment on the appropriateness of:

- The contents of the questionnaires
- The data elements in the questionnaires will be sufficient to provide a staff profile
- The data elements in the questionnaires being comparable with the Persal data as well as the data in the Comprehensive Service Plan (CSP).

Any other comments, which will improve the format and content of the questionnaires

It would be very appreciated if you can provide inputs by Friday 12 October 2007. Should you not be able to provide your input by the date indicated, please indicate the earliest you would be able to comment for the purposes of further planning

Finally, I would like to thank you in advance for your valuable time and kind support.

Your inputs will be appreciated.

Yours faithfully

Hilary Goeiman
083 333 1320

hgoeiman@pgwc.gov.za

phgoeiman@vodamail.co.za

Appendix 6: Ethics Approval University of Stellenbosch

20 November 2007

Mrs HD Goeiman
C/o ProfD Labadarios
Division of Human Nutrition
Dept of Interdisciplinary Health Sciences

Dear Mrs Goeiman

RESEARCH PROJECT:

PROJECT NUMBER: "DEVELOPING A HUMAN RESOURCE NUTRITION IN THE
PUBLIC HEALTH WETERN CAPE PROVINCE"
N07/10/219

At a meeting of the Committee for Human Research that was held on 12 November 2007 the above project was approved on condition that further information that was required, be submitted.

This information was supplied and the project was finally approved on 14 November 2007 for a period of one year from this date. This project is therefore now registered and you can proceed with the work. Please quote the above-mentioned project number in all further correspondence.

Please note that a progress report (obtainable on the website of our Division) should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly and subjected to an external audit.

Patients participating in a research project in Tygerberg Hospital will not be treated free of charge as the Provincial Government of the Western Cape does not support research financially.

Due to heavy workload the nursing corps of the Tygerberg Hospital cannot offer comprehensive nursing care in research projects. It may therefore be expected of a research worker to arrange for private nursing care.

Yours faithfully

CJ VAN TONDER
RESEARCH DEVELOPMENT AND SUPPORT (TYGERBERG)
Tel: +2721 938 9207/ E-mail: cjvt@sun.ac.za
CJVT/pm

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Verbind tot Optimal. Ciesondheid . Committed to Optimal Health
Afdellng Navorsingsontwikkeling en -steun . Research Development and
Support Division Posbus/PO Box 19063 . Tygerberg 7505 . Suid-Afrika/50uth
Africa Tel: .+27219389677' Faks/Fax: +27 21931 3352 E-pos/E-mail:
rdinfo@sun.ac.za

Appendix 7: Approval Department of Health Research Committee



Verwysing
Reference
Isalathiso 19/18/RP93/2007

Navrae
Enquiries
Imibuzo Dr T. Naledi

Telefoon
Telephone
Ifowuni 021 483 9901

Departement van Gesondheid
Department of Health
iSebe lezeMpilo

Mrs H Goeiman
DHS and Programmes
PO BOX 2060
Cape Town
8000

Dear Mrs Goeiman

Developing a Human Resource Strategy for Nutrition in the Public Health Sector in the Western Cape Province

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that your research proposal has been approved. Please see below the contact details of the persons who will assist you with access to the required facilities. In the DHS:

1. MDHS – please contact Nicolette Henney at nmhenney@pgwc.gov.za tel (021) 918-1695
2. Eden and Central Karoo District – please contact Terence Marshall on tmarshall@pgwc.gov.za tel (044) 483-270
3. Overberg and Cape Winelands East – please contact Petro Roberts on Proberts@pgwc.gov.za tel (023) 3488142
4. Westcoast and Cape Winelands West – please contact Richard Davids on Ricdavid@pgwc.gov.za tel (021) 487-9308

The following facilities were also given approval by Dr Carter Acting DDG: Tertiary, regional hospitals & EMS.

5. GSH please contact Dr Saadiq Kariem at Skariem@pgwc.gov.za tel (021) 404 6288
6. Tygerberg Hospital please contact Dr Mukosi at Mamukosi@pgwc.gov.za tel(021) 938-5966
7. Red Cross Hospital please contact Dr Dimitri Erasmus at Dierasmu@pgwc.gov.za tel (021) 658-5091
8. Paarl Hospital please contact Dr Breslau Kruger at Bkruger@pgwc.gov.za tel(021) 872-1711
9. Worcester Hospital please contact Dr Helise Schumann at Hschuman@pgwc.gov.za tel (023) 348-1212
10. George hospitals please contact Dr Beverley Pedro at bpedro@pgwc.gov.za tel 044 8024533
11. APH please contact Dr Linda Herring at Lherring@pgwc.gov.za tel (021) 440-3303
12. TB Hospitals please contact Dr K Vallabhjee at kvallabh@pgwc.gov.za tel (021) 918-1506

We look forward to hearing from you when your research has been completed.

Dorpstraat 4
Posbus 2060
KAAPSTAD
8000

4 Dorp Street
PO Box 2060
CAPE TOWN
8000

Yours sincerely



DR JRS CUPIDO
DEPUTY-DIRECTOR GENERAL
DISTRICT HEALTH SERVICES AND PROGRAMMES

DATE: 17/1/2008

CC:	DR K CLOETE	CD: MDHS
	DR R CROUS	D: EDEN AND CENTRAL KAROO
	DR F KRIGE	D: CAPE WINELANDS EAST AND OVERBERG
	MS C BESTER	D: CAPE WINELANDS WEST AND WESTCOAST
	DR K VALLABHJEE	CD: REGIONAL HOSPITALS, EMS
	DR B ENGELBRECHT	DDG: TERTIARY, REGIONAL HOSPITALS AND EMS

Appendix 8: Letter Director: Comprehensive Health Programmes



Departement van Gesondheid
Department of Health
iSebe lezeMpilo

Reference 19/1
Enquiries Mrs H Goeiman

Telephone 021 483 5663

"NUTRITION IS OUR BUSINESS"

Dear Colleagues

Re: Developing a Human Resource Strategy for Nutrition in the Public Health Sector in the Western Cape Province

The crisis in terms of human resources in health care has been acknowledged throughout the world. Furthermore, there have been a number of changes in health care delivery in our province of which the approval of the Comprehensive Service Plan (CSP) in May 2007 has been instrumental.

You are being invited to take part voluntarily in this Master's degree research project with the department of Human Nutrition of the University of Stellenbosch. This study has been approved by the Committee for Human Research at Stellenbosch University as well as the Department of Health of the province and will be conducted according to international ethics guidelines and principles.

Please take some time to read the information presented in this letter, which will explain the details of the project.

The project aims to establish/determine the current staffing profile of the Integrated Nutrition Programme *only*. The results of this research project will provide vital information and, hopefully, contribute to making recommendations for future planning and development of nutrition services within the Department of Health in our province.

In order to establish an accurate representative profile of nutrition personnel in the Western Cape Province, all nutrition personnel are invited to participate voluntarily [including dietitians, food service workers, nutrition advisers, nutrition support staff and nutrition managers working at all three levels of health care (primary, secondary and tertiary services)]. The questionnaires must be completed by the different levels of management (middle to micro management) including staff at all levels of nutrition care (primary, secondary and tertiary services).

Individual questionnaires for the different levels have been developed and include: Nutrition at regional level, District and Sub district personnel (dietitians), tertiary, secondary, specialised, psychiatric and TB hospital dietetic and food service staff. The questionnaires have been pre-

coded and only the investigator and the study leader will know the code(s) for the purposes of data analysis.

Information of the categories of staff, services and hospitals will be grouped in order to ensure that individual respondent information is kept anonymous and protected. The findings will be analysed on a facility- and not on a personal-basis. No individual contact details will be obtained or published. Information used in the publication of the thesis and any reports will remain anonymous. PERSAL data (PERSAL numbers, staff establishments, filled/vacant posts and personnel costs per facility) will be compared with the actual data from the proposed study. No new or personal data will be added to or extracted from the PERSAL system.

Your participation is entirely voluntary and you are free to decline to participate. If you do not wish to participate, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if initially you did agree to take part in the study. If you decide to participate in this research project you will only be responsible to complete a self-administered questionnaire, which will take you approximately 15 – 30 minutes to complete. You will not be paid to take part in the study and there will be no other costs involved for you. Consent will be recognized/ accepted as given, if you complete the questionnaire and return it as requested.

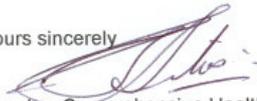
Senior management in the Department of Health will be provided with a full report and recommendations once this study is completed. Participants will have access to the report after approval by senior management. Recommendations made to the Department of Health may have an impact, at Management's discretion, on the number and structure of posts, salary levels, staff development and training.

It will be appreciated if the completed questionnaires can be submitted within two weeks after the date of receipt. Managers should inform Mrs. B Williams via e-mail at Bawillia@pgwc.gov.za and or fax at 021 483 2275 to make arrangements for collection and or posting/forwarding of the completed questionnaires.

Should you have any enquiries do not hesitate to contact Mrs. H D Goeiman at 021 483 5663 or send an e-mail to Hgoeiman@pgwc.gov.za.

Your cooperation is highly appreciated and many thanks for your participation and time spent in completing the attached questionnaire(s).

Yours sincerely



Director: Comprehensive Health programmes
Mr. S A Titus
Date: 9/4/08

PS:

To Managers:

1. Please assist any of your staff who might encounter difficulties in completing the questionnaires.
2. Please check the completed questionnaires for completeness before returning them.

To Personnel:

1. Please ask your immediate supervisor to help you, if you have any difficulties in filling in the questionnaire.
2. Please check the completed questionnaire for completeness before returning it to your supervisor.