

**UNDERSTANDING HOUSEHOLD FOOD INSECURITY AND
COPING STRATEGIES OF STREET TRADERS IN DURBAN**

by

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DECLARATION

I BUNANA GABY BIKOMBO declare that this dissertation on UNDERSTANDING HOUSEHOLD FOOD INSECURITY AND COPING STRATEGIES OF STREET TRADERS IN DURBAN submitted to the University of South Africa for a Master Degree in Human Ecology, is my own work in design and execution, has not been submitted by me or anyone else to this or any other University. I further declare that all the sources that I have used or quoted have been acknowledged by means of complete references.

SIGNED BY B.G. BIKOMBO (Mr.):

DATE: 10/06/2014

DEDICATION

I dedicate this work to my wife Brigitte and my adorable children Eneserine, Gad, Benedict, Victoire and Volonté-Merveille.

You have been and continue to be my inspiration and pillar of strength throughout.

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ABSTRACT

Food insecurity in South Africa is not due to a shortage of food in the country but to inadequate access to food by poor groups of individuals and households. Many people, who lost their jobs due to retrenchments or can't find suitable jobs for various reasons, revert to street trading or other activities of the informal economy as a survival strategy. There is limited information on understanding the food security status and strategies used by street traders and their households in Durban. This study aims to understand the extent of food insecurity among street traders in terms of their access to food, the quality of food consumed and the strategies they used to cope with food shortage.

A mixed research method composed of a survey, face to face interviews and observations were conducted with a sample population of 120. The findings of this study confirmed that the sector was dominated by semi-literate people who generated R2000 per month which was to be shared with an average of 4 members of their respective households. Consequently, the majority of street traders' households lived below the poverty line, thus food insecure.

Limited income compromised the quality of food consumed: energy dense food dominated their food; hence 59.2% suffered from communicable lifestyle diseases. The study recommended more studies in this field, the extension of the Isipingo census to the entire municipality and the decriminalization of street trading by the municipality in order to improve the food security situation of street traders.

Key words: Food insecurity, coping strategies, street traders, dietary diversity, food access, socio-demographic.

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CHAPTER 1 INTRODUCTION

1.1 BACKGROUND AND JUSTIFICATION OF THE STUDY

Household food security is described as the ability of households to access sufficient, safe, and appropriate food to meet dietary needs in order to lead a healthy and productive life. It refers to the ability of a household to assure all its members sustain access to sufficient quantity and quality of food to live an active healthy life (Kirkland, Kemp, Hunter & Twine, 2011). This means that households experience food insecurity when they are unable to absorb, reduce or mitigate the impact of decline in food availability, access, and/or utilization making some households more vulnerable to food insecurity than others (Misselhorn, 2005).

The South African government recognises the basic right of all people to food, and this is entrenched in the constitution of this country: “everyone has the right to have access to sufficient food and water” (Constitution of South Africa, 1996). It is for that reason that the government has set itself the target of halving poverty by 2014. To help in achieving this target, it has adopted the Integrated Food Security Strategy (IFSS) in 2002, which explicitly aims to eradicate hunger and nutrition deficits among low-income households (Jacobs, 2009).

The vast majority of South Africans buys their staple food from commercial suppliers, rather than growing it themselves, and is therefore dependent on having (direct or indirect) access to cash. Food insecurity and poverty are not exceptional, short-term events but continue to be everyday realities of the urban poor, including street traders in South Africa. Street vending itself is considered as a coping or even an adaptation strategy to poverty and unemployment. More than a third (34%) of people living in Durban is dissatisfied mainly because of lack of income (unemployment and financial problems), health problems, lack of improvement in people’s living conditions amongst others (eThekweni Municipality, 2012). Many people who cannot find formal employment or have lost their jobs revert to street trading or other informal economy activities as a survival strategy (Department of Agriculture, 2006).

The 2000 Labour Force Survey reported that there were about 445,000 street traders in South Africa, which represented about 15% of non-agricultural informal employment and as much as 36% of non-

agricultural informal self-employment. This number had nearly doubled to 987,000 by 2007, many of whom joined the street trading sector in an effort to cope with poverty and unemployment since the government has not been able to reduce unemployment (Tengeh & Lapah, 2013; Wills, 2009).

1.2 RATIONALE

Food security is an essential and universal dimension of household and personal well-being. People who cannot find formal employment or have lost their jobs often revert to street trading, making it one of the important coping or adaptation strategies (DoA, 2006).

Although South Africa is classified as a food-secure country due to its adequate food supply at national level, large numbers of households within the country are still food insecure (du Toit, 2011). It is listed by the World Health Organization as one of 36 high-burden countries, home to large numbers of stunted children. This food insecurity situation has not improved since the findings of the NFCS of 1999 which revealed that between 58.5% and 73% of South African households experience food insecurity and 15.9% consume less than the adequate energy requirements (Faber, Witten & Drimie, 2010). The National Food Consumption Survey (NFCS) of 2005 recorded that 51.6% of South African households experienced hunger, 33.3% were at risk of hunger, about 28% of children less than nine years of age were affected by stunting whilst 3.7% experienced wasting and 60% of all deaths of children below five years of age were associated with malnutrition and only 20% appeared to be food secure (Labadarios *et al*, 2007; Roos & Ruthven, 2011).

Using the Household Food Insecurity Access Scale (HFIAS), the General Household Survey (GHS) of 2011 found that the percentage of South African households with inadequate or severely inadequate access to food was 19.4% and the percentage of individuals that were at risk was 23.3%. According to Statistics South Africa (Statistics SA, 2012), the percentage of households that experienced hunger decreased considerably from 23.8% in 2010 to 11.5% in 2011 while the percentage of individuals who experienced hunger decreased from 29.9% to 13%. The latest national survey conducted by the South African Health and Nutrition Examination Survey (SANHANES -1) in 2012 also reported a significant improvement in terms of households that experienced hunger, as only about half of surveyed households (26.0%) experienced hunger whereas 28.3% were food insecure without hunger (HSRC, 2013). Having said that, other indicators of food security and well-being have not improved that much; 54.3% of households are still food insecure; the highest prevalence being in the urban informal

(36.1%), and the Eastern Cape and Limpopo being the two provinces with a hunger prevalence higher than 30% (HSRC, 2013).

Unfortunately measurements used in these studies are too broad and although the GHS gives a provincial breakdown, the figures are not divided into different sectors of economic activities of the population. Yet, the informal sector in general and street trading in particular are increasingly important components of the urban poor livelihoods in South African cities and should no longer be neglected in studies (Misselhorn, 2005). However, there is no debate about the reciprocal relationship which exists between poverty and food insecurity because the poor are the most vulnerable to food shortage and hunger.

The 2007 “World Urbanization Prospects” highlights an upward trend in urbanization in South Africa. By 2010 more than 61.7% of South Africans resided in urban areas. In addition, the report shows that annual population growth rate is negative at -0.92% in rural areas and positive at 1.17% in urban areas (Koch, 2011). In 2007, 36.7% of Kwazulu Natal population, resided in Durban, whereas two years earlier (2005), only 28.3% were living in the Metro, which represents an increase of 8.4% over two years (Provide 2005; 2009).

Van der Merwe (2011) argues that the migration of people from rural to urban areas is a natural social phenomenon driven among other factors by economic incentives, political instability, environmental degradation or the decline of the natural resource base. With this population influx, South African cities are faced with new social and developmental challenges, the biggest of which being to ensure food security for all people in urban areas, especially inner cities.

To better understand and improve the household food insecurity status in this country, it is important to investigate how communities are affected by food insecurity and how they cope with the situation. Among the urban poor, who suffer the brunt of the lack of jobs in the South African economy, street trading is considered as one of the main sources of income together with insecure informal jobs and the government’s social welfare safety net (DoA, 2006). Food security is an essential, universal dimension of household and personal well-being whether viewed globally, within the nation, the state, or in local communities. Food insecurity is undesirable and is a possible precursor to nutritional, health, and developmental difficulties (Bickel, Nord, Price, Hamilton & Cook, 2000).

The struggle for survival of the urban poor in general and street traders in particular is a field that does not attract many researches. However, there are limited research and organising efforts led at international level by WIEGO (Women in Informal Employment, Globalising and Organising) and its network partners such as StreetNet International and SEWA (Self Employed Women's Association). These efforts which mainly focus on issues related to the right to trade, lobbying and advocacy with international institutions, local and national authorities, municipal harassment, etc., should be extended to research studies that deal with livelihood struggles in relation to economic rights and needs of the urban poor in general and informal traders in particular.

Although more studies still need to be conducted regarding the food insecurity situation of street traders, some information about it has been included in different household or food consumption surveys. However, studies that investigate the household food security situation of street traders and strategies they use to cope with the situation in Durban have never been attempted.

The present study will therefore help to understand the well-being aspect of this population and determine whether or not they are in usually severe conditions requiring special attention. It will contribute towards a better understanding of struggles of street traders to put food on the table and how they cope with the incapacity to ensure their households' sustainable access to sufficient and nutritious food. This will hopefully contribute towards a common understanding of their livelihood challenges, the design of appropriate policies and programs that are dedicated to addressing those challenges and help alleviate food insecurity in general and in the street trading sector in particular. It will contribute to a better understanding of how street traders in Durban cope with their inability to provide sufficient food for their households, and propose policy recommendations.

The outcome from this study could be used by government to design appropriate policies and programs to alleviate food insecurity in general and in the street vending sector in particular. They can also be used to replicate similar studies elsewhere in the country and may be useful to development assistance (and other) organisations that support the urban poor.

1.3 RESEARCH PROBLEM

The number of street traders in Durban has more than doubled over the past 10 years from 19,301 in 1997 to 49,739 (Skinner, 2009; McConnell, Hixon, and McConnell, 2010). Hunger and food insecurity

are among the major challenges facing communities living in Durban. The municipality argues that this situation is caused amongst other things by its inability to identify appropriate opportunities for urban and peri-urban production of food, high unemployment rates and low purchasing power, inadequate safety nets and high dependency ratios (eThekweni municipality, 2012).

There is limited information documented and contributing towards a better understanding of street traders. It is not known how the street traders cope with the incapacity to access sufficient and nutritious food. Few, if any, studies investigate how much profit is earned; how the intra-household allocation is managed; and the contribution of this income towards households needs. Therefore, a glaring omission in street trading literature is a critical evaluation of the contribution of street trading to household food and livelihood security. This study is an important first step towards understanding the extent of food insecurity among street traders both in terms of access to food and quality of food consumed but also the coping strategies that are used by them to deal with food insecurity.

1.4 THE OBJECTIVES OF THE STUDY

The overall aim of this study is to understand the extend of food insecurity among street traders in terms of access to food, the quality of food consumed and the strategies used by street traders and their households to cope with the incapacity to ensure a sustainable access to sufficient and nutritious food.

The specific objectives of this research are:

- To investigate the access to food by street traders and their households;
- To understand how diverse and nutritious is the food consumed by street traders and members of their households; and
- To determine and to document the strategies used by street traders to cope with food shortage in their households;

1.5 DEFINITION OF KEY CONCEPTS

1.5.1 STREET TRADERS

A street trader, also called informal trader, street vendor, hawker or peddler, is defined by Bromley (2000) as any person who carries on the business of selling goods and/or services on the street and/or any public space, including any employee of such a person. Under this description, traders who operate at train stations, bus stations, public parks or any other public space are also included.

Street trading or informal trading therefore means the selling of any goods or services by individuals and/or groups on public and sometimes private spaces. Informal trading is generally unorganized and not always registered as a formal business activity. In its most basic, informal trading takes place on streets and pavements, and requires little more than the actual goods and services to set up (City of Johannesburg, 2009).

1.5.2 FOOD SECURITY

The definition of the concept “Food Security” by the Food and Agriculture Organisation (FAO), which has been formally and widely accepted is “Food Security is the situation when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2010).

The FAO (1996) has identified four main dimensions of food security which must all be fulfilled simultaneously for food security objectives to be fulfilled. These dimensions are:

1.5.2.1 Physical availability of food

It addresses the “supply side” of food security and is determined by the level of food production, stock levels and net trade. Food availability depends on food production, importation and efficiency of food distribution, and is assessed according to food requirements of the population. Food availability is therefore a macro or national dimension of food security, and therefore, as far as food availability is concerned, South Africa is classified as a food secure country (DoA, 1997).

1.5.2.2 Economic and physical access to food

An adequate availability of food at the national level does not translate into food security at community or household levels. Food accessibility means households and individuals are able to obtain enough food for all members at all times, through production for own consumption or sale. Poor people, who do not have high or stable incomes, have few assets and few marketable skills, are most vulnerable to chronic food insecurity (DoA, 1997).

Bonti-Ankomah (2001) identified three dimensions of food accessibility at household level, i.e. physical accessibility which refers to direct access to food from domestic production (from family farm/garden), or food distribution (food parcels to most vulnerable individuals /households), economic accessibility which refers to the individual/household ability to access markets and/or purchase food items and social accessibility which refers to the existence and efficiency of social welfare nets and responses to food emergencies.

1.5.2.3 Food Utilization

Food utilization is defined as the way the body makes the most of various nutrients in the food. The nutritional well-being of members of households depends not only on food accessibility, but also on its utilization by members of households (Swindale & Bilinski, 2006). The consumption of sufficient energy and nutrients by individuals is the result of good care and feeding practices, food preparation, the quality and distribution of food among members of the household. Combined with good biological utilization of food consumed, this determines the nutritional status of individuals (FAO, 1996).

1.5.2.4 Food Stability

In order to ensure sustainable food security, there has to be stability of the above three dimensions over time. Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis (FAO, 1996).

1.5.3 HOUSEHOLD FOOD SECURITY

Household Food Security is described as the ability of households to access sufficient, safe, and appropriate food to meet dietary needs sustainably in order to lead a healthy and productive life. It refers to the ability of a household to assure all its members sustain access to sufficient quantity and quality of food to live active healthy lives either through production or purchase (Kirkland *et al*, 2011).

Households experience food insecurity when unable to absorb, reduce or mitigate the impact of decline in food availability, access, and/or utilization making some households more vulnerable to food insecurity than others (Misselhorn, 2005; Topouzis, 1999).

Since the World Food Conference in 1974, Food Security has been conceptualized as consisting of three important paradigm shifts, i.e. from the global and the national to the household and the individual food security, from a food first perspective to a livelihood perspective, and from objective indicators to subjective indicators. These paradigm shifts explain how food security has been conceptualized in the past and at present (Maxwell, Watkins, Wheeler & Collins, 2003).

According to Labadarios, Davids, Mchiza & Weir-Smith (2009), household food security is determined by indicators such as the household location (urban or rural community), household density (the number of people living and sleeping in the same household for more than five days in a week), and the income status of the household.

1.5.4. FOOD INSECURITY

Coleman-Jensen, Nord & Singh (2013) defined food insecurity as the inability of a household or individual to gain consistent access to adequate food by a lack of money and other resources. Other terms such as hunger, risk of hunger, are often used to mean food insecurity. Food insecurity is often a household situation; while it affects everyone in a household, it may affect them differently. Therefore it is not correct to state that individuals in a food insecure household (such as children) definitely experience outright hunger or specific coping mechanisms. Rather than describing these individuals as being “food insecure”, they should be referred to as “living in a food insecure household (Coleman-Jansen, Nord & Singh, 2013)

A distinction is frequently made between transitory and permanent food insecurity, where the former describes food insecurity as for example seasonal food insecurity, while the latter describes a long-term lack of access to sufficient food. The concept of food insecurity is closely linked with the poverty in a country and to some extent have an influence on one another. In any food security discourse, it is also essential to highlight in a nutshell the plight of poverty in the country (du Toit, 2011).

1.5.5. COPING STRATEGIES

Coping strategies are defined by Snel & Staring (2001) as all the strategically selected acts that individuals and households in a poor socio-economic position use to restrict their expense or earn some extra income to enable them to pay for the basic necessities (food, clothing, shelter) and not fall too far below their society's level of welfare. This definition implies that coping strategies involves a conscious assessment of adaptation strategies or activities, which may not necessarily be successful in achieving the intended objectives. In fact, the coping strategies often have unintended negative effects (Snel & Staring, 2001).

Households that are poor and likely to be destitute use more coping strategies. To adapt to food shortages, Maxwell *et al* (2003) argued that a shortage of food requires a change in people's behaviour. Those who use severe coping strategies to deal with shortages of food become more vulnerable (Maxwell & Caldwell, 2008).

The strategies pursued by households differ in several aspects, that is, within the household and between households (Maxwell *et al*, 2003). Due to varying degrees of wealth among households, different coping behaviors are adopted by households at different poverty levels. However, some coping strategies are common to all households although the extent to which such strategies enable a household to remain afloat depend on the assets at their disposal (Devereux, 2001). Above all, the general tendency is that the lower the household asset status, the more likely the household would engage in erosive responses such as selling off productive assets such as farm implements (Hoddinott, 2004).

Coping strategies have been divided by Maxwell *et al* (2003) into the following four major categories, which include:

- Dietary change: changing the household's diet by consuming less preferred or less expensive food;
- Using short-term strategies to increase their food supplies, namely to obtain food by borrowing, purchasing on credit, begging or consuming wild foods and immature crops or even seed stock.
- Reducing the number of people in the household that are to be fed by sending some of them to eat at neighbours, friends or relatives.
- Reducing the portion sizes of meals within the household, favouring certain household members and spending a day without a meal.

1.6 THE PLAN OF THE DISSERTATION

1.6.1 CHAPTER ONE: INTRODUCTION

The introduction presents an overview of literature comprising the background and justification of the study, the rationale, the statement of the problem, the objectives of the study as well as the definition of key concepts used in this study.

1.6.2 CHAPTER TWO: LITERATURE REVIEW

This chapter focuses on a review of literature regarding food security and its measurement in general and those used in this study in particular, i.e. the Household Food Insecurity Access Scale (HFIAS), the Household Dietary Diversity Scale (HDDS) and the Coping Strategy Index (CSI).

1.6.3 CHAPTER THREE: METHODS AND MATERIALS

The selected research methodologies used in the study are discussed, selected research sites identified, and the sampling methods and procedures discussed.

1.6.4 CHAPTER FOUR: RESULTS AND DISCUSSION

This chapter focuses on the findings of the study. The results of the study are also discussed in relation to the findings of other relevant studies.

1.6.5 CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

The chapter includes the conclusions, and whether the original objectives of the study were addressed and answered. Based on the results of the study, recommendations are presented for future actions, policy formulation and research.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

Food availability in an urban area is largely determined by food supply to cities, which involves wholesalers, intermediaries, distributors and even street vendors. Such a distribution chain has the potential of increasing the price of food, which has a negative consequence due to the vulnerability of the urban poor to price increases because access to food goes hand-in-hand with income availability. Generally, the urban poor pay more for food, therefore food prices are a critical factor and determinant of urban food security (van der Merwe, 2011).

Another important dimension of urban food security that van der Merwe (2011) highlights is food utilization. He recognises the difference between eating patterns of different ethnic and cultural groups and between urban and rural residents in South Africa. Black urban residents have lower fat intake and higher carbohydrates. Food items which are consumed in large quantities by black urban dwellers include cereals (98.5% of people), stimulants like tea and coffee (72.6% of people) and products with high sugar content like cold drinks (89.1% of people). This lifestyle and diet have a negative effect on the health of urban residents and poses a great health challenge for urban dwellers. The high content of fats in urban dwellers' food intakes exposes urban dwellers to diet-related diseases such as obesity, hypertension, diabetes and strokes (van der Merwe, 2011).

This chapter gives an overview of available literature regarding household food security and street trading with particular emphasis on urban areas. The literature highlights the importance of street trading and the socio-economic situation of street traders at international, national and most importantly at city level, and it also discusses the various tools used to measure food security by different institutions in South Africa.

2.2 IMPORTANCE OF STREET TRADING INTERNATIONALLY

Street traders form a vital part of urban social and economic life around the world. As vendors of affordable goods and services, street traders provide convenient and accessible options to consumers. Street vending has existed for many years, and is considered a cornerstone of many cities' historical

and cultural heritage. Street trade creates jobs not only for millions of street traders worldwide, but also for other occupations, such as wholesalers, porters, trolley operators, and security guards, yet they continue to operate in unstable policy environments and have little voice in city planning, because they are often viewed as a nuisance (Roever, 2011).

Most existing data undercount the total number of people working as street traders, often because they exclude those who are not officially registered by authorities as well as those who use street trading as a secondary, seasonal, temporary, or part-time occupation. In each region of the world, there are always both official and unofficial estimates of the number of street traders. The share of street traders in total non-agricultural employment is situated between 2% and 9% globally, but much higher in African cities. In South Africa, street trading accounts for about 14.6% of total non-agricultural employment (Chen, 2004; Wills, 2009).

Like other sectors of the informal economy, the driving forces behind street trading are diverse. Many of the working poor who enter street trading do so because they cannot find jobs in the formal economy. Others get involved in street trading because it offers a more flexible or otherwise more attractive employment option than wage or salaried work, and/or because they cannot afford the costs of operating a formal store. For others, street trading is a more viable option even where wage work is available, because of its flexibility and freedom (Chen, 2004).

However, while some view informal trading as “a symptom of developmental backwardness – a problem that needs to be resolved, others regard it as a positive dynamic which enables large numbers of people to participate in the urban economy”. In many developing countries and throughout most of Africa, the informal economy contributes significantly to employment creation and accounts for as much as 20% of total employment in some cities (Willemse, 2011; Roever, 2011).

Roever (2010) confirms that earnings among street traders vary widely although most street traders are poor. Available data shows that street traders’ earnings often place them at or below the US\$2 a day poverty threshold. In South Africa, the latest (March 2009) poverty lines in South Africa determined by Statistics SA (2012) are:

- Food poverty line = R305 per person per month. This poverty line refers to the amount of money that an individual needs to consume the required energy intake.

- Lower-bound poverty line = R431 per person per month. The lower-bound poverty line includes the food poverty line (R305) plus the average amount derived from non-food items of households whose total expenditure is equal to the poverty line.
- Upper-bound poverty line = R577 per person per month. This refers to the food poverty line (R305) plus the average amount derived from non-food items of households whose total food expenditure is equal to the food poverty line.

Street trading is also characterised by interesting gender dynamics. Roever (2010) argues that women street traders generally earn less than men and food traders, who are generally women, earn less than vendors of non-food products, who are generally men. Vendors of durable products like hardware and electronics often have relatively secure livelihoods and are less exposed to loss of assets and price fluctuations than other types of vendors. Most street traders in developing countries earn very little and their incomes fluctuate significantly from season to season and from week to week, and they are vulnerable to price fluctuations, police harassment, etc. Vendors of fresh produce are particularly vulnerable to unstable prices and may see their goods spoil before they are sold.

2.3 STREET TRADING IN SOUTH AFRICA

During the apartheid era, anti-street trading regulations such as the imposition of excessive fines and confiscation of goods were used to discourage street trading in South African cities (Skinner, 2008). Since the end of apartheid, street trading has become a common occurrence, and by-laws have been developed by municipalities to regulate it. Among other things, these by-laws restrict street trading in some areas and prohibit it in others (Willemse, 2011).

Street trading in South Africa is influenced by various factors such as the social, economic and political situation, which often lead to interesting debates and discussions. South Africa's informal economy is considered to be relatively small compared to those of other sub-Saharan countries (Ligthelm, in van Heerden, 2011). This is largely due to South Africa's history, which generally prohibited street trading, and promoted the formal economy making it the strongest in Africa, with the highest GDP per capita on the continent (van Heerden, 2011).

2.3.1 IMPORTANCE OF STREET TRADING IN SOUTH AFRICA

Street trading is the most visible segment of the informal economy and comprises a significant proportion of the total number of informal workers in South Africa (van Heerden, 2011).

In his article for Mail and Guardian on street trading, Timse (2009) argued that in many African cities, street trading forms part of everyday life but conversely, it is seen in South Africa as a sign of underdevelopment. Most informal traders are poor and treated as a nuisance and a threat to urban security and beauty, and therefore they have to be wiped off the streets of the city. Yet, the government itself acknowledges the role played by the informal economy in general and the trading sector in particular, in creating employment. In Durban for instance, eThekweni municipality reported that in 2011, with 262,758 jobs, informal employment made up 24% of total employment and that more than half (131,737) of these jobs were in the trading sector (eThekweni municipality, 2012).

2.3.2 SOCIO-ECONOMIC SITUATION OF STREET TRADERS IN SOUTH AFRICA

The informal sector comprises a wide range of economic activities. Chen (2012) gives a comprehensive list of actors involved in those activities including street traders, push-cart vendors, rickshaw pullers, taxi drivers, waste collectors, home-based workers, small shops keepers, keepers of workshops that repair bicycles and motorcycles, recycle scrap metal, make furniture and metal parts, tan leather and stitch shoes, weave, dye, and print cloth; polish diamonds and other gems; make and embroider garments; sort and sell cloth, paper, and metal waste, etc., making it as diverse as the formal economy.

The usual perception that street traders are generally unskilled, have low levels of education and therefore unable to get jobs in the formal sector is increasingly losing ground. Studies conducted in Durban in 1997 showed that the level of education of street traders was generally very low with 18.3% of vendors not having completed primary education. However, a recent study conducted in the Central Business Districts (CBDs) of four major metropolitan councils in South Africa, i.e. Pretoria, Johannesburg, Cape Town and Durban, found that a large number of respondents (37%) in all four metropolitan cities had some level of secondary education, and an almost equally large number (29%) of respondents indicated that they have obtained matric/grade 12. The percentage of respondents having obtained no formal education is surprisingly low at 6% (Horn, 2011).

Street traders sell products ranging from manufactured goods like clothing and shoes through self-made products like crafts to services like hairdressing and the sale of insurance and other related services. With more than 41%, foodstuff constitutes the majority of products sold by street traders followed by clothing (37%), fruits and vegetables (30%), while services were in the minority (Lund, in Tengeh & Lapah, 2013).

Horn (2011) presents the results of an empirical survey regarding the socio-economic situation of street traders conducted in the CBDs of 4 metropolitan councils (Pretoria, Johannesburg, Cape Town and Durban), which revealed the following findings about eThekweni CBD:

- The ages of the respondents ranged between 18 and 50 years, with the majority of the respondents between 18 and 30 years. Only 9% were older than 50 years.
- 33% of respondents between the ages of 18 and 30 years had obtained matric, 10% even obtained a tertiary qualification, 30% of respondents aged between 31 and 50 years completed their secondary education and 9% had obtained a tertiary qualification, pointing to the fact that increasing numbers of qualified and semi-qualified young people are joining the street trading sector.
- 90% of street traders are South African citizens, the great majority are black Africans and very few Asians. However, only 18% of surveyed traders responded to this question, indicating that they were probably non-South African citizens.
- 69% were self-employed without assistants, owned their businesses and had no other means of income, other than the income generated by their businesses.

In addition, a very recent census conducted in Isipingo (Southern Suburb of Durban) by Urban-Econ (2013) on behalf of Business Support, Tourism and Markets Unit (BSTMU) reveals that:

- 53% of street traders are women; 57.8% are within the age group of between 35 to 65 years and a large number of them (82.8%) do not reside in Isipingo.
- 62.7% have a secondary level of education whereas 2.6% have tertiary level education and 7.2% are illiterate.
- 49.7% of Isipingo traders sell food items whereas 46.2% trade in non-food items and 2.2% are trading in services. The monthly income of street traders in Isipingo depends on business activities and varies between R 400 and R 2,800 but 46.7% earn between R 1,400 and R 2,800 per month.
- It should be noted that more than half of the informal traders in Isipingo CBD (50.3%) do not

have trading permits.

2.3.3 POLICY FRAMEWORK AND MANAGEMENT OF STREET TRADING IN KWAZULU NATAL AND DURBAN

2.3.3.1 Provincial policy on informal economy

Kwazulu Natal is so far the only province in South Africa that has developed a policy on the informal economy. This policy was adopted in 2011 with the aim of creating an environment that supports sustainable economic growth in the informal economy and also to repeal or amend certain laws that were preventing the government to play its developmental role in regulating the informal economy. The KwaZulu-Natal Province through this policy framework aimed to bring the informal economy into the mainstream, and thereby reduce the vulnerability and exclusion of those working in this sector (KZN provincial government, 2011).

Before that, the regulation and development of the informal economy in the province was not well coordinated and even absent in some cases. Where efforts were made to support operators in the informal economy, they were uncoordinated and uneven. The Province through its Department of Economic Development and Tourism developed the informal economy policy in order to move towards an integrated support and regulation of the informal economy.

In his budget speech to the provincial legislature last year, the Member of the Executive Council (MEC) for Economic Development and Tourism in the KZN Provincial Government reported that the province has established Local and District Informal Economy Chambers which are fully functional and the Provincial Chamber has also been established with representatives from all eleven (11) districts (Mabuyakhulu, 2012).

2.3.3.2 Informal economy policy of eThekweni municipality

In December 2001, the eThekweni Council adopted a progressive and developmental informal economy policy. This was the first South African government structure at any level to pass an informal economy policy and was applauded nationally and internationally. In 2006, this policy was revised during a major international conference.

eThekwini municipality understood before anyone else that the informal economy was here to stay and that the role of the local government was to develop and regulate it and not to try and destroy it at all costs. This led to the creation of a unit within the municipality now known as Business Support, Tourism and Markets (BSTMU) Unit, with a mandate to support and manage the informal economy and SMMEs within its boundaries. Other municipal policies were adopted and practical implementation procedures were established, such as the allocation policy, the itinerant policy, the rental policy and the container policy.

This municipality has also heavily influenced the process of developing the provincial informal economy policy which was adopted in 2011, making Kwazulu Natal the first province in the country to have a provincial level informal economy policy. Therefore, this municipality is leading the way for informal trading management in the country from which other municipalities are learning.

The BSTMU is now spearheading a national process of forming a National Informal Economy Forum (SANIEF), based on the idea of the eThekwini Municipality Informal Economy Forum (EMIEF) that exists in Durban. It is hoped that SANIEF will be inclusive and properly constituted to include representatives of informal workers' organisations, and will lead to the adoption of the national informal economy policy.

2.3.3.3 Management of street trading in eThekwini municipality

Tissington (2010) pointed out that the administration and management of street trading and many other services is the responsibility of local government. In 1995, the then 6 local municipalities which were integrated to form eThekwini municipality adopted informal trading by-laws in order to regulate trading, and in 2001, an informal trading policy was adopted by the city council as a guide to the administration and management of street trading in Durban.

The BSTMU has created management zones, demarcation of trading areas, issuing of trading permits, organising traders into area committees that feed into a broader forum called eThekwini Municipality Informal Economy Management Forum (EMIEF). Within BSTMU, the management of street traders is the responsibility of the Informal Economy and Retail Markets sub-structure which is divided into six management regions, i.e. Durban Central, Coastal (North and South Beaches), South (Isipingo, Umlazi

and Amanzimtoti), North (Inanda, Ntuzuma, Kwa Mashu and Phoenix), Upper North (Verulam and Tongaat) and Inner & Outer West (Pinetown, Chatsworth).

Each region is managed by an Area Manager who reports to the senior manager of informal trade, who in turn reports to the head of BSTMU. Out of the 49,739 street traders operating in Durban, only about 8000 (or 16%) are registered by eThekweni municipality and issued with vending permits. The area distribution of street traders with a vending permit is as follows: Durban Central: 3689, South: 2181, Coastal: 412, North: 461, Inner and Outer West: 559 and Upper North: 691. This distribution is a reflection of street trading density in the whole eThekweni municipality.

Similarly to other urban municipalities in South Africa, street traders face many challenges in Durban. Street trading has often been characterized by what municipal authorities call “invasion” of streets, pavements, major junctions, parks and other public areas by hawkers who want to make a living by exposing their wares to potential buyers. Jenny (in Tengeh & Lapah, 2013) has even argued that the regulatory measures taken to manage and control street trading in Durban have caused a significant number of conflicts between street traders and the local authorities.

Street traders face many problems. Firstly, the very nature of their activity is seen in most cities as a hindrance to the development of the city. In many cases, their activities have been classified as “illegal” and hence problems have ensued. Nontyatyambo (in Tengeh & Lapah, 2013) asserts that street trading is the most vulnerable career after prostitution in terms of harassment and associated risks. The very fact that the activity is often poorly regulated in most cases puts traders at the mercy of government officials, such as the police, who often carry out arrests, confiscation of goods and even demand bribes. Hence, street traders suffer from a constant infringement on their rights to earn a living.

Yet in Durban like in many other cities, the number of street traders who do not have vending permits (called illegal traders) is higher than that of traders with vending permits. The results of the official census commissioned by the BSTMU of eThekweni municipality in Isipingo reveals that 50.3% of street traders do not have vending permits often because the municipal management system makes it very difficult for traders to obtain those vending permits (Urban-Econ, 2013).

2.4 FOOD SOURCES IN URBAN KWAZULU NATAL

2.4.1 INDIGENOUS FOOD CROPS

The Department of Agriculture, Forestry and Fisheries (DAFF, 2013) defines indigenous food crops as food crops that were discovered in South Africa. To these crops, are added those that were introduced in the country and are now called naturalized or traditional crops.

South African indigenous food crops are very diverse; they include cereals, leafy vegetables and various wild fruits. These crops are grown and found more and more in the wild in the country under various weather conditions. Their production by the rural farming communities is on a small scale and is mainly for subsistence purposes (DAFF, 2013).

In Kwazulu Natal, the following indigenous food crops have been listed by Modi (2009) and DAFF (DAFF, 2013) as being the most commonly used:

- Millet: Indigenous cultivated food cereal used mainly as whole, cracked or ground flour, dough, or grain-like rice which is then converted into fermented breads, foods and thick porridges, steamed food, non-alcoholic beverages and snacks. Pearl millet in particular is also grown for silage and hay. Crop residues and green plants provide building materials for fencing, thatching and basket-making.
- Sorghum: Indigenous cereal cultivated and mainly used for making porridge, unleavened bread, biscuits, cakes, couscous and malted beverage. Dried seeds are used as a coffee substitute. It is also an important animal feed.
- Amaranth (*Umfino*): Various amaranth species grow wildly in this province and are believed to be the most prized leaf vegetables and the largest source of nutrients out of all indigenous African vegetables.
- Amadumbe: The corms, young shoots and leaves of these vegetables are used mostly boiled. The mature corms can also be roasted, baked, or fried. Roasted or boiled corms can be eaten alone or with stew.
- Other indigenous food crops commonly used in Kwazulu Natal are cowpeas and groundnuts (legumes), gourds, African melons and pumpkins (Cucurbits), black jack and lamb's quarters.

2.4.2 URBAN FOOD PRODUCTION

Agricultural production at the local level has been marginalized because the urban dwellers lack interest in producing food but even the rural poor are disengaging in agricultural production. This situation has been exacerbated among other things by a poor access to agricultural land and inputs, including labour, a decrease in agricultural knowledge coupled with poor research and extension services, a lack of access to infrastructure, poor credit facilities, HIV and AIDS, climate change and increasing water pressures (Drimie *et al*, 2009).

In Durban, agriculture is a neglected sector; it only contributes 1% to the municipal GDP. eThekweni municipality gives weak arguments (it does not have sufficient land or the capacity to identify appropriate opportunities for urban food production) to justify interest in promoting urban food production. But, it recognizes the importance of urban food production for food security in Durban (eThekweni municipality, 2012).

However, van der Merwe (2011) argues that, like in many other countries, urban agriculture in South Africa should be considered as one of the options for ensuring urban food security. It provides good access to food for poor communities, and a source of income and good quality food at low cost to the stable poor. In South Africa urban agriculture is also viewed as a policy option to strengthen the asset base of the urban poor (van der Merwe, 2011).

2.4.3 EMPLOYMENT GENERATION

The growth of the South African economy has contributed significantly to improving food security in the country. Food security, particularly in urban areas, is largely about direct or indirect access to cash to purchase food (Drimie *et al*, 2009).

According to Drimie *et al* (2009) among the poor, who are often unemployed in South Africa, the main sources of income are precarious jobs, remittances from working relatives and the government social welfare grants,. Economic growth has enabled the government to provide an effective social protection scheme that increasingly provides grants to vulnerable individuals.

However, despite these interventions, food insecurity in both rural and urban areas continue to increase, caused by a growing unemployment, increases in food prices, HIV and AIDS, adverse environmental conditions and poverty in general (Drimie, *et al*, 2009).

Job creation should be a top priority for urban planners, managers, and policy-makers. Policies that promote employment (and self-employment) for the urban poor, are needed. Because, jobs are more easily destroyed than created, hence the need for the municipal planning and regulatory framework to facilitate and guide the informal and small business sector. Unfortunately, the formal sector is unable to generate enough employment and job opportunities to meet the ever growing number of urban job seekers, leaving the unemployed with the only choice of turning to informal self-employment like street trading and informal wage employment to generate some income (Kuiper & van der Ree, 2006).

The Global Poverty Research Group (in Skinner, 2007) found that 29.3% of urban South Africans are unemployed against a total unemployment rate of 25%. This means that there are more urban South Africans unemployed than those in rural areas. A sizeable number (18.9%) of urban South Africans work in informal economy.

Employment in the informal economy in South Africa averages 33% representing approximately +/- 2 million people, which can be divided into trade (46%), construction (14%), manufacturing (9%), and transport (10%). This makes informal trading the biggest component of the informal economy in this country. The average income is estimated to be between R500-R1, 500/month and the contribution to GDP is estimated to be around 8-10% (Skinner, 2007).

Since Statistics South Africa introduced the six monthly labour force surveys in 2000, South Africa has had comparatively good labour market statistics. In that year, those working informally constituted 15% of the labour force. This went up to 19% in 2005. From this, it is clear that the number of people working in the South African informal economy has been on the increase, both in terms of gross numbers but also as a proportion of the total labour force in the post-apartheid period (Skinner, 2007).

The April-June 2009 Quarterly Labour Force Survey revealed that one in every two South Africans working in the informal sector worked in retail and 60% of them were women (Statistics SA, 2009b). In the first Quarterly Labour Force Survey of 2013, employment in informal trading created 86,000 jobs

and the pace of employment creation in informal trading has been increasing (Statistics SA, 2013).

2.5 HOUSEHOLD FOOD SECURITY SITUATION IN SOUTH AFRICA

South Africa is considered a food secure nation because it produces enough staple food and has the capacity to import food, if needed in order to meet the basic nutritional requirements of its population (FAO, in du Toit, 2011). According to Statistics SA (2012) the spending patterns for poor households differ significantly from those of non-poor households. In poor households, 42.3% of expenditure is spent on food and non-alcoholic beverages while in non-poor households, food and non-alcoholic beverages account for only 16.1% of expenditure. Regarding other expenditures, poor households spend 15.2% on housing and 16.2% on transport respectively against 26.3% and 8.3% in non-poor households, yet the average annual household food consumption expenditure is of R18,121 for poor households against R85,154 for non-poor households.

Regardless of its relative wealth, well-developed economy and food security at national level, South Africa is still beset with prevalent poverty and food insecurity at household level (Hindson, McIntosh, Xaba & Associates, 2003). The results of the 2009 General Household Survey estimate that at least 20% of South African households had inadequate or severely inadequate access to food. The report states that food access problems are the most serious in Free State province where 33.5% of households have inadequate or severely inadequate food access; followed by KwaZulu-Natal (23.1%). Western Cape (14.5%) was reported to be the province with the least problems with food access (DAFF, 2010).

However, the General Household Survey (GHS) of 2011 noted that households' access to food has improved in 2011. Using the Household Food Insecurity Access Scale (HFIAS), Statistics SA (2012) noted a decrease in its the percentage of South African households with inadequate or severely inadequate access to food, from 21.9% in 2010 to 19.4% in 2011 and people who were at risk of hunger decreased from 27.1% to 23.3%. Between 2002 and 2011, households that experienced hunger decreased from 23.8% to 11.5% while individuals who experienced hunger decreased from 29.9% to 13%. This trend has been supported by the latest national SANHANES -1 in 2012, which also reported a significant improvement in the percentage of households that experienced hunger. The survey found that only 26.0% of households experienced hunger compared with 52% in 2005 (HSRC, 2013).

Altman, Hart & Jacobs (2009) argue that poverty and food insecurity can be addressed by creating more job opportunities, thereby improving household incomes particularly in urban areas because income security is essential to address food insecurity. It is important to note though that many more jobs have been created since 1994, but not enough to address poverty meaningfully. Unemployment and the lack of sufficient income is the main factor that determines urban poverty as it affects directly and positively the other dimensions of urban poverty. Therefore, employment is the first and essential step out of poverty because nothing is more fundamental to poverty reduction than employment (Aliber, 2009).

In 19th and the 20th century, colonialism and apartheid forcibly removed black people from their arable land and were therefore unable to continue with their farming and entrepreneurial activities. As a result, they went to work in the mines and large farms, which increased the poverty and food insecurity because black people did no longer have the means to produce enough food for themselves (IFSS, 2002).

Over time, various initiatives have been developed by the Government of South Africa to address food insecurity. Some of these initiatives, namely the school feeding scheme, elderly pensions, and child grants, have resulted in positive changes in people's lives, while others, like the land reform programme, the various food production schemes, were not really successful and instead left people poorer and bitter. The participation of households in food security initiatives contributes significantly to addressing poverty, unemployment, under-nutrition, and other socio-economic challenges faced by South Africans (du Toit, 2011).

A focus on the household ensures a bottom-up approach to development. This positive effect on the household in turn affects the food security situation at community, municipal, provincial and national levels. If all households are targeted with the intention of increasing the availability, ensuring access to, and improving the affordability of food, this could have a multiplier effect where communities are able to produce or purchase their food. The household is the best and most effective target if a lasting impact in people's lives is to be made (du Toit, 2011).

2.5.1 HOUSEHOLD FOOD SECURITY SITUATION IN SOUTH AFRICAN CITIES

Even though food security is a major concern in rural areas, its situation in urban areas is not well addressed. Policy makers often treat it as a political issue and neglect the issue of urban food insecurity because it is overshadowed by problems such as unemployment, the mushrooming of the informal settlements, overcrowding, decaying infrastructure and poor service delivery (Mustafa, Rod & Luc, 2007).

Van der Merwe (2011) notes that like other developed and developing countries, South Africa is experiencing a rapid urban influx of migrants as large volumes of people move to cities mainly in search of better employment and education opportunities. Through this, new social systems have evolved in the inner cities in South Africa and thus pose major challenges including that of ensuring food security to city dwellers.

The prospects indicate that the rural annual population growth rate is negative at 0.9%, compared to positive growth of 1.2% in the urban areas (Koch, 2011). Currently, more than 61.7% of the South African population resides in urban areas. With this newfound population influx, urban areas of South Africa are faced with new social challenges. These include lack of housing, poor sanitation and sewage disposal, lack of adequate energy and/or fuel sources, lack of access to clean water and high rates of crime and violence. Over and above these, one of the biggest social and developmental challenges today is to ensure food security for all people in urban areas (van der Merwe, 2011).

One of the priority interventions of the Integrated Food Security Strategy for South Africa (IFSS) is to improve household food production, trade and distribution. However, the focus of this policy is to overcome rural food insecurity by increasing participation in rural food insecure households in productive agricultural activities (NDA, 2002) leaving the urban poor with no policy recourse in its quest for food security. It is only now that the Department of Agriculture, Forestry and Fisheries has expressed a willingness to develop a strategy on urban and peri-urban agriculture with the aim of promoting best practice, enhancing the role of agriculture in urban and peri-urban livelihoods, and improving coordination and cooperation among role players in this field (DAFF, 2012).

As a result, municipal food security initiatives such as shifting to crops that are more resilient to difficult climatic conditions and can meet the demands of an ever growing population, maintaining agricultural

land so as to keep it arable, introducing mitigation methods to fight climate change, promoting sustainable agricultural production, ensuring reasonable food costing as well as introducing and managing community gardens and soup kitchens, are not really applying the national IFSS at local government level and are not aggressively addressing food insecurity of the urban poor in this municipality (eThekwini municipality, 2013).

2.5.2 HOUSEHOLD FOOD SECURITY SITUATION IN KWAZULU NATAL AND DURBAN

The 2011 GHS report reveals that most households in South Africa continue to rely on income from salaries. 56.6% of households reported salaries/wages/commission as the main source of income, followed by grants (24.3%) and other sources (9.6%) and remittances (9.5%). In Kwazulu Natal, 56.5% of households relied on salaries, 24% depended on social grants, 10.6% on remittances and 7.2% on other sources (Statistics SA, 2012).

As regarding access to food, the same survey used HFIAS to determine the percentage of South African households with inadequate or severely inadequate access to food. In Kwazulu Natal, the 2011 GHS found that 4.1% had severely inadequate access to food, 13.1% has inadequate access to food while 82.9% had adequate access to food (Statistics SA, 2012).

Besides those positive statistics at provincial level, hunger and food insecurity continue to be the biggest challenges facing households living in eThekwini municipality. The fight against food insecurity in this municipality is confronted with challenges such as the shortage of land to undertake urban food production, low purchasing power due to high unemployment, the inadequate safety net due to high dependency ratios and the impact of climate change on food security (eThekwini municipality, 2012).

The eThekwini Municipality has initiated a number of programmes to assist with the alleviation of food insecurity. These include the creation of dedicated structures to drive agriculture, the agro-ecology programme, the aqua and poultry farming, the soya bean project, the community support farms programme, the community gardens project, the mushroom and hydroponics project, the One Home One Garden project, etc, offering support in the form of seedlings, compost and technical support (eThekwini municipality, 2012). There are other complementary municipal policies which focus on poverty alleviation and employment provision, but insufficient budget allocation for these programmes makes them invisible and unable to make an impact. Crucially, there are also no direct links between

these initiatives and informal traders, who should be one of the key beneficiary groups. These programmes therefore fail to make a positive impact on their food security situation and livelihoods of street traders.

2.6 MEASUREMENT OF HOUSEHOLD FOOD INSECURITY IN SOUTH AFRICA

Measuring food insecurity is an expensive and difficult exercise and many tools have been developed. The FAO has even stated that there is no perfect single measure that captures all aspects of food insecurity (FAO, 2003).

Hart *et al* (in du Toit, 2011) said that in South Africa there are no definite and accepted measures of food security, and this creates differences that make it difficult for policy makers to address food insecurity as they are limited in their ability to find suitable interventions to different conditions and needs. These challenges are further exacerbated by weak coordination between government, private sector and civil society.

Researchers in South Africa are using various methods to measure household food security depending on the objectives and purpose of their studies. Some of the common measures used to assess food security status in the country are: National Food Consumption Survey (NFCS); General Household Survey (GHS); Income and Expenditure Survey (IES); Labour Force Survey (LFS); Food Insecurity and Vulnerability Information and Mapping System (FIVIMS); Community Survey (CS) and the South African Social Attitudes Survey (SASAS). Nonetheless, due to the complexity of food security, these methods do not always give the same results. The South African government policy design process is currently informed by the GHS, IES, LFS and Community Survey, which are used by Statistics SA (Labadarios *et al*, 2009).

2.6.1 MEASUREMENTS USED BY STATISTICS SOUTH AFRICA

The General Household Survey (GHS); Income and Expenditure Survey (IES); Labour Force Survey (LFS) are the three measurements used by Statistics SA which give indications on the food security situation in South Africa. However, Aliber (2009) considers that only the General Household Survey (GHS) and the Income and Expenditure Surveys (IES) give a better perspective of getting an

understanding of household-level food security in South Africa. Although these surveys are not designed for the study of household-level food security per se, they provide valuable datasets in terms of understanding food security (du Toit, 2011).

2.6.1.1 General Household Survey (GHS)

The general household survey (GHS) discloses trends in the experience of hunger over time, sets the basis for understanding where hunger remains most challenging and provides some basis for directing future food security or poverty alleviation interventions, both in terms of kind and location of households. The GHS covers six major areas, namely education, health and social development, housing, household access to services and facilities, food security and agriculture (du Toit, 2011).

The GHS is a household survey that has been specifically designed to measure the multifaceted living conditions of South African households, as well as the quality of service delivery in a number of key service sectors. The target population for the GHS includes all private households in the nine provinces of South Africa and people residing in workers' hostels. The survey does not cover students' hostels, old-age homes, hospitals, prisons and military barracks (Statistics SA, 2012).

The questionnaire is reviewed and amended annually. Depending on the need for more information on particular areas, additional sections or questions can be added to existing sections. Likewise, questions that are no longer necessary may be removed (Statistics SA, 2012).

2.6.1.2 Income Expenditure Survey (IES)

The IES contributes to a better understanding of food security at household level by measuring the portion of income spent on food by poor households. The main objective of the IES is to provide relevant statistical household information on the structure of expenditure that will enable to update the goods and services baskets of the consumer price index (CPI). The survey uses a combination of the diary and recall methods. Households complete their daily purchases in diaries for a period of two weeks and respond to questions from the household questionnaire provided by Statistics SA officials over a four week period (Statistics SA, 2012).

In the 2010/2011 IES, data was collected in stages over a period of four weeks during different visits to sampled households using three data collection instruments, i.e. the household questionnaire, the weekly diary and the summary questionnaire (Statistics SA, 2012).

The household questionnaire was a booklet composed of four modules of questions. The questions were administered to respondents during the period of the survey. Weekly diaries were also contained in a booklet which was given to the head of the responding household to track all acquisitions made by the household during the diary-keeping period. Different diaries were filled for each week over a four week period. Finally the summary questionnaire served as a list for interviewers when assigning codes for the classification of individual consumption according to purpose (COICOP) to reported items recorded in the weekly diary (Statistics SA, 2013).

2.6.1.3 The Labour Force Surveys (LFS)

The Quarterly Labour Force Surveys (QLFS) is a household-based survey conducted every three months by Statistics SA to collect data on the labour market activities of individuals aged 15 years and above (often up to the retirement age of 65 years) who live in South Africa. These surveys take into account the instability of the job market and ensure that the absent household members have a better chance of inclusion at their usual residence (Statistics SA, 2013).

2.6.2 NATIONAL FOOD CONSUMPTION SURVEY (NFCS)

The NFCS is commissioned by the Nutrition Directorate of the Department of Health (DoH), within the scope of its Integrated Nutrition Programme (Labadarios *et al*, 2007). The first NFCS survey was conducted in 1999 and aimed at determining the nutrient intakes and anthropometric status of children (1–9 years old), as well as factors that influence their dietary intake. The same survey was repeated in 2005 and defined the anthropometric, iron, iodine, zinc, folate and vitamin A status of children aged 1–9 years and women of reproductive age in South Africa, as well as the knowledge, attitudes and practices with regard to food fortification and fortified food products (Labadarios *et al*, 2009).

Labadarios *et al* (2007) developed the following methodology for the 2005 NFCS:

- A cross-sectional survey of a nationally representative sample of children aged 1–9 years in South Africa using data from 2001 census.

- The survey population consisted of all the children aged 1–9 years and women of reproductive age (16–35 years) living in the same Household.
- Validated questionnaires (socio-demographic, knowledge, attitude and behaviour questionnaire, food procurement and household food inventory and hunger scale) were conducted by trained fieldworkers. A blood and urine sample was also taken from the respondents of each household to assess micronutrient status. Samples of tap water and maize were collected from each household and tested for iodine and vitamin A respectively.
- A training manual was developed and used for the training of all field personnel engaged in the implementation of the survey.
- Anthropometric status assessment included height and weight.
- Quality assurance measures were employed throughout the survey.

2.6.3 FOOD INSECURITY AND VULNERABILITY INFORMATION MANAGEMENT SYSTEM (FIVIMS)

In 2005, the Department of Agriculture embarked on an integrated household survey on livelihoods in the Greater Sekhukhune district municipality as part of the piloting of a Food Insecurity and Vulnerability Information and Mapping System (FIVIMS). The objectives of the survey were to better understand the main livelihoods in Sekhukhune, to identify key drivers of food insecurity and vulnerability, to use the data in the design of food security models and generate a survey report (DoA, 2006).

2.6.4 MEASUREMENTS USED IN THIS STUDY

The measures used in this study, the Household Food Insecurity Access Scale (HFIAS), the Household Dietary Diversity Scale (HDDS) and the Coping Strategies Index (CSI) have been used in many countries including by various international agencies of the United Nations, and appear to be quick and easy to administer, straight-forward to analyse, and provide immediate information. The questions developed represent universal domains of the household food insecurity (access) experience and can be used to assign households along a continuum of severity, from food secure to severely food insecure households (Coates, Swindale & Bilinski, 2007; Maxwell, Watkins, Wheeler & Collins, 2003; Maxwell & Caldwell, 2008).

2.6.4.1 Measurement of household food access

The Household Food Insecurity Access Scale (HFIAS) is an adaptation of the approach used to estimate the prevalence of food insecurity in the United States (U.S.) annually. It is an important measurement for public policy makers who use official statistics for their policy formulations and decision making and is currently the most widely used and most tested food security direct measure (Coates, Swindale & Bilinski, 2007).

The HFIAS questions enable to measure household food access by asking them about modifications they made in their diet or eating patterns during the previous month because of limited resources to obtain food (Statistics SA, 2012).

Coates, Swindale & Bilinski (2007) developed four types of indicators that can be calculated to help understand the characteristics of and changes in household food insecurity (access) in the surveyed population. Of those, the two that are commonly used in practice, will be used in this study in order to understand the characteristics of household food insecurity (access) in the street trading sector in Durban. These indicators are:

- Household Food Insecurity Access Scale Score
- Household Food Insecurity Access Prevalence

2.6.4.2 Household Food Insecurity Access Scale Score (HFIAS Score)

The HFIAS score is a continuous measure of the degree of food insecurity (access) in the household in the previous month. It is calculated for each household by summing the codes for each frequency-of-occurrence question. The frequency-of-occurrence is coded 0 for all cases where the answer to the corresponding occurrence question is “no”. The higher the score, the more food insecure (access) the household was. The lower the score, the less food insecurity (access) a household experienced (Coates, Swindale & Bilinski, 2007).

2.6.4.3 Household Food Insecurity Access Prevalence (HFIAP)

Using the HFIAP indicator, Coates, Swindale & Bilinski (2007) categorized households into the following four levels of household food insecurity (access):

- **Food secure** — Households that show no or negligible indication of food insecurity.
- **Mildly food insecure or food insecure without hunger** — Food insecurity is apparent in households through concerns about adequacy of the household food supply and in adjustments to household food management, including reduced quality of food and increased unusual coping patterns. Little or no reduction in members' food intake is reported.
- **Moderately food insecure or food insecure with hunger** — Food consumption by adults in the households has been reduced to a level that implies that adults have repeatedly experienced hunger. In most (but not all) food-insecure households with children, such reductions are not observed at this stage on children.
- **Severely food insecure or food insecure with hunger** — At this level, all households with children have reduced the children's food intake to a level that indicates that the children have experienced hunger. Adults in households with and without children have repeatedly experienced more reductions in food consumption.

2.6.4.4 Measurement of household food quality and diversity

Hoddinott & Yohannes (2002) evaluated the suitability of using household dietary diversity as an indicator of household food security and found that as dietary diversity increases so too does per capita intake and energy availability, and that the increase in energy availability comes more from non-staple than staple foods. From this, they concluded that dietary diversity coupled with the consumption of non-staple foods, is a reliable indicator of household food security (Kirkland *et al*, 2011).

Household food diversity measure that will be used in this study is called "Household Dietary Diversity Score (HDDS)". It has been widely used in many developing countries and indicates a positive relationship between dietary diversity and nutrient adequacy (Kirkland *et al*, 2011).

2.6.4.5 Measurement of household coping strategies

Snel & Staring (2001) have a broad definition of coping strategies that "all the purposefully selected acts that individuals and households in a poor socio-economic situation use to limit their expense or earn some extra income to enable them to pay for their basic necessities (food, clothing, shelter) and not fall too far below the level of well-being of society". This definition implies that coping strategies

involve a conscious use of alternative courses of action. This does not necessarily mean that their choice of strategies is always successful in achieving their intended objectives. If anything, the coping strategies often have unintended negative results.

The strategies used by households differ in several aspects, both within the household and between households (Maxwell *et al*, 2003). Due to difference in levels of wealth among households, different coping behaviours are adopted by households at different poverty levels. However, some coping strategies are common to all households although the extent to which such strategies enable a household to stay afloat depend on the assets at its disposal. The general trend is that the lower the status of household assets, the more likely it would engage in erosive responses (Hoddinott, 2004).

The relationship between the Household Food Insecurity Access Scale (HFIAS), the Household Diet Diversity Score (HDDS) and the Consumption Coping Strategies Index (CSI) is that a household, which has low food access and/or low diet diversity, often resorts to using more coping strategies in order to deal with lack of food access and low quality of food. Coping strategies are an indication of the vulnerability of a family, because households that are poor and likely to be destitute use more coping strategies, clearly indicating their vulnerability to hunger (Maxwell & Caldwell, 2008). Maxwell *et al* (2003) argue that a shortage of food requires a change in people's behaviour and when the adopted behaviour is to reduce the number of meals, it may lead the concerned households to become more vulnerable to malnutrition.

According to Maxwell *et al* (2003) food insecure households use any of the below four types of consumption coping strategies or a combination of all or some of them, which indicate a problem of food insecurity or food shortages in households. Households may decide to:

- Change their diet (substituting preferred foods with cheaper, less preferred foods).
- Try to increase their food supplies using short-term strategies that are not sustainable over a long period (borrowing, or purchasing food on credit, begging or consuming wild foods, or even seed stocks).
- Try to reduce the number of people in the household by sending some of them to eat elsewhere (anything from simply sending the kids to the neighbour's or a relative's house to eat, to more complex medium-term migration strategies).

- Try to manage the shortfall by rationing the food available to the household (cutting portion size or the number of meals, favouring certain household members over other members, going whole days without eating, etc.).

Maxwell & Caldwell (2008) explain that coping strategies measure behaviour: the things that people do when they cannot access enough food. Households which are poor and likely to be deprived use more coping strategies. This could mean that those who use severe strategies are more vulnerable to hunger. There exist a number of regular behavioural responses to food insecurity or coping strategies that people use to manage household food shortages. These coping strategies are easy to observe, quicker, simpler, and it is cheaper to collect information on coping strategies than on actual household food consumption levels. Hence, the CSI is an appropriate tool in situations where other methods are not appropriate or practical.

There are two main types of coping strategies. One includes the *immediate and short-term alteration of consumption patterns* while the other concerns the *longer-term alteration of income earning or food production patterns*, and one-off responses such as asset sales (Maxwell & Caldwell, 2008). While it is important to understand longer-term livelihood strategies, the management of short-term consumption strategies is an accurate indicator of acute food insecurity.

The Coping Strategy Index (CSI) tool is designed to determine the number and the frequency of coping strategies that the household may employ when there is a shortage of food in the household. It is relatively simple and quick to use, straightforward to understand, and correlates well with more complex measures of food security. It was developed in Uganda, Ghana, and Kenya but is now an international, standardised questionnaire, used in many African countries, in Middle East and in Asia (Maxwell & Caldwell, 2008).

2.7 SUMMARY OF LITERATURE REVIEW

This chapter gave an overview of available literature regarding household food security and street trading with special emphasis on urban areas, particularly eThekweni municipality (Durban). The literature highlights the importance of street trading and the socio-economic situation of street traders at international, national and most importantly at urban levels. It is quite interesting to note that increasing

numbers of qualified and semi-qualified young people are joining the street trading sector like many others as they cannot find formal employment.

Measuring food insecurity is a costly and complicated exercise. In South Africa there are no specific and accepted measures of food security, researchers use various methods to assess food security at household level depending on the objectives and purpose of their study. Some of the common measures used to assess food security status in the country are: National Food Consumption Survey (NFCS); General Household Survey (GHS); Income and Expenditure Survey (IES); Labour Force Survey (LFS) and Food Insecurity and Vulnerability Information and Mapping System (FIVIMS).

The measures used in this study, the HFIAS, the HDDS and the CSI have been used in several countries including by various international agencies of the United Nations, and appear to be quick and easy to administer, straight-forward to analyse, and rapid enough to provide real-time information.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodology and materials that were used to collect data in order to achieve the objectives of the study. An overview of the province of Kwazulu Natal and eThekweni municipality (Durban) is included to place the research area within the context of the study.

3.2 RESEARCH STUDY AREA

3.2.1 SOCIO-DEMOGRAPHIC PROFILE OF KWAZULU NATAL AND DURBAN

The 2011 National Census has revealed that Kwazulu Natal (KZN), which was previously South Africa's most populous province, has now been overtaken by Gauteng with 12.3 million people. KZN now contributes 20% of South Africa's 51, 770, 560 million people, with a population of 10, 267, 300 people (Statistics SA, 2012).

The Provincial Department of Agriculture and Environmental Affairs (DAEA, 2013) reported in its 2013/2014 Annual Performance Plan, that the unemployment rate in KZN stands at 33% and youth unemployment is at an alarming 49%, which accounts for the high rate of migration from the province to Gauteng in search of employment opportunities. About a million people between the ages of 5-24 in KZN are neither in educational institutions, training or work. The rural-urban migration continues to be a dominant trend in the province. The most populous areas are eThekweni District municipality (34%) which account for a third of the province's population, followed by Umgungundlovu district municipality (10%). This is an indication that a growing number of KZN's population is moving to urban centres, and that food security in eThekweni municipality can be viewed as the reflection of all urban centres in the KZN province.

The 2011 census indicated that unemployment and poverty is most brutal among black Africans, who represent 80% of KZN population and that women and children are the main victims of poverty (DAEA, 2013).

The study was conducted in three different towns of eThekweni municipality (Durban), which are Isipingo in the South, Durban Central and Phoenix in the North. eThekweni is one of eight metropolitan municipalities in South Africa, based in the province of Kwazulu Natal. Durban is the richest and largest municipality in the Province of Kwazulu Natal and the third richest in South Africa after Johannesburg and Cape Town. It is situated on the East Coast of South Africa and surrounded by iLembe district municipality to the North, the Indian Ocean to the East, Ugu district municipality to the South and Umgungundlovu district municipality to the West.

According to information found on its website, eThekweni Metropolitan Municipality has 2,291km² with a population of 3,442,361 of whom 71% come from the African community, followed by Indians (19%), Whites (8%) and Coloureds (2%). The official unemployment rate is estimated to be around 30.2% and majority of the population is young (15-35 years). The majority of people (34%) are dissatisfied with their life, particularly because of unemployment, housing, crime and the inability to meet basic needs, amongst other reasons (eThekweni Municipality, 2012).

This municipality contributes 53% of the Gross Value Added (GVA) to the provincial economy followed by uMgungundlovu (12%) and uThungulu (8%), making eThekweni economy by far the most important in the province of KZN. The tertiary sector activities (finance and business services, wholesale and retail trade, government and other services, transport and storage), contribute 71% to the total GVA of the municipality followed by the secondary sector which includes manufacturing, utilities and construction, which contributes a total of 27% to the municipal economy (Davis, Zunckel & Kruger, 2012).

The main economic sectors in the municipality are: manufacturing (30%), tourism (24%), finance, trade (16%), transport and communication (14%) and community services. Informal trade contributed 56% of the employment in the informal sector in 2007 in this municipality. 41.8% of the population is classified as living in poverty, although poverty is believed to be less pronounced in this municipality than elsewhere in Kwazulu Natal because other areas in the provinces are more rural (eThekweni municipality, 2012).

3.3 RESEARCH DESIGN

This study was conducted according to a cross-sectional and descriptive design. Trochim (2006) defines cross-sectional research as a type of study that utilizes different groups of people who may differ in many things but share characteristics such as socioeconomic conditions, educational background, and ethnicity. Cross-sectional studies are observational in nature and are also known as descriptive researches because researchers record the information that is present in a population, but they do not manipulate variables. It is a type of research that is often used to describe characteristics that exist in a population, but not to determine cause-and-effect relationships between different variables (Trochim, 2006)

Descriptive research encompasses research activities such as a population census or survey, the collection of a wide range of social indicators and economic information such as household expenditure patterns, time use studies, employment and crime statistics. This type of research design is used in quantitative, qualitative or mixed research methods. The questionnaire for this study was designed to describe the socio-demographic and food security situation of respondents in the three selected informal trading management regions of eThekweni municipality and provide a valid representation of factors that are relevant to the objectives of the research.

According to De Lisle (2011), mixed methods research is the type of research in which a researcher combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration. This research used a method dominated by quantitative approach mixed with open-ended questions in the same questionnaires as well as personal interactions between the field workers and the respondents aimed at capturing personal experiences of respondents. The observation of the researcher and his assistants also contributed to getting a better understanding of the socio-demographic and food security situations of street traders who participated in the study.

3.4 RESEARCH METHODS AND INSTRUMENTS

3.4.1 SAMPLE AND SAMPLING METHODS

This study was conducted among street traders in Durban Central, Isipingo rail and Phoenix Plaza. These areas were selected based on three main considerations, i.e. geographic spread, areas with high density of street traders and the historic struggle for the right to trade. The Central Business District (Durban Central) and Isipingo rail (South) are the most populated street trading management areas within eThekweni municipality whereas street traders in Phoenix Plaza (North) have gained a reputation on account of their struggle against the municipality for the right to trade in an area dominated by formal outlets. In total, the interviews were conducted with 120 street traders.

Out of the six (6) management regions, three (3) were selected for this research based amongst other considerations, on their regional (cluster) representation; Phoenix representing the North, Isipingo representing the South and obviously the inner city (Durban Central). In each management region (cluster), other considerations such as high density of street traders, the historic struggle for the right to trade, were taken into account in the selection of these sites.

It is worth noting though that, unlike in Phoenix and Isipingo where interviews were conducted only in Phoenix Plaza and Isipingo rail which are street trading restricted areas, interviews in Durban central were held throughout the Central Business District (CBD). In Durban Central and Phoenix Plaza, snowball sampling method was used; the researcher and his assistants relied on leaders of street trader organizations and the area committees through whom suitable respondents were identified, and who in turn referred them to others. In Isipingo rail, respondents were randomly selected among street traders because, leaders of street traders were not willing to cooperate in the same way that other leaders did elsewhere.

3.4.2 DATA COLLECTION

Data for this study was collected through individual face to face interviews conducted by using the four (4) socio-demographic and food insecurity sections of the questionnaire (see appendices A, B, C and D).

The socio-demographic section of the questionnaire includes open-ended questions and collected biographic and socio-economic data. Data on issues such as eating patterns, social protection (grants and/or any other), health conditions and sources of food was provided by respondents in this section of the questionnaire.

The three (3) food insecurity sections of the questionnaire which are the Household Food Insecurity Access Scale (HFIAS), the Household Dietary Diversity Scale (HDDS) and the Coping Strategies Index (CSI) sections, were used to collect data on the capacity of street traders to access quality food and how they adapt or mitigate the shortage of such food. Whereas the recall period for the HFIAS was 30 days or one month, the HDDS was measured at 24 hours (1 day) recall period and the CSI (Coping Strategies Index) recall period was 7 days or one week.

The HDDS section of the questionnaire had one main question and thirteen (13) sub-questions. The main question was **“have you or any member of your household ate the following food yesterday, in the morning, during the day or at night?”**

The CSI is a comparative tool often used to assess and monitor behaviour changes in relation to food shortages, through recording the different strategies that households employ to deal with poor access to food. However, no rankings were undertaken because this was a once only exercise with no possibility of returning to respondents with the same questionnaire later in time in order to compare changes in severity ranking, and considering the reluctance of respondents to disclose the severity level of their situation.

The main question in this section of the questionnaire was **“in the past 7 days, if there have been times when you did not have enough food or money to buy food, for how many days have you and/or your household had to** (rely on less preferred and/or less expensive food; borrow food or rely on help from a friend or a relative; buy food on credit; gather wild food; hunt, or harvest immature crops or eat seed stock held for next season; send children and other household members to eat at a friend or relative’s house; limit portion size at mealtime; restrict consumption by adults in order for small children to eat; feed working members of household at the expense of non-working members; only eat two meals in a day; eat only at night or in the morning; pass the whole day without eating).

3.4.3 FIELD VISIT: SCOPING VISIT AND PILOT STUDY

Various leaders of street traders organizations, Ward councillors and officials from the municipal department in charge of managing informal trading (Business Support and Markets Unit or BSTMU) were approached and informed about the study and its objectives. They were subsequently asked to grant permission and provide assistance to conduct research in the selected areas (de Vos, Strydom, Fouché & Delpont, 2011).

The pilot study was conducted with the 11 members of the Executive Committee of Umbumbano Traders' Alliance. The questionnaire was submitted and discussed with them in its pilot phase to test its suitability for use with street traders on the ground. This was an important phase in order for the field workers to get the buy-in of the leaders of street vendors especially considering that a significant number of street traders are members of associations and committees affiliated to Ubumbano Traders Alliance. In the meetings held on 11 and 18 September 2013, the Executive Committee approved and completed the questionnaire and committed to facilitate the selection of participants in their respective areas. Two research assistants were also selected among the leadership of Ubumbano Traders' Alliance. The questionnaires filled by the leaders of Ubumbano Traders' Alliance were subsequently included in the total 120 interviews conducted.

In Phoenix Plaza, the leadership of Phoenix Plaza Street Traders Association (PPSTA) mobilized their members and their Vice-President volunteered to be one of our research assistants for that area. In Isipingo, the participants were randomly selected; these were the street traders who accepted to respond and participate in the study.

Before research data collection commenced, two training sessions were organised. The first one was held with members of the informal traders' leadership during which the consent form and questionnaire were explained in details. The second one was a set of meetings held 30 days later in the last week before the actual data collection in different areas during which we discussed the process and any foreseeable possible challenges they may face.

3.4.4 FIELD VISITS: INTERVIEWS USING QUESTIONNAIRES

As already indicated above, this study was conducted from August to September 2013, among street traders in Durban Central, Isipingo and Phoenix Plaza. Other than the Executive Committee members of Ubumbano traders' alliance with whom the questionnaires were discussed and completed as part of their regular monthly meetings, all interviews were conducted with selected street traders at their workplaces next to their stalls while trading. Each complete interview session started with an introduction and signing the consent form before the actual questionnaires were filled out. All interviews conducted by research assistants were done in isiZulu for Zulu speakers and in English for Indian and foreign respondents.

3.5 CHALLENGES

Although research assistants underwent extensive training and supervision, some respondents did not provide logical and reliable responses or they were not recorded correctly. As a result, 36 initial questionnaires had to be discarded and other interviews conducted by the researcher in areas where those initial questionnaires came from.

Most street traders are vulnerable and often resist taking time away from trading in order to respond to a questionnaire or to participate in an interview. By working with leaders of street traders' organizations in the respective areas as key entry points and selecting some of them as research assistants, full cooperation of street traders in most areas was obtained. Apart from Isipingo, street traders when contacted showed a high level of consent to act as respondents, showed considerable interest in the survey, and were above all, frank and open in their replies.

Another challenge faced was that the interviews raised expectations among some respondents. Despite the explanation contained in the consent form which was repeatedly given to them, for some reason street traders did not seem to believe that this was just for academic purposes and hoped for some kind of follow-up after submission of the findings.

3.6 ETHICAL CONSIDERATIONS DURING DATA COLLECTION

Before starting data collection, as required, an application for ethics approval to undertake a research project was submitted to the UNISA's ethics committee. The actual data collection started only after the approval letter was received from UNISA.

Based on recommendations from Rubin & Babbie (2011), potential participants in this study were approached to request them to respond to the questionnaire. The first step when approaching respondents consisted of explaining the purpose of the study and also to get their interest in the topic. In addition, they were informed about a possible impact and/or consequence if any, and that they have the right to respond negatively to the request, even though we stated we would appreciate if they responded positively. All interviews started by the research assistant introducing him/herself and informing respondents that the research is being conducted entirely for academic purposes, that their participation was voluntary and therefore they were free to discontinue their participation at any stage of the study should they wish to do so.

Participants were requested to participate in the study by signing a consent form provided by the College of Agriculture and Environment Sciences (CAES) of UNISA to confirm that they agreed to participate in the study before it started. The respondents were informed that participation was voluntary and confidential.

3.7 DATA ANALYSIS AND PRESENTATION

The quantitative data collected was captured using IBM SPSS statistics 21.0. The analysis of data later was done using descriptive statistics (to generate frequencies, crosstabs and graphs) of IBM SPSS 21. Qualitative data was captured and coded manually in a way that facilitated the rapid retrieval of information. Data collected was subsequently retrieved, edited, categorized, classified and coded in order to develop themes for discussion in the next chapter based on the research questions and objectives.

While the quantitative data collected provided statistical information on households' food insecurity situation, using numerical analysis, the qualitative data analysis tried to understand the meaning of a particular behaviour.

CHAPTER 4 RESULTS AND DISCUSSION

4.1 INTRODUCTION

The purpose of this chapter is to present and discuss the results of data collected from the Durban street traders who formed part of this study. The analysis is divided into four sub-chapters which represent the four sections of the questionnaire and also the specific objectives that were set: i.e.(i) to investigate the access to food by street traders and their households; (ii) to understand how diverse and nutritious is the food consumed by street traders and members of their households and; (iii) to determine and to document the strategies used by street traders to cope with food shortage in their households.

4.2 SOCIO-DEMOGRAPHIC RESULTS

4.2.1 GENDER, AGE AND EDUCATION OF RESPONDENTS

Table 4.1 – Age group, level of education and additional training by gender

Characteristics		Gender		
		Percentage		
		Male	Female	Total
Age group	18 – 35	16.7 (n=20)	15.0 (n=18)	31.7 (n=38)
	35 – 50	23.3 (n=28)	24.2 (n=29)	47.5 (n=57)
	Above 50	6.7 (n=8)	14.2 (n=17)	20.8 (n=25)
	Total	45.8 (n=55)	53.3 (n=64)	100.0 (n=120)
Level of Education	None	-	8.3 (n=10)	8.3 (n=10)
	Primary school	11.7 (n=14)	12.5 (n=15)	24.2 (n=29)
	High school	25.0 (n=30)	24.2 (n=29)	49.2 (n=59)
	Matriculates	7.5 (n=9)	5.8 (n=7)	13.3 (n=16)
	Tertiary education	1.7 (n=2)	3.3 (n=4)	5.0 (n=6)
	Total	45.8 (n=55)	54.2 (n=65)	100.0 (n=120)
Other training	None	4.2 (n=5)	12.5 (n=15)	16.7 (n=20)

	Catering	-	7.5 (n=9)	7.5 (n=9)
	Small Business Mgmt.	27.5 (n=33)	38.3 (n=46)	65.8 (n=79)
	Security	5.0 (n=6)	0.8 (n=1)	5.8 (n=7)
	Other	2.5 (n=3)	1.7 (n=2)	4.2 (n=5)
	Total	39.2 (n=47)	60.8	100.0 (n=120)

Table 4.1 above indicates that most respondents (79.2%) were aged between 18 and 50 years. Almost a third of them (31.7%) were young, aged between 18 and 35 years of age. The majority of respondents (53.3%) were women. These findings correspond with the recent municipal census conducted in Isipingo and other previous studies indicating that more than half (53%) of street traders in Durban are women and more and more young people are working in the street vending sector (Horn, 2011; StreetNet, 2012; Urban-Econ, 2013; Skinner, 2009).

Most street traders (49.2%) who participated in this study are semi-literate, having reached high school level of education, and 13.3% have matriculated, of whom almost half (43.7%) were women. Compared with previous studies in Durban, the number of street traders with tertiary education level is increasing. The study found that up to 5% of respondents (of whom 66% are women) had a tertiary level of education, which is higher than the findings of the 2010 and 2013 (Isipingo) censuses (McConnell & McConnell, 2010; Urban-Econ, 2013) which found respectively that 3% and 2.6% had a tertiary level of education. Although still in minority, this increase in the number of graduates who resort to street trading as a way to earn an income need to be further and properly investigated.

These results are also higher than those of Horn (2011) but lower than the results of Urban-Econ (2013), which found that 37% and 62.7% of street traders in Durban and Isipingo respectively have some level of secondary education. This confirms the data that an increasing number of graduates are now resorting to street trading, possibly because of scarcity of formal employment (McConnell, Hixon & McConnell, 2010; Horn, 2011). The study found that all of the 10% of respondents with no schooling were women. This has been equally confirmed by Siqwana-Ndulo (2013), who argues that this is a general situation throughout the country due to various structural and social issues and is not specific to the street vending sector. Statistics SA (2011) also found that 14.8% of black African women aged 25 years and older had no formal schooling.

Although there seems to be no proven direct relationship between lack of formal education and household food insecurity in general, however, in the case of urban inhabitants there seems to be a causal link. The lack of education of the heads of households limits their ability to understand written instructions, rules and by-laws, and also their access to markets, technology, training, finances, infrastructure and information that could help them improve the income and food security situation of their households (Siqwana-Ndulo, 2013).

The study further revealed that more than two-third of all respondents (65.8%) has received additional training in small business management. Women represent 58.2% of all those who had received small business management training.

These findings indicate that, like elsewhere in the world, street trading in Durban is increasingly becoming an important source of income and therefore an important way to cope with food insecurity for men and women, young and old, illiterate and university graduates alike. It should no longer be ignored and treated as a nuisance by both the government and other role players.

4.2.2 FIRST LANGUAGE

An earlier survey commissioned by StreetNet International (2012) found that 85% of street traders were isiZulu speaking followed by Xhosa speaking. In this study also, the majority were found to be first language Zulu speaking (62.5%). This is not surprising for the largest city of the Kwazulu Natal Province where isiZulu is the main language.

Radipere (2012) highlights the problems faced by immigrants, which prevent them from entering the job market in South Africa and therefore, they turn to self-employment. Five percent of respondents in this study speak other African languages including Kiswahili (language widely spoken in East and Central Africa). This is an indication of the size of street traders from other African countries in this city. It also shows a sense of their integration in the South African trading society and a possible good relationship that seem to exist between South African and other African street traders. This is illustrated in Table 4.2.

Table 4.2 – First language

Language	Percentage
isiZulu	62.5 (n=75)
English	15.0 (n=18)
isiXhosa	17.5 (n=21)
Kiswahili	1.7 (n=2)
Other African languages	3.3 (n=4)
Total	100 (n=120)

4.2.3 RESIDENTIAL AREAS OF RESPONDENTS

As reported in chapter 3, the interviews were conducted in three major trading areas, i.e. Central Durban, Phoenix and Isipingo. In all these 3 sites, respondents were predominantly black Africans, even though Phoenix and Isipingo are predominantly Indian-dominated areas. This indicates that these street traders live elsewhere and have to commute to and from their trading areas. The findings corresponds with the results of the municipal census conducted in 2013 in Isipingo which also found that 82.8% of street traders do not reside close to their trading areas (Urban-Econ, 2013).

Table 4.3 – Residential areas of respondents

Residential area	Percentage
North (Inanda, Ntuzuma, Kwamashu...)	31.7 (n=38)
South (Umlazi, Lamontville, Wema...)	15.8 (n=19)
West (Mayville, Pinetown, Clermont...)	13.3 (n=16)
Central Durban	9.2 (n=11)
Other (townships, informal settlements, peri-urban)	30.0 (n=36)
Total	100.0 (n=120)

Table 4.3 above shows that 31.7% of respondents live in North (Inanda, Ntuzuma, and Kwamashu), 15.8% in South (Umlazi, Lamontville, Wema) and 30% live in other townships, informal settlements and peri-urban areas. Only 9.2% live in central Durban. The findings of the official census in Isipingo, reveals that traders travel to and from their trading areas and spend a substantial amount of time (more than 4 hours) and money on commuting between home, workplaces and wholesale places (Urban-

Econ, 2013). This journey from home to work and back affects their well-being and has a negative impact on their income and food security because they have to open their businesses later and close earlier than others to catch their transport (Roebuck & Marcus, 2001). Studies conducted in some African cities (Lagos, Douala, Yaoundé and Dakar) revealed that the urban poor spend between 14% and 20% of their income on transport (Carruthers, Dick & Saurkar, 2005).

Transport costs and services (minibus-taxi) were reported to be a challenge for informal traders in the study conducted in Durban in 2001, as most of the time they are required to pay for their goods as well. However, the advent of the minibus-taxi has been a key factor in enabling the development of street trading and other small businesses as it is often the only transport means available in townships and provides the necessary link between traders, materials and markets (Roebuck & Marcus, 2001).

4.2.4 PRODUCTS AND SERVICES OF TRADE

Table 4.4 – Products and services of trade

Products and services	Percentage
Street Barber	8.3 (n=10)
Fruits and vegetables	43.3 (n=52)
Other food products (cooked and processed food products)	13.3 (n=16)
Manufactured good (textiles, shoes, etc.) and/or confectionary)	25.8 (n=31)
Other	9.2 (n=11)
Total	100.0 (n=120)

Table 4.4 above indicates the general trend whereby 56.6% of street traders sell food items. The figure shows that 43.3% of them sell fresh produce and 13.3% sell other food products like fresh and cooked corncoobs, processed wheat products (bread, fat cooks and others). However, in some cases, street traders were selling several types of goods and services from the same trading location.

According to the information received from the discussion with fruits and vegetable traders and a visit to the Durban fresh produce bulk market; almost all fruit and vegetable street traders buy in bulk at this market which is situated in Clairwood (about 10 km south of Durban) and operates from 06h00 to 11h00 a.m. Fresh produce traders have to be at the market at 06h00 to be able to buy the best fresh produce (fruits and vegetables). Since there are no cold storage facilities for them, fresh produce

traders have to commute daily between their home, Clairwood bulk market and trading places. The impact of the distance (between their homes, trading places and the Clairwood bulk market) on their income and therefore on their food security situation cannot be underestimated and should be seriously investigated.

4.2.5 PRODUCTS/SERVICES OF TRADE AND MONTHLY INCOME

According to Roever (2010), earnings among street traders in many parts of the world vary widely, but most street traders are poor, earning below the poverty threshold of US\$2 a day. In this study it was found that the majority of very low income street traders earned less than R2000 of gross income per month. The 22 categories of common products and services were regrouped into 5 main groups in order to facilitate the identification of activities that resulted in the highest income levels. The five categories, selected were: fruit and vegetables, other food products, street barbers, manufactured goods and/or confectionaries, and other goods and services.

Table 4.5 – Monthly income of products/services of trade of respondents

Products/Services of trade	Monthly income (percentage)			
	Below R2000	R2000 to 3500	Above R 3500	Total
Street barber	1.6 (n=2)	6.7 (n=8)	-	8.3 (n=10)
Fruit and Vegetables	33.3 (n=40)	10.0 (n=12)	-	43.3 (n=52)
Other food products	9.2 (n=11)	3.3 (n=4)	0.8 (n=1)	13.3 (n=16)
Manufactured goods and/or confectionary	18.3 (n=22)	5.0 (n=6)	2.5 (n=3)	25.8 (n=31)
Others	5.8 (n=7)	2.5 (n=3)	0.8 (n=1)	9.2 (n=11)
Total	68.3 (n=82)	27.5 (n=33)	4.1 (n=5)	100.0 (n=120)

Generally speaking, vendors of non-food products earn more than food traders. In particular, vendors of fruits and vegetables are vulnerable because of unstable prices and lack of cold storage facilities, which often mean that their goods spoil before they are sold (Roever, 2011). Similarly to the census conducted by McConnell, Hixon & McConnell (2010), this study found that, with 79.2%, foodstuffs (including confectionary) are the most important products traded by street vendors in Durban. Street traders who participated in this study confirmed that trading in fruits and vegetables is the activity of choice for most street traders (42.5%) followed by trading in manufactured goods and/or confectionary

(25.8%). As reported earlier, it is not unusual to find other products/services (public phones, sim cards) sold by these traders next to foodstuffs. The income of the majority of traders (68.3%) is below R 2000 per month while 27.5% of them earn between R2000 and R3500 per month.

It is noticeable from the survey that all traders live near or below poverty levels. Considering that the lower poverty line is R431 per month, and that on average street traders' households have 4 members or more, these results indicate that street traders' households live well below the lower poverty line. Similar results were obtained by other surveys conducted on urban food security in Msunduzi and Cape Town (Frayne *et al*, 2009), and on socio-demographic situation of street vendors in Durban, Johannesburg, Isipingo and Tshwane (Horn, 2011; Urban-Econ, 2013).

4.2.6 SIZE OF HOUSEHOLDS

Table 4.6 – Size of households

Size of Household	Percentage	
	Total	Completely dependent on street traders
1 to 3 members	40.8 (n=49)	35.8 (n=43)
4 to 6 members	40.8 (n=49)	40.0 (n=48)
Above 6 members	18.3 (n=22)	18.3 (n=22)
Total	100.0 (n=120)	94.2 (n=113)

The 2010/2011 Income and Expenditure Survey found the average household size to be 3.85 across all races in South Africa, being higher in female-headed households. The survey conducted by Horn in Durban also confirmed that the average number of dependents per respondent was 4 or more (Horn, 2011; Statistics SA, 2012).

As illustrated in Table 4.6 above, this study confirms these earlier findings, indicating that all respondents have big households (4 or more members) and almost all of them (94.2%) are totally dependent on the heads of households who are street traders. However, it was not clear from the responses whether these also included dependents who lived in the rural areas where respondents come from.

4.2.6.1 Size of households and monthly income

The 2010/2011 Income and Expenditure Survey (IES) (statistics SA, 2012) classified households according to per capita income per month as follow:

- Upper quintile: R57,100 and more;
- 4th quintile: R21,003 – 57,099;
- 3rd quintile: R9,887 – 21,002;
- 2nd quintile: R4,544 – 9,886;
- Lower quintile: up to R4,543

The same survey (IES) found that the average household income across all households was R119,542 per annum, but was noticeably lower for black African households at R69,632 or R5,803 per month per head of household of 4 members (Statistics SA, 2012).

This study shows in Table 4.7 below that the majority of respondents (68.4%) earn less than R2,000 per month. Among them 36.7% have 4 or more members while 31.7% have a maximum of 3 members. Compared with the national findings, the majority of street traders in Durban earn about a third of the monthly income of black Africans and belong to the lower quintile. In addition, the surveys conducted on street traders in Isipingo and in Durban indicated that the great majority (75%) of them earned only between R300 and R1,800 per month, which make them highly vulnerable to food insecurity (Urban-Econ, 2013; McConnell, Hixon & McConnell, 2010).

Table 4.7 – Monthly income in relation to the size of household

Size of Household	Percentage				
	Monthly income				Total
	Below R2000	R2000 to 3500	Above R3500	No response	
1 to 3	31.7 (n=38)	6.7 (n=8)	0.8 (n=1)	-	39.2 (n=47)
4 to 6	22.5 (n=27)	15.8 (n=19)	1.7 (n=2)	-	40.0 (n=48)
Above 6	14.2 (n=17)	3.3 (n=4)	0.8 (n=1)	-	18.3 (n=22)
No response				2.5 (n=3)	2.5 (n=3)
Total	68.4 (n=82)	25.8 (n=31)	3.3 (n=4)	2.5 (n=3)	100.0 (n=120)

It is important to mention that street traders are often apprehensive about sharing information on their income, profit and turnover due to issues of fear, privacy, and lack of trust, particularly with reference to the authorities. Skinner (in Horn, 2011) argues that questions that measure income of workers should not be included at all because often information given does not reflect the real situation and most street traders do not keep accurate records of their gross income, business-related expenditure, wages and profit, and the majority of informal business owners are reluctant to declare income for fear of being taxed (Horn, 2011). In this study, 2.5% did not respond to the question about income and some of those who did; stated that it was not easy for them to estimate their monthly earning and to separate profit (net income) from their gross income, especially those who were not well educated.

However, while these estimates may not be accurate, measuring income in this context did help us to provide an indication of the ability of this segment of the urban poor to sustain the priority needs of their households. In addition, the estimation of income of respondents did enable the researcher to compare their income to poverty levels. Accordingly, based on the lower bound poverty line of R431 per person per month (Statistics SA, 2012), and considering the number of dependants, the study found that the respondents' households live well below the lower poverty line.

4.2.7 SOURCES OF INCOME

Table 4.8 – Sources of income

Age group	Percentage			
	Other source of income			
	Nothing	Social grant	Other	Total
18 to 35	15.8 (n=19)	15.0 (n=18)	0.8 (n=1)	31.7 (n=38)
35 to 50	23.3 (n=28)	22.5 (n=27)	1.7 (n=2)	49.2 (n=59)
Above 50 years	5.0 (n=6)	13.3 (n=16)	0.8 (n=1)	19.2 (n=23)
Total	44.2 (n=53)	50.8 (n=61)	3.3 (n=4)	100.0 (n=120)

Trading constitutes the main source of income for street traders followed by social assistance. Although a significant number of respondents (44.2%) reported that they do not receive any additional income, Table 4.8 above shows that the majority of households (50.8%) reported receiving a government welfare grant. Although most respondents were aged between 18 and 50 years, this study

was not able to determine the categories of grants received by respondents. This suggests therefore that there is a need of more investigations on the impact of social grants to food security in street vending sector

Leibbrandt *et al* (2010) argue that social grants have strong anti-poverty impact. These authors indicated that in 2007, almost 50% of households reported that social grants were their main source of income. One struggling respondent confided to us that her trading business was not doing well and if it was not for the disability and child support grants that she collects, she would be very miserable.

Therefore, in spite of their modest financial value, social grants make an important contribution to livelihoods and food security situations of street traders' households.

4.2.8 SOURCE OF FOOD AND NUMBER OF MEALS PER DAY

Table 4.9 – Source of food

Source of food	Percentage
Backyard gardening	11.7 (n=14)
Receive grocers from relatives	4.1 (n=5)
Purchase	79.2 (n=95)
Food parcels	1.7 (n=2)
Other	3.3 (n=4)
Total	100.0 (n=120)

Street traders spend long hours selling goods and services and their working day is extended even more by time spent travelling between home and workplace and other home duties such as cooking and cleaning, particularly for women. The street traders survey conducted in Durban in 2010 found that on average street traders spend 10 hours trading (StreetNet, 2012), excluding the time spent commuting and bulk buying. This situation compels street traders to rely on purchased food as they have very little time left to undertake any other activity.

The Table 4.9 demonstrate that more than three-quarter of respondents (79.2%) purchase all their food. More than half of respondents (53%) generally eat two meals a day whereas 21.7% have three meals or more per day as illustrated in the Table 4.10, unfortunately only 11.7% of respondents grow

vegetables in their backyards. Considering the importance of this activity as a contributor to household food security, it would be important to study the possibilities of involving other members of their households in backyard food production.

Table 4.10 – Number of meals per day

Number of meals per day	Percentage
One	7.5 (n=9)
Two	61.6 (n=74)
Three or more	25.8 (n=31)
Total	100.0 (n=120)

Literature confirms that household urban agriculture can be a source of income and can provide direct access to a larger number of nutritionally rich foods (vegetables, fruit, and meat). Additionally urban agriculture can provide a more varied diet, and increase the stability of household food consumption (Maxwell in Zezza & Taciotti, 2010). Urban agriculture provides substantial income savings to poor households that spend the largest portion of their income on food. It is relatively inexpensive, requiring few resources and little skill, and therefore forms a food security measure that supplements street trading income, particularly in times of instability (Geyer *et al*, 2011).

Production of food (e.g. green vegetables, eggs, milk, and meat) by poor urban households can supply 20% to 60% of their total food consumption. Those households that are involved in some sort of farming or gardening have a better and more diverse diet (increased vegetable consumption) and are therefore more food secure than those who are not involved in urban food production (van der Merve, 2011).

However, although urban agriculture, often informal, is advised here as one of the main alternatives for improving urban food security for street traders' households, it can only be undertaken with the direct or indirect involvement of others members of street traders' households. As an additional source of food and income, urban agriculture should be encouraged particularly considering that the majority of street traders are involved in food vending.

4.2.9 INDIGENOUS FOOD

Despite their nutritional and economic value, indigenous food crops (and their products) are so far only traded informally within communities to generate income for the farmers. Currently, there is a growing interest by government and other stakeholders about the value of these crops as a means to address food security and climate change (DAFF, 2013).

Table 4.11 – Categories of indigenous food consumed by street traders in Durban

Category of Food	Percentage
Households that do not use indigenous Foods	40.0 (n=48)
Households that use indigenous food	60.0 (n=72)
Total	100.0 (120)

The importance of indigenous foods in this study is indicated in Table 4.11 above. The results show that 60% of households that participated in the study use indigenous food for subsistence or income generation. This is encouraging considering the negative impact of cash crops introduced by colonial economies, on the changes of the diet of African people (van der Hoeven, Osei, Greef, Kruger, Faber & Smuts, 2013). Van der Hoeven, *et al* (2013) argues that urbanisation has contributed to a decline in knowledge of the usefulness of indigenous and traditional plants and the subsequent decline in their consumption. It is important to note though that a great variety of traditional food consumed in Durban, particularly by Zulu people, is not necessarily from indigenous food crops. Food like maize, wheat flour, etc., are prepared traditionally to make meals such as ujeqe, Isijingi, Isijwabane (Isigwampa), Isicukwana, Amaqeba, etc.

Table 4.12 – Sources of indigenous food

Source of indigenous food	Percentage
Collected from veld	13.3 (n=16)
Collected from fallow fields	0.8 (n=1)
Planted in garden or field	26.7 (n=32)
Other/Purchase	42.5 (n=51)

Note: Numbers do not add-up as some respondents reported more than one source of food while 40% indicated they did not consume indigenous food.

Most respondents in this study indicated using a combination of methods to source indigenous vegetables (Table 4.12). It was revealed that respondents either collect from the veld, or collect from fallow fields, plant or purchase the indigenous food. Of all street traders interviewed, 41.7% indicated consuming amaranths followed respectively by amadumbe (26.7%) and cowpeas (*Imbumba*) (6.7%). The consumption of other indigenous foods is very marginal; cassava (*umjumbula*) for instance is specifically consumed by foreigners particularly from Mozambique, and Central and West Africa based here in Durban.

It is important to note that most indigenous foods consumed by street traders are purchased from people who harvest them in the wild, and are not grown by respondents in their backyards or gardens. Unfortunately, studies on South African production of indigenous food are limited, but research in other parts of Africa suggests that indigenous and traditional food crops should not be ignored and overlooked in the fight against food insecurity as they undeniably possess significant nutritional and economic value, especially useful for poor households (Cloete & Idsardi, 2012; DAFF, 2013).

4.2.10 WHAT SHOULD BE DONE TO IMPROVE THE FOOD SECURITY SITUATION IN YOUR HOUSEHOLD?

This open-ended question was inserted in order to capture what intervention street traders think is best suited to improving their livelihood, particularly with regards to food security. More than half of respondents (54.2% of respondents) believe that the provision of employment is the key to ensuring food security in their households, which is the reflection of the general expectations of poor urban dwellers anywhere in the world (van der Merwe, 2011). However, many street traders do not consider their occupation as an employment (self-employment) and therefore by employment they mean a formal job with a salary.

It is encouraging to find though that there are street traders' households who are involved (or want to be involved) in small scale and survival farming activities. An important number of respondents, particularly those who live in peri-urban areas in the outskirts of Isipingo (umbumbulu, Adams) and Phoenix (Ndwedwe) would prefer to get support for their farming activities instead of registering for a grant. The importance of a social grant was also highlighted as an important contributor to their household food security.

4.2.11 EXISTENCE OF CHRONIC DISEASES IN STREET TRADERS' HOUSEHOLDS

Although typically associated with wealth, the new trend in urban areas in South Africa is the rise of lifestyle diseases and related malnutrition among the poor. The results of the study on the existence of chronic diseases in street traders' households in Durban are presented in the Figure 4.1 below.

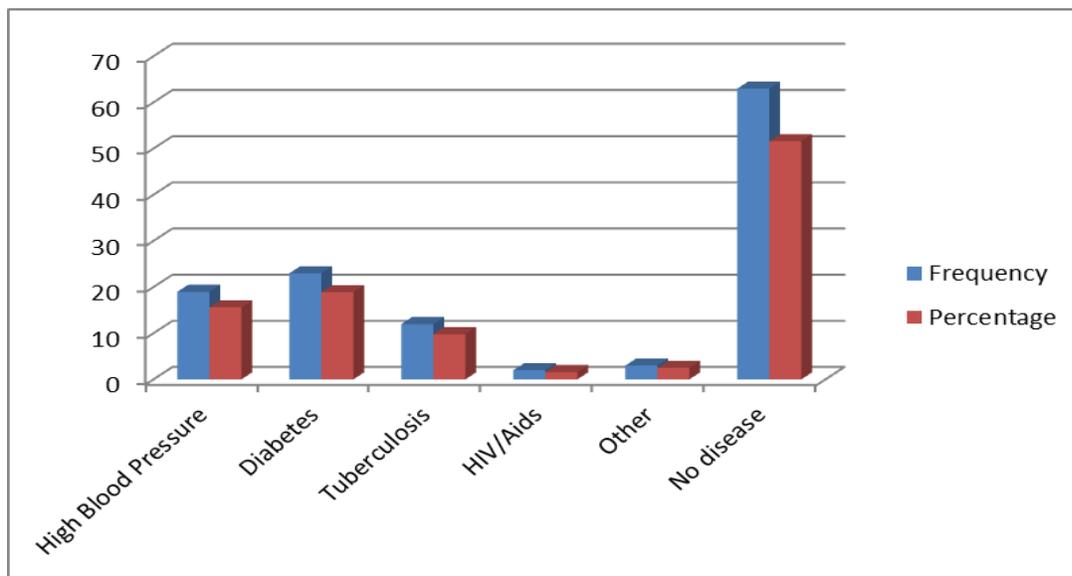


Figure 4.1 Chronic diseases in street traders' households

The prevalence of lifestyle diseases in street trading sector is alarming. The figure above shows that 59.2% of street traders' households that participated in this study suffer from various chronic diseases. There are those who suffer from high blood pressure, diabetes, heart conditions and/or arthritis. The importance of HIV/AIDS and its opportunistic diseases such as tuberculosis (20%) is also highlighted, resulting in severe decrease of production and earnings.

These diseases have a terrible impact on the food security situation of affected street trader households. Once developed, these diseases affect negatively the ability of street traders to trade, causing a crucial loss of income which in turn leaves them and their households vulnerable to food insecurity. The compounding impact of all these diseases has a direct negative effect through decreasing the quantity, quality and stability of income earning activities and may force the affected households below the level of "vulnerability" into a situation from which they may not recover (Steyn *et al*, 2006).

The prevalence of chronic diseases among urban poor households seems to be widespread in South African cities. A previous study conducted by Frayne *et al* (2009) found that in Pietermaritzburg (80 km from Durban), 14% of residents had either diabetes, hypertension, arthritis or heart problems, which are all chronic diseases associated with a modern, urban lifestyle. Another study found that many of these diseases are not related to calorie deficiency, but rather to a lack of food diversity, overweight and obesity and a sedentary lifestyle (Steyn *et al*, 2006).

The impact of chronic diseases on food security has already been documented. Labadarios *et al* (2011) argue that these diseases force the household to spend more on healthcare and associated costs, which means switching spending from other household needs to healthcare, depending on the existing food security level in the household. In already very poor households, their options may be so limited that they make the difficult decision to forego such spending on healthcare to maximize the welfare of the remaining members.

The situation could improve if street traders and other stakeholders were sensitised about the situation and were included in existing and planned efforts to overcome this challenge. A more diverse food combined with sufficient physical activities will also go a long way to improving the situation (Labadarios *et al*, 2011).

4.3 HOUSEHOLD FOOD ACCESS

4.3.1 INTRODUCTION

As outlined in the literature review, the household food access was analyzed using the Household Food Insecurity Access Scale (HFIAS). Two indicators were used in this study in order to understand the characteristics of household food insecurity (access) in the street trading sector in Durban. These indicators are:

- Household Food Insecurity Access Scale Score (HFIAS Score)
- Household Food Insecurity Access Prevalence (HFIAP)

While the HFIAS Score determines the degree (severity) of food access at household level in the last month, the HFIAP indicates the prevalence of food insecurity in the household. The two measures are

therefore complementary even though the HFIAP was considered as the main HFIAS classification for the study.

4.3.2 HOUSEHOLD FOOD INSECURITY ACCESS SCALE SCORE (HFIAS SCORE)

The HFIAS score is defined by Coates, Swindale & Bilinski (2007) as a continuous measure of the degree of food insecurity (access) in the household in the past 30 days. The maximum score for a household in this study is 24 (the household response to all eight frequency-of-occurrence questions was “often”, coded with response code of 3); the minimum score is 0 (the household responded “no” to all occurrence questions). Although there are no agreed and universal cut-off points between the scores in relation to the levels of food insecurity, a higher HFIAS score is an indication of poorer access to food and greater household food insecurity while on the other hand a lower HFIAS Score indicates a better access to food and less food insecurity (FAO, 2008).

In a study conducted in 2006 and 2007 (FAO, 2008) in two provinces of Mozambique (Manica and Sofala provinces), households were divided into three groups (called terciles) based on overall distribution of the HFIAS as follows:

- most food secure tercile = scores of 0-11;
- medium food secure tercile = 12-16;
- least food secure tercile = 17 to higher (FAO, 2008):

In the absence of any other credible categorisation of HFIAS scores found in the consulted literature, the above FAO categorisation from the Mozambique study was adapted and used to classify the households in this study. Considering the number of occurrence questions (8), the researcher developed a classification of the households of the study according to which the following 3 categories were developed:

- 16 – 24: More (severe) food insecure households (access)
- 12 – 16: Medium (average) food insecure households (access)
- 0 – 11: Least food insecure (food secure) households (access).

The HFIAS score (0-24) for each household was calculated by summing the frequency-of-occurrence in the past month for the 8 food insecurity-related conditions (Q20a + Q21a + Q22a + Q23a + Q24a + Q25a + Q26a + Q27a). The results of the study indicated that:

54 Households (45%) were more (severe) food insecure (access)
15 Households (12.5%) were medium (average) food insecure (access) and
51 Households (42.5%) were least food insecure (access).

After calculating the HFIAS for each household, the next and final step was to calculate the average HFIAS score for all 120 households. This was done by dividing the sum of HFIAS scores by the total number of the sample as advised by Coates *et al* (2007). This was done as follows:

Sum of HFIAS scores = 1584

Average HFIAS score = $1584 \div 120 = 13.20$.

These results are illustrated by Figure 4.2 below:

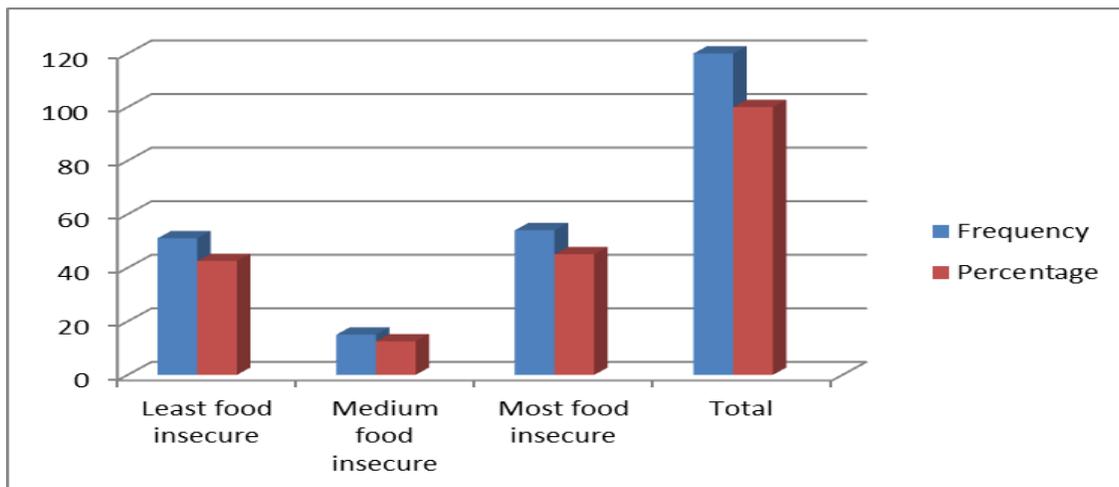


Figure 4.2 Household Food Insecurity Access Scale Score (HFIAS Score)

With such average HFIAS score (13.20), most street traders in Durban were classified as medium (average) food insecure households (access). However, the fact that 45% of street traders were more (severe) food insecure was also taken into account in the analysis of the overall HFIAS Score.

The findings of this study (57.5% food insecure households) compare favourably with those of Frayne *et al* (2009) which found that 87% of households in Pietermaritzburg were food insecure but they are slightly higher than the recent national average of 54.3% which includes 28.3% of insecure households without hunger (HSRC, 2013). Considering the income levels of street traders in Durban and the size of

most of their households (higher than 4 members), it is not surprising that there is such a high incidence of food insecurity (access) among street traders here in Durban.

4.3.3 HOUSEHOLD FOOD INSECURITY ACCESS PREVALENCE (HFIAP)

The second indicator that was calculated is the Household Food Insecurity Access Prevalence (HFIAP). The HFIAP allows us to make a clear distinction between ‘food secure’ and ‘food insecure’ households. Its indicator categorizes households into four levels of household food insecurity (access):

- Food secure households;
- Mildly food insecure households or food insecure households without hunger;
- Moderately food insecure households or food insecure households with hunger and
- Severely food insecure households or households with hunger.

The process of calculating the four HFIAP categories is explained in Table 4.13 below:

Table 4.13 – Calculation of the four HFIAP categories

Food secure	Mildly food insecure	Moderately food insecure	Severely food insecure
HFIAP category=1	HFIAP category=2	HFIAP category=3	HFIAP category=4
if [(Q20a=0 or Q20a=1) and Q21=0 and Q22=0 and Q23=0 and 24ss1s1=0 and Q25=0 and Q26=0 and Q27=0]	if [(Q20a=2 or Q20a=3 or Q21a=1 or Q21a=2 or Q21a=3 or Q22a=1 or Q23a=1) and Q24=0 and Q25=0 and Q26=0 and Q27=0]	if [(Q22a=2 or Q22a=3 or Q23a=2 or Q23a=3 or Q24a=1 or Q24a=2 or Q25a=1 or Q25a=2) and Q26=0 and Q27=0]	if [Q24a=3 or Q25a=3 or Q26a=1 or Q26a=2 or Q26a=3 or Q27a=1 or Q27a=2 or Q27a=3]

(Adapted from Coates *et al.*, 2007)

The results of the study are presented in Figure 4.3 below:

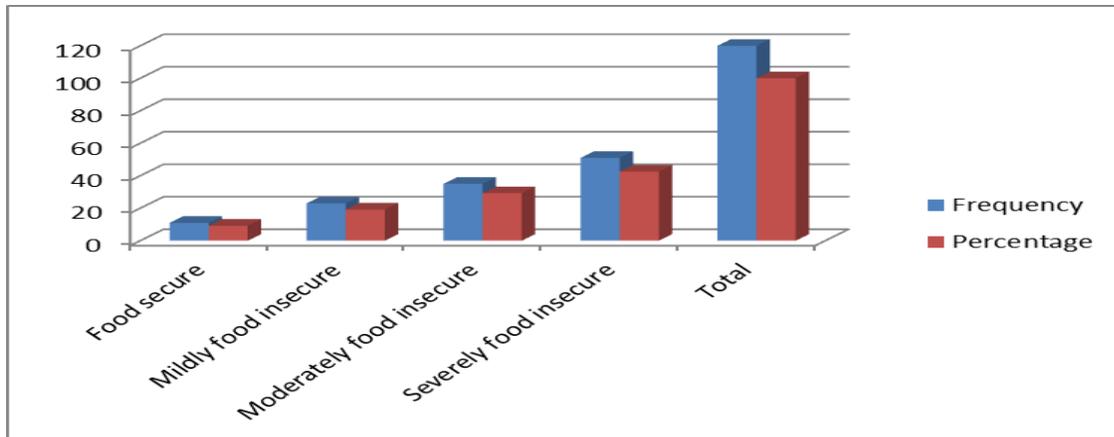


Figure 4.3. Household Food Insecurity Access Prevalence (HFIAP)

The interpretation of the results (above) shows that:

- 9.2% of households were found to be food secure (access);**
- 19.2% of households were mildly food insecure (access), in other words they were insecure without experiencing hunger;**
- 29.2% of households were moderately food insecure (access) or did sometimes experience hunger;**
- 42.5% of households were severely food insecure (access) or did often experience hunger.**

The results indicate that only 9.2% of street traders' households who participated in this study did not experience any worries concerning food insecurity (access) conditions: they were food secure. Almost twenty percent (19.7%) of households were mildly food insecure (access) or food insecure without worries about hunger. They worry about not having enough food sometimes or often, and/or are sometimes unable to eat preferred foods, and/or eat a more monotonous diet than desired and/or some foods considered undesirable. Twenty-nine point two percent (29.2%) of those street traders' households were moderately food insecure (access), which means that they sacrificed quality more frequently by eating a monotonous diet or undesirable foods sometimes or often, and/or have started to cut back on quantity by reducing the size of meals or number of meals, and 42.5% of the respondents were severely food insecure (access) households, which means that in the last 30 days, they have sometimes (or often) cut back on meal size or number of meals, and/or experience one or more of the three most severe conditions (running out of food, going to bed hungry, or going a whole day and night without eating), even if infrequently or rarely (Coates *et al*, 2007).

These findings imply that as far as the prevalence of food insecurity is concerned, 90.8% of respondents' households did experience food insecurity at different levels. These results are close to the findings of Frayne *et al* (2009) and Battersbay (2011) on urban food security situation in South Africa, which found that 87% and 80% of surveyed households were food insecure respectively in Pietermaritzburg and Cape Town and only 15% of households could be classified as food secure.

These results indicate that, with regard to food access, the prevalence of food insecurity amongst street traders in Durban is very high. This is worrying but consistent with the level of food insecurity situation in the eleven SADC cities surveyed by Frayne *et al* (2010), which found that on average 76% of households were food insecure whereas Pietermaritzburg (80 km from Durban) had higher than average levels of food insecurity (87%), despite South Africa being the wealthiest country in the region with an extensive social protection system. Therefore, if the government is to achieve its goal of halving poverty by 2014 (Jacobs, 2009), it needs to adopt a more supportive approach to managing the sources of income (and therefore of food security) of street traders and other sectors of the urban poor.

4.4 HOUSEHOLD FOOD QUALITY AND DIVERSITY

In this study, the Household Food Quality and Diversity was determined using the Household Dietary Diversity Score (HDDS) which reflects the number of different food groups consumed over a period of 24 hours.

To better reflect a quality diet, the number of different food groups consumed was calculated. Knowing that households consume, for example, an average of six different food groups implies that their diets offer some diversity in terms of both macro- and micro-nutrients. A set of twelve food groups listed below was used to calculate the HDDS based on yes and no questions asked to respondents which referred to the household as a whole. The respondents were asked a 13th question about whether any member of their households ate any food outside the home (e.g. at lunchtime on the street while trading). Whatever was consumed outside the home was not included in the calculations because HDDS is designed to reflect the dietary diversity of the household as a whole on average (Swindale & Bilinsky, 2006).

The 12 food groups that formed part of this section of the questionnaire are:

- Question 29: **Grains or Cereals** (maize, rice, wheat, sorghum, millet or any other food made from these);
- Question 30: **Tubers and Roots** (potatoes, cassava, sweet potatoes or any other such food);
- Question 31: **Vegetables** (leafy vegetables including indigenous and locally available leaves and carrots);
- Question 32: **Fruits** (including indigenous fruits or locally available)
- Question 33: **Meat** (including red meat, offal, poultry, etc.)
- Question 34: **Eggs**
- Question 35: **Fish** (fresh or dried, including shellfish and seafood)
- Question 36: **Food made of legumes** (beans, soya, lentils, peanuts, peas) **seeds or nuts**,
- Question 37: **Milk** or its products
- Question 38: **Oil**, fat or butter
- Question 39: **Sweets** (including sugar or any sugary food)
- Question 40: **Spices** or condiments and beverages

There are no established cut-off points in terms of the number of food groups to indicate adequate or inadequate dietary diversity for the HDDS. Therefore the use of a mean score or distribution of scores is recommended for analytical purposes or to set programme targets (FAO, 2011; Kennedy, Ballard and Dop, 2013). In a study conducted by the FAO in Mozambique for example, the mean HDDS used for the lowest wealth quintile was 3.9. Steyn *et al* (2006) also recommend the use of the average mean HDDS of four (4) food groups as the cut-off point for studies using a total of 9 food groups, a HDDS below four is considered to be low and to be associated with dietary inadequacies (Steyn *et al.* 2006). On this basis, the researcher used a mean HDDS of five (5) as a cut-off point for this study because it used 12 food groups.

In addition, the researcher sought to determine the proportion of households that consumed food groups which are good sources of micronutrients, particularly the consumption of food rich in vitamin A and iron by households of respondents. Table 4.15 itemizes food groups of interest for the consumption of vitamin A and iron rich foods.

Table 4.14 – Micronutrients of interest and corresponding food groups in the HDDS section of the questionnaire (adapted from Kennedy, Ballard & Dop, 2013).

Micronutrient	Question number and Food group
Vitamin A	- Question 31: Vegetables (leafy vegetables including indigenous and locally available leaves and carrots);
	- Question 32: Fruits (including indigenous or locally available fruits)
	- Question 33: Meat (including red meat, offal, poultry, etc.)
	- Question 34: Eggs
	- Question 35: Fish (fresh or dried, including shellfish and seafood)
	- Question 37: Milk or milk products
Iron	- Question 31: Vegetables (particularly leafy vegetables);
	- Question 33: Meat (including red meat, offal, poultry, etc.)
	- Question 35: Fish (fresh or dried, including shellfish and seafood)

4.4.1 DETERMINATION OF THE HOUSEHOLD DIETARY DIVERSITY SCORE (HDDS)

For a household to have a diversified diet there has to be a variety of foods from different food groups. A lack of foods from different food groups can lead to low dietary diversity, forcing households to depend on less preferred foods which are often available during periods when preferred foods are not available or are simply not affordable.

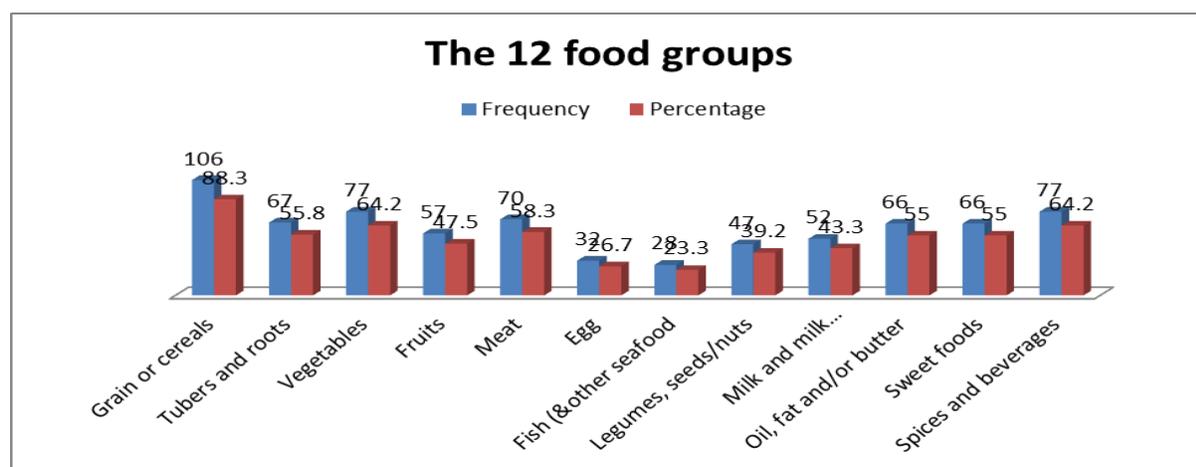


Figure 4.4. Level of Food Consumption of the 12 food groups

The figure 4.4 above indicates that more than 88% of households consumed cereal products almost every day. These products are made of maize and wheat (bread), which are easily accessible at affordable prices. The least consumed food groups are eggs and fish, consumed respectively by 26.7% and 23.3%. Even legumes and milk, are consumed by less than half of respondents (respectively 39.2% and 43.3% of respondents). This is particularly important in terms of food diversity because these food groups (eggs, fish, legumes and milk) are very nutritious as they are rich in high quality proteins (amino acids), minerals such as biotin, calcium, copper, fluoride, folic acid, iodine, iron, magnesium, molybdenum, phosphorus, potassium, selenium, zinc and vitamins like vitamin A (retinol), thiamine (vitamin B1), riboflavin (vitamin B2), niacin (vitamin B3), pantothenic acid (vitamin B5), pyridoxine (vitamin B6), cyanocobalamin (vitamin B12) and cholecalciferol (vitamin D) (Wickham, 2011).

In terms of diverse food groups consumed by street traders, this study found that on average, the dietary diversity score of street traders' households was equal to 6, which is slightly above the cut-off figure of 5 and indicates that on average, street traders are eating from six different food groups. However, 47.5% of households in the survey have a diversity score equal to or below 5, and if starchy foods (cereals and tubers) are removed, the average score drops below 5. This means that the average dietary score is heavily influenced by the amount of cereals and tubers consumed.

A survey on food security conducted by Frayne *et al* (2010) on households in eleven cities across eight SADC countries in 2008-9 found that, on average people were eating food from five different food groups, which was inadequate in terms of dietary diversity, particularly because of the types of foods eaten. Other surveys conducted by Frayne *et al* (2009) and Battersby (2011) in South African cities show that the dietary diversity scores of 7.5 for Pietermaritzburg and 6 (out of a possible 12) were inadequate because the diversity of the actual foodstuffs consumed was very limited. Therefore street trader' households in Durban are considered highly vulnerable to food insecurity in terms of the quality and diversity of food consumed.

4.4.2 CONSUMPTION OF FOOD RICH IN MICRONUTRIENTS (VITAMIN A AND IRON)

In addition to studying the Household Dietary Diversity Score as an indication of food security, it is also useful to understand how often households consume food groups that are good sources of

micronutrients particularly the consumption of food rich in vitamin A and iron, without which diets are inadequate and may lead to morbidity related to lack of micronutrient.

According to the HSRC (2013), vitamin A deficiency is an endemic nutritional disorder in South Africa and throughout the developing world, particularly affecting the health and survival of infants, young children, and pregnant and lactating females. The 2005 NFCS revealed very high levels of vitamin A deficiency among females of reproductive age (27.2%).

Health consequences of vitamin A deficiency include mild to severe (blinding) stages of xerophthalmia, and inadequate vitamin A levels in breast milk. Dietary deficiency in iron (and vitamin A) is believed to be the most common cause of anemia. The World Health Organization (WHO) reported that about two billion people are anemic in the world making anemia the most common and intractable nutritional problems in the world today, (WHO in HSRC, 2013).

The following indicators were derived for consumption of vitamin A and iron rich food groups:

- Percentage of households that consumed foods rich in vitamin A (households that responded yes to questions 31, 32, 33, 34, 35 and 37)
- Percentage of households that consumed foods rich in iron (households that responded yes to questions 31, 33 and 35)

The indicators above were calculated by summing the number of households who consumed the food groups listed above and divided by the total number of respondents.

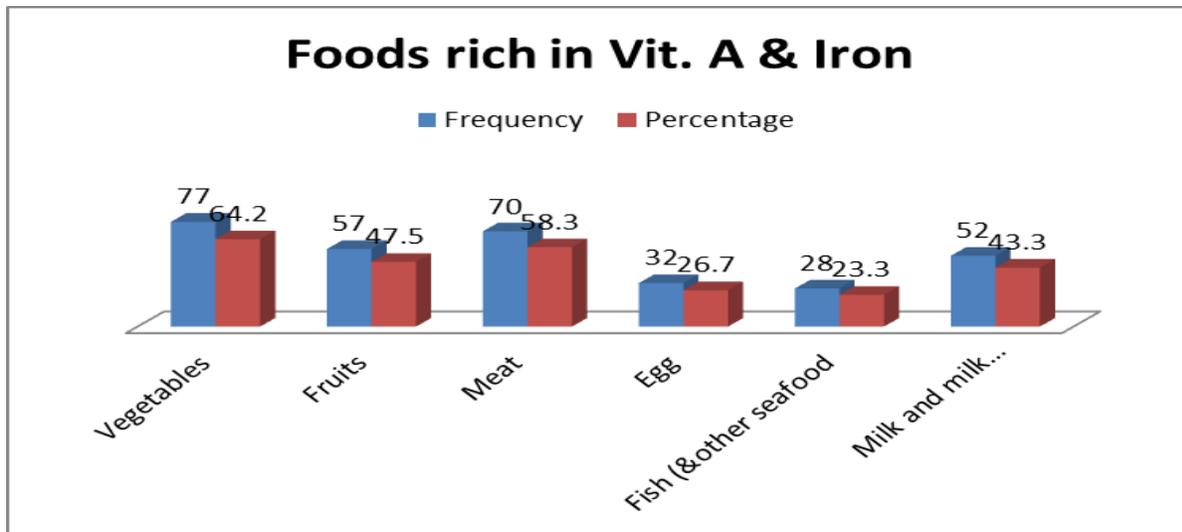


Figure 4.5 Consumption of food groups of interest by street traders (vitamin A and Iron)

Using dietary diversity data, it is not possible to establish thresholds below which populations do not consume sufficient vitamin A or iron. In general, low percentages of households consuming food groups containing these micronutrients on a given day is a good indication of seriously inadequate diets that may lead to morbidity related to micronutrient deficiencies (Kennedy *et al*, 2013).

The findings of our study as illustrated in Figure 4.5 above reveal that:

- The consumption of food rich in micronutrients by street traders is very low. On average, only 43.7% of households consumed foods rich in vitamin A;
- Green leafy vegetables and meat are the only food groups rich in vitamin A and iron that were consumed by more than half of respondents (respectively 64.2% and 58.3%), whereas eggs and fish were the least consumed as respectively only 25.8% and 23.3% of respondents consumed them;
- Iron is an important component of haemoglobin needed by the body for oxygen transportation and prevention of stress and diseases (NFCS, 2005), but only 34% of households in this study consumed foods which are rich in Iron, such as meat or fish.

The low consumption of fish deprives South African black street traders of an important source of both vitamin A and iron and of good proteins (complete amino acids) with no saturated fat. This low intake of vitamin A and iron by street trader' households can expose them to anaemia and other Vitamin related diseases.

4.5 COPING STRATEGIES USED IN TIMES OF FOOD SHORTAGES

4.5.1 INTRODUCTION TO COPING STRATEGIES

The Coping Strategy Index tool (CSI) was used to assess behaviour changes in relation to food shortages, through recording the different strategies that households employed. Together with HDDS, the CSI is a straightforward and less expensive measuring tool as the questions asked are easy to understand by both the respondents and the research assistants (Maxwell *et al*, 2003; Hoddinott, 1999).

Households that are poor and likely to be destitute use more coping strategies. Those who use severe coping strategies to deal with shortages of food become more vulnerable (Maxwell & Caldwell, 2008). The CSI tool is an international, standardized questionnaire, designed to determine the number and the frequency of coping strategies that the household may employ when there is a shortage of food in the household. Some of the strategies, such as reducing the quality of food, reducing food portions, spending a day without a meal or sending members of the family to eat with the neighbours are used by different households to deal with food insecurity. When there is a shortage of food, people's behaviour changes in order to adapt to the food shortages. The coping strategies fall into four major categories (Maxwell *et al*, 2003):

1. Dietary change: changing the household's diet by consuming less preferred or less expensive food;
2. Using short-term strategies to increase their food supplies, namely to obtain food by borrowing, purchasing on credit, begging or consuming wild foods and immature crops or even seed stock.
3. Reducing the number of people in the household that are to be fed by sending some of them to eat at neighbours, friends or relatives.
4. Reducing the portion sizes of meals within the household, favouring certain household members and spending a day without a meal. (Maxwell *et al*, 2003).

4.5.2 DIETARY CHANGE

4.5.2.1 Rely on less preferred and less expensive food.

This strategy characterises a low food diversity and limited choice of preferred or nutritious food. The results shown in Figure 4.6 indicate that 77.5% of the household used this strategy of whom almost two out of five respondents (39.2%) used it all the time and 22.5% of respondents did not use it at all.

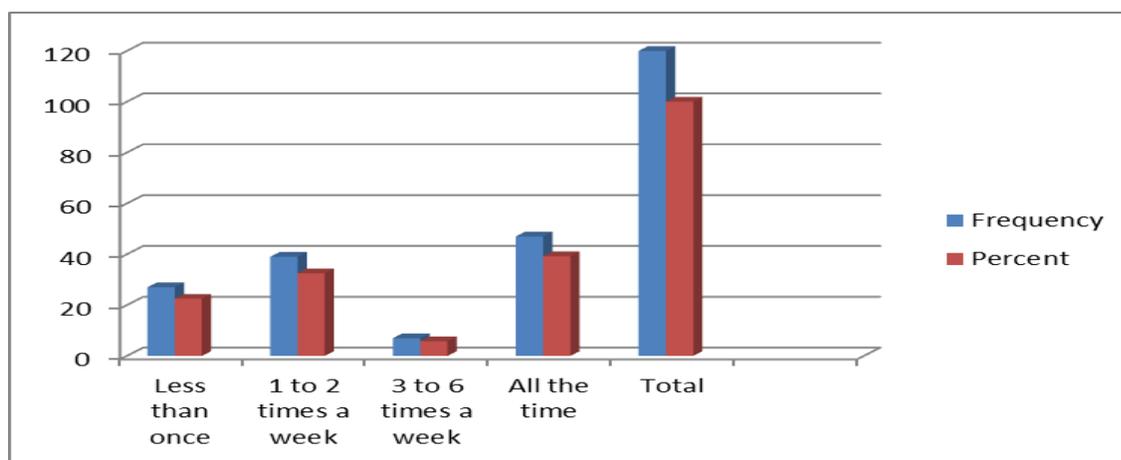


Figure 4.6 Households using dietary change as their strategy to cope with food shortage

These findings are supported by the survey conducted by Mjonono (2008) which revealed that about 64% of sampled households in Umbumbulu (Durban peri-urban district), 85.6% in Southern Ethiopia (Mengistu, Regassa & Yusufe (2009), and 96% in Botswana employed this strategy when they faced food shortages (Tembwe, 2010). This coping strategy is a reflection of low diet diversity and poor access to food. As reported earlier, it is a strategy that is used by households that are mildly food insecure (access) or food insecure, without however facing hunger.

4.5.3 INCREASE SHORT TERM FOOD AVAILABILITY

4.5.3.1 Borrow food or rely on help from a friend or relative.

Figure 4.7 indicates that more than half of street traders' households (51.7%) use this strategy of which 38.7% (20% of the total) always use it, and 26.7% of respondents use it only once or twice per week. The relatively large number of households who do not use this strategy (48.3%) is probably an

indication that this is not a popular coping strategy among street traders, and that those who use it do so because they have no other choices.

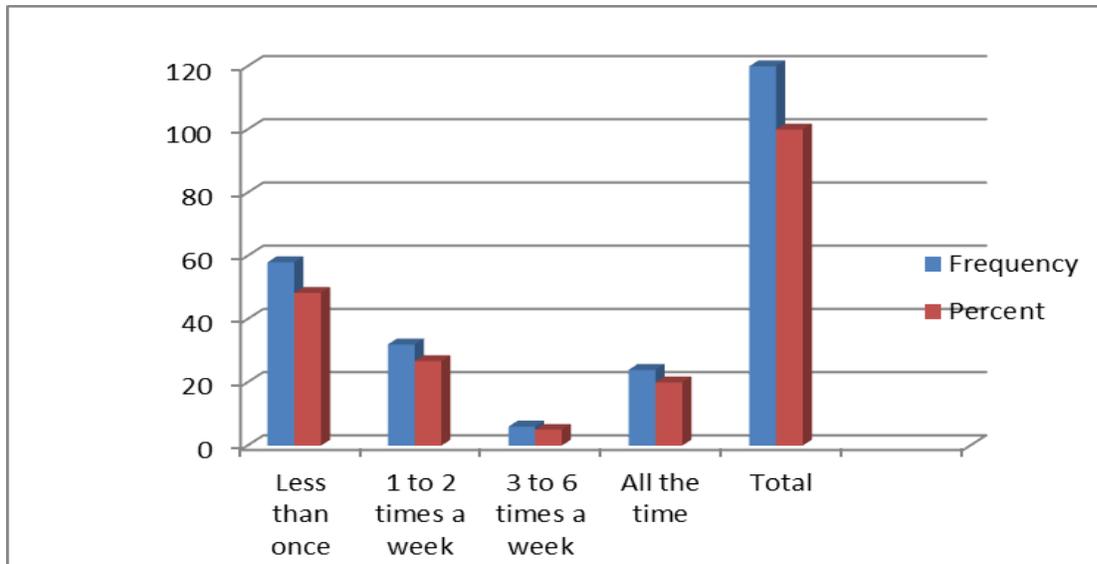


Figure 4.7 To borrow food or rely on help from friends or relatives as a coping strategy

Mjonono (2008) who conducted a research on coping strategies in Umbumbulu (outskirts of Durban) also found that 52% of households used the strategy of borrowing food, or relying on help from friends or relatives as a means of ensuring that there was food for household members. Although borrowing food or relying on help from friends or relatives is a strategy to cope with food shortage, it is understood from the discussions with respondents that they could only do that with relatives and friend with whom they had good social relations.

4.5.3.2 Buy food on credit

Street traders do not have enough money to purchase food in bulk; they are however involved in socio-financial arrangements such as stockvels (a kind of informal revolving fund created by savings from members and handed out to each person, one after the other) that help them to purchase on credit from food stores situated in their areas. In this study, it was revealed that a sizeable number of street traders (42.5%) do actually buy food on credit, but the relationship between their involvement in socio-financial arrangements and their ability to purchase on credit was not established. In this category, instances where respondents had to borrow money to buy food were also included. However, it is

important to point out that the majority of street traders (56.7%) had not used this strategy either by choice but often due to restrictions that exclude them from buying food with other forms of credit.

In Umbumbulu, the research by Mjonono (2008) found that 33% of households purchased food on credit as a strategy to get access to food. However, purchasing food on credit is a strategy that can put a poor household in a more vulnerable position in the long-term, particularly as the interest rates on credit for low-income households are often very high (Maxwell *et al*, 2003).

4.5.3.3 Gather wild food, hunt or harvest immature crops or eat seed for next season

Figure 4.8 shows that the majority of street traders who participated in this study (56.7%) do not use this coping strategy and those who use it do so rarely (19.2%). This is obviously because in urban environments, particularly where respondents are living, there are few areas where wild food can grow, but also because, as Table 4.11 indicates, urban agriculture is not yet understood by street traders here in Durban as an important source of income and food security, as only 11.7% of them grow food in their backyards.

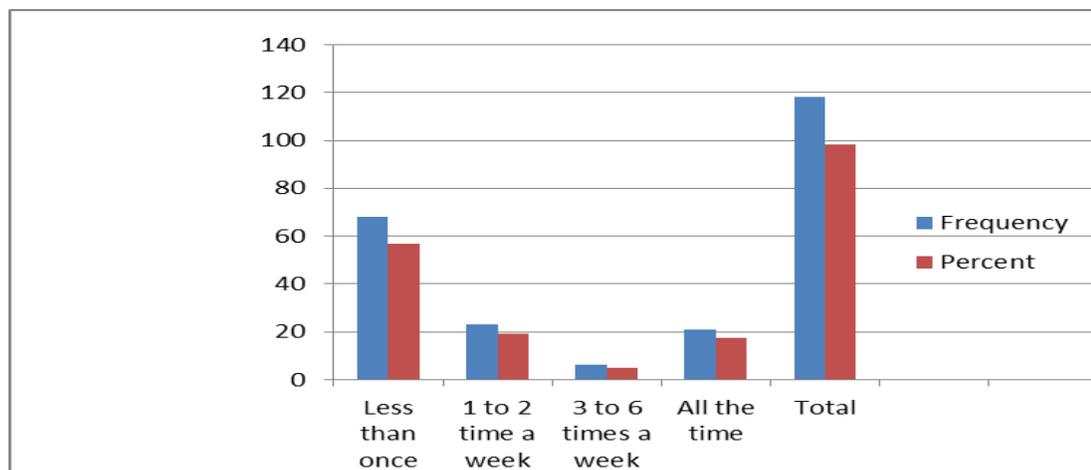


Figure 4.8 Consumption of wild food, seeds and immature harvests

This study indicates that 41.7% of households consumed either wild food, seeds or immature food. Similar studies conducted in Umbumbulu and Gumare found that respectively 67% and 60% of the sampled households consumed the seed stocks that were prepared for the following planting season (Mjonono, 2008; Tembwe, 2010). In Tharaka District, a similar study conducted by Kabui (2012) revealed that 58% of households collected wild food and borrowed food from relatives and neighbours.

This difference can be attributed to the fact that street traders, who spend most of their time trading will unlikely keep seeds and will have limited time to look for wild food.

4.5.4 SEND HOUSEHOLD MEMBERS TO EAT AT A FRIEND’S OR RELATIVE’S HOUSE

More than half of respondents (50.8%) reported using this strategy particularly with regards to school-going children. Often after school, knowing that there is no food at home; children will decide to go to their parents’ relatives with the hope of finding something to eat before their parents come back from work (trading). These are usually decisions that are approved by their parents but sometimes children decide to do it on their own. The results of this strategy are displayed in the figure 4.9 below.

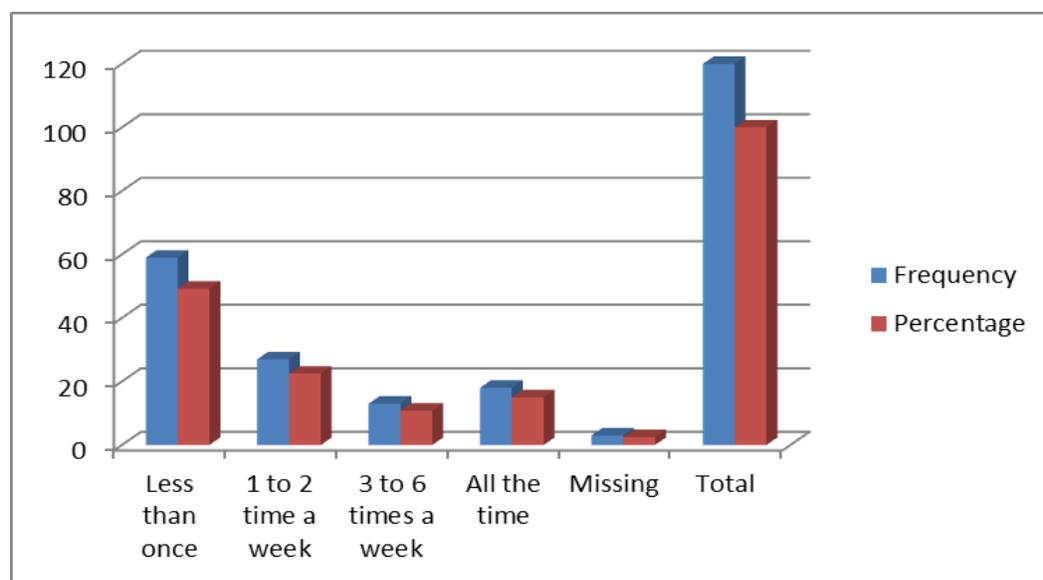


Fig 4.9. To send household members to eat elsewhere

This seems to be a very popular strategy particularly for those households that have school-going children. Fifteen percent of respondents reported always sending their family members to eat at a friend’s or relative’s house, while 22.5% only send them once or twice per week, and 10.8% send them often. A similar study conducted by Mjonono (2008) in Umbumbulu found that in total; only 7% of households in this peri-urban and mostly farming area use this strategy and none of them use it frequently. This suggests that the use of this strategy by street traders’ households is heavily influenced by the nature of their work, which forces them to be absent from their homes for most of the days, and this affects the access and diversity of food consumed by their dependants.

4.5.5 RATIONING STRATEGIES

Rationing strategies are often used by households experiencing moderate to severe food shortages and hunger. These are households that have started to cut back on quantity by reducing the size of meals or number of meals and in more severe situations, they experience one or more of the three most severe conditions i.e. running out of food, going to bed hungry, or going a whole day and night without eating (Coates, 2007). The use of these different coping strategies is presented in Table 4.15.

Table 4.15 – The 6 rationing strategies used by street traders to cope with food shortage

Rationing strategies used	Percentage			
	Never	1 to 2 times	3 to 6 times	All the time
Limit portion size at mealtime	29.2 (n=35)	23.3 (n=28)	10.0 (n=12)	37.5 (n=45)
Restrict consumption by adults in order for small children to eat	39.2 (n=47)	38.3 (n=46)	16.7 (n=20)	5.8 (n=7)
Feed working members of HH at the expense of non-working members	80.8 (n=97)	9.2 (n=11)	0.8 (N=1)	-
Only eat two meals in a day	24.2 (n=29)	20.0 (n=24)	6.7 (n=8)	49.2 (n=59)
Eat only at night or in the morning	58.3 (n=70)	20.8 (n=25)	12.5 (n=15)	8.3 (n=10)
Go entire days without eating	80.0 (n=96)	13.3 (n=16)	6.7 (n=8)	-

4.5.5.1 Limit portion sizes.

From Table 4.15 it is clear that many households limit the portion sizes of food. 37.5% of households limit food portions all the time and 33.3% fairly often. This strategy enables all members of households to have something to eat albeit the quantity is small, which may enable a household to provide food for a longer period of time to all its members.

Similar results were also obtained by a study conducted by Gomolemo Tembwe in Botswana where more than 90% of respondents affirmed using this strategy (Tembwe, 2010). Reduction in size of meals followed by the reduction in the number of meals per day and consumption of immature crop, have also been widely used as coping strategies in Tharaka central division, in Kenya and in Southern Ethiopia (Kabui, 2012; Mengistu, Regassa & Yusufe, 2009).

4.5.5.2 Restrict consumption by adults to enable young children to eat.

The majority of the heads of households preferred to restrict themselves and other adults from eating so that children could have sufficient food to eat. It was revealed in this study that more than 58% of respondents restricted food consumption by adults at least once or twice a week (in 66% of cases).

The fact that this strategy is used once or twice a week by the majority of households is an indication that it is alternated with other strategies like sending children to eat elsewhere or reducing meal size. This strategy has also been used by households in Gumare village (Botswana) where 66% of households used this strategy (Tembwe, 2010). Adults are able to restrict food, because, unlike children, they can survive hunger for a longer period of time and are more likely to eat outside their households (at a friend's house) than children, if there is no food in their households.

4.5.5.3 Feed working members of household at the expense of non-working members

This is really an unpopular strategy as only 10% of respondents reported to have used it sometimes. Many respondents said that this was not possible as it is unAfrican, and it undermines the spirit of Ubuntu that promotes togetherness and support for one another. Many respondents indicated that it was rare that people would stop some members of household from eating simply because they were not working. But in a study conducted by Mengistu, Regassa & Yusufe (2009) in Southern Ethiopia, it was found that in 95.8% of cases, the heads of households, who are the main providers gets prime priority during a food crisis at the expense of other members of their households.

4.5.5.4 Only eat two meals in a day.

Table 4.11 indicated that in 61.7% of street traders' households, there are only two meals per day. In many instances, this is a breakfast in the morning and a main meal at night, and this is the normal situation for these households. The 75.9% of households reflected in Table 4.15 include those households that usually have more than two meals but have to reduce for financial reasons. It ought to be noted though that when households reduce the number of meals, they become more vulnerable to malnutrition and therefore to food insecurity if this is applied over a long period of time.

A study in Swaziland and Botswana revealed similar results, where reducing the number of the meals eaten in a day was used by 60% and 22% of households respectively, in order to manage food shortages (Mugabe *et al*, in Tembwe. 2010). Together with other mechanisms, minimizing the number of meals and the amount of food consumed were the most commonly used coping strategies, used respectively by 55.5% and 47.3% in Southern Ethiopia (Mengistu, Regassa & Yusufe, 2009).

4.5.5.5 Eat only at night or in the morning

Table 4.15 indicates that 41.7% of respondents used this strategy when faced with the inability to provide sufficient food for their households. Almost half of these households (50%) used this coping strategy once or twice a week while another half ate once per day 3 to 7 times a week. 58.3% of street traders' households do not use this coping strategy.

This is a more severe coping strategy than having two meals a day and cannot be sustained over a long period of time without causing serious harm in terms of food access, food quantity and quality. It is of great concern that 8.3% of households reported that they always use this strategy.

4.5.5.6 Go entire day without eating

Data in Table 4.15 indicates that only 20% of street traders' households are able to last for a whole day without any food, 6.7% do so often (3-6 times per weeks), 13.3% once in a while (1 to 2 times a week) and as evidently no one can use it all the time. Missing meals to deal with food shortages is a coping strategy that is used in countries such as Swaziland, where over 30% of people do not eat during an entire day (Plus News, in Tembwe, 2010), but it is the most severe short-term coping strategy that one can consider.

4.5.6 THE COPING STRATEGY INDEX (CSI) SCORES OF HOUSEHOLDS

The Coping Strategy Index (CSI) tool is designed to determine the number and frequency of coping strategies that the household may employ when there is a shortage of food (Maxwell *et al*, 2008). The CSI is a comparative tool, rather than an absolute measure of food insecurity, and unlike the HFIAS and the HDDS, a CSI score cannot be used alone as a tool for food security assessment. Because each CSI indicator is specific to its context, there is no designated cut-off point in a CSI scale as to at

what level a household would be considered “food secure” and above which it would be considered “food insecure.” But it can be used in cross-sectional analysis to determine which households are better off and which are worse off, and what the correlates of these two kinds of households are (Maxwell & Caldwell, 2008).

In the context of this research, the CSI can be used to analyze and interpret households living in different areas, multiple locations, and/or across different age groups. However, since this is not the main purpose of the study which is in any case a one-off exercise, the researcher decided to keep the raw data and make it available as a baseline for comparison in future research or project interventions involving coping strategies in this area.

4.6 SUMMARY

The findings of this study showed that semi-literate and semi-skilled population resort to street trading as a source of income. This is a population that has no or limited chances to participate in formal jobs as only 5% reached tertiary level. Fifty-three percent of the respondents were women of whom 10% had no schooling. It was however mentioned that 65.8% of street traders, of whom 58.2% were women, had received training in small business management. More so, the income generated from street trading was used to diversify the social grant. The low education level and the unstable socio-economic situation of street traders were threatening the food access and affecting the diet diversity of their households.

In this study, more challenges faced by street traders that affected their households' food security were identified. The majority of respondents (68.2%) earned below R2000 per month from their businesses for an average household of 4 members. Also, it was observed that the options for business choices were limited as 43.3% were trading in fruits and vegetables. Furthermore, in addition to buying food, the generated income was budgeted for transport costs as most respondents (82.8%) lived far from their businesses and need to commute to and from their trading places, spending a substantial amount of time (more than 4 hours per day) and money. In addition, this study found that 59.2% of members of street traders' households suffer from various chronic diseases such as blood pressure, diabetes, heart conditions and/or arthritis. These challenges pose a threat to household food security as they limit the purchasing power and thereby compromising food access and quality.

Due to time burden, 79.2% of street traders did not grow any food in their backyards; they purchased all their food. The findings of this study also indicated that street traders' households are generally food insecure. The results on the prevalence of food insecurity among respondents' households indicate that (90.8%) experienced difficulties in accessing food at different levels, with 42.5% of households experiencing severe food insecurity situations (access), 19.7% experiencing mild food insecurity (access) or food insecurity without worries of hunger and 29.2% of them being moderately food insecure (access). Due to time burden, 79.2% of respondents did not have any garden at home and had to purchase all their food.

Indeed the findings showed that the diet was dominated by energy dense foods. The average dietary diversity score of respondents was equal to 6, which is above the cut-off figure of 5, but with 47.5% of households having a poor diet quality (score below 5) and most respondents eating cereals and tubers, street trader' households were considered highly vulnerable to food insecurity in terms of the quality and diversity of food consumed. Regarding the consumption of food rich in vitamin A and iron, the study shows that on average 43.7% of households consumed foods rich in vitamin A whereas only 34% of households consumed foods which are rich in iron, such as meat or fish. Green leafy vegetables and meat are the only food groups rich in vitamin A and iron that were consumed by more than half of respondents (respectively 64.2% and 58.3%), whereas eggs and fish were the least consumed (respectively by 25.8 and 23.3% of respondents).

Although all 11 coping strategies have been used at different levels but the most common coping strategies used by street traders under study in times of inadequate food access were: relying on less preferred or less expensive food, borrowing food, relying on help from friends or relatives, sending households members to eat elsewhere, at a friend's or relative's house, restricting food to adults in order for young children to eat and reducing the size of food portions (particularly eating only two meals a day). However, it should be noted that some of the coping strategies were not perceived as such but rather as social kinship, which is a social norm showing Ubuntu. Accordingly, as street traders spend most of their time on their businesses; their children are looked after by their extended family members or neighbours.

Urban agriculture, as an additional source of food and/or income, requires special attention and should be encouraged particularly considering that the majority of street traders are involved in food vending.

Since street traders spend all their time at their vending sites, other household members should be encouraged to get involved in this activity.

CHAPTER 5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 GENERAL CONCLUSION

5.1.1 INTRODUCTION

Poverty and urban food insecurity are directly related. Complex and multifaceted environmental and economic factors impact disproportionately on the urban poor. Street traders are a very visible form of urban poverty. However, they have very little political voice and as a consequence must bear the greatest burdens.

Household Food Security is defined as the ability of households to sustainably access sufficient, safe, and appropriate food to meet dietary needs in order to lead a healthy and productive life (Kirkland *et al*, 2011). This means that households experience food insecurity when unable to absorb, reduce or mitigate the impact of decline in food availability, access, and/or utilization (Misselhorn, 2005; Topouzis, 1999).

5.1.2 SIGNIFICANCE OF THE STUDY

The struggle for survival of the urban poor in general and street traders in particular is a field that does not attract many researches. There are very few research studies on livelihood struggles in relation to economic rights and needs of the urban poor in general and informal traders in particular. This study was a modest contribution towards a better understanding of the daily struggles of street traders to put food on the table and how they cope with their households' incapacity to sustainably access sufficient and nutritious food. Maxwell *et al* (2008) noted that food insecurity challenges of the urban poor remains largely invisible not only to the politicians but also and most importantly to all those civil society organisations who are (or pretend to be) involved in helping or working with street traders to fight for their rights and improve their livelihoods.

The overall objective of this study was to document and contribute towards a better understanding of food security situations and strategies used by street traders and their households in Durban. This

study was an important first step towards understanding the extent of food insecurity among street traders both in terms of access to food and quality of food consumed but also the coping strategies that are used by them to deal with shortages of food.

The specific objectives were:

- To investigate the access to food by street traders and their households;
- To understand how diverse and nutritious is the food consumed by street traders and members of their households;
- To determine and to document the strategies used by street traders to cope with food shortage in their households.

5.1.3 SUMMARY OF THE RESEARCH METHODOLOGY

The study was conducted among street traders in Durban Central, Isipingo and Phoenix Plaza with 120 street traders in total, who responded to a questionnaire designed to describe the socio-demographic and food security situation of respondents. Each interview lasted between 30 and 45 minutes.

The method used was predominantly a quantitative approach mixed with instances of personal experiences of respondents as well as of the observation of the researcher and his assistants.

The socio-demographic section of the questionnaire included open-ended questions and collected biographic and socio-economic data whereas the HFIAS, HDDS and CSI sections were used to collect data on the capacity of street traders to access quality food and how they adapt or mitigate the shortage of such food. The recall period for the HFIAS, HDDS and CSI was respectively 30 days, 24 hours (1 day) and 7 days.

The HDDS section of the questionnaire contained one main question and thirteen (13) sub-questions. The main question was **“have you or any member of your household ate the following food yesterday, in the morning, during the day or at night?”**

The main question of the CSI section of the questionnaire was **“in the past 7 days, if there have been times when you did not have enough food or money to buy food, for how many days have you and/or your household had to: rely on less preferred and/or less expensive food, borrow food or rely**

on help from a friend or a relative, buy food on credit, gather wild food, hunt, or harvest immature crops or eat seed stock held for next season, send children and other household members to eat at a friend or relative's house, Limit portion size at mealtime, restrict consumption by adults in order for small children to eat, feed working members of household at the expense of non-working members, only eat two meals in a day, eat only at night or in the morning, pass the whole day without eating.

Before starting data collection, as required, an ethics approval letter was obtained from to the UNISA's ethics committee. All interviews started by an introduction during which respondents were informed that the research was conducted entirely for academic purposes, that their participation is voluntary and therefore they were free to discontinue their participation at any stage of the study should they wish to do so. All participants had to consent to participate in the study in writing by signing a consent form provided by the College of Agriculture and Environment Sciences (CAES) of UNISA.

The quantitative data collected was captured and analysed using IBM SPSS statistics 21.0. Qualitative data was captured and coded manually in a way that facilitated the rapid retrieval of information. While the quantitative data collected provided statistical information on households' food insecurity situation, using numerical analysis, the qualitative data analysis tried to understand the meaning of a particular behaviour.

5.1.4 SUMMARY OF THE RESULTS

5.1.4.1 Socio-demographic results

The results of the study indicate that the majority of street traders are young and are increasingly educated; 79.2% of respondents were aged between 18 and 50 years (of whom 31.7% were aged between 18 and 35 years of age), some of them (5%) have reached university education level but almost half of them (49.2%) had reached a high school level of education. Most street traders live far from where they trade and need to commute to and from their trading places, for up to 4 hours per day, most of them have 4 or more dependents and earn less than R2000 per month from which they must buy food amongst other things.

The study found that 53.3% of street traders were women and that all 10% of respondents with no schooling were women. This is a serious situation which needs to be addressed because their lack of

education forces them to participate in only a few areas of business and deprive them of opportunities for further professional training.

The prevalence of lifestyle diseases in street trading sector is alarming. This study revealed that 59.2% of street traders' households suffer from various chronic diseases. There are those who suffer from blood pressure, diabetes, heart conditions and/or arthritis. The importance of HIV/AIDS and its opportunistic diseases such as tuberculosis (20%) is also highlighted resulting in severe decrease of productivity and earnings.

The study further found that more than two-third of all respondents (65.8%) have received additional training in small business management of whom women make up almost 39 percent. Women represent 58.2% of all those who had received small business management training.

Although Skinner (in Horn, 2011) does not believe in the inclusion of questions that measure income of workers, the estimated income reported by respondents was used to categorize street traders in Durban as living near or below poverty levels. Based on the available (out-dated) lower poverty line of R431 per month, and also taking into account the number of dependants, the study found that the respondents' households live well below the lower poverty line.

5.1.4.2 Food access by street traders and their households

The results of the study indicate that street traders' households are generally food insecure. Respondents' households (90.8%) experienced difficulties in accessing food at different levels. The results on the prevalence of HFIAS among street traders in Durban indicated that 42.5% of households were experiencing severe food insecurity situations (access) whereas 19.7% were mildly food insecure (access) or food insecure without worries of hunger and 29.2% of them were moderately food insecure (access).

But in terms of HFIAS score, the situation is not yet desperate. The average HFIAS score of 13.2 means that most street traders' households in Durban were medium (average) food insecure (access) although 45% of them experienced more (severe) food insecurity situations. The detailed HFIAS scores found that 33.3% of households were least food secure (access), 31.7% households were experiencing

both food security and insecurity situations (access) while 35% of households were found to be most food secure (access).

5.1.4.3 Quality and diversity of food consumed by street traders

Regarding the diverse food groups consumed by street traders, the study found that on average, the dietary diversity score of street traders' households was equal to 6, which is above the cut-off figure of 5. This means that on average food consumed in street traders' households is sufficiently diverse. However, considering the substantial number of respondents with poor diet quality (47.5%), street traders' households were found to be vulnerable to food insecurity in terms of the quality and diversity of food consumed.

The study also reviewed the consumption of foods rich in micronutrients (vitamin A and iron) because their deficiency can be indicative of seriously inadequate diets that may lead to morbidity. The study found that on average, only 43.7% of households consumed foods rich in vitamin A, and only 34% of households consumed foods rich in iron, mainly from the consumption of green leafy vegetables and meat. Eggs and fish were not often consumed as respectively only 25.8% and 23.3% of respondents consumed them. This low intake of vitamin A and iron by street trader households can expose them to anaemia and other vitamin related diseases.

5.1.4.4 Strategies used by street traders to cope with food shortage

Households that experienced food insecurity employed all 11 coping strategies used in the questionnaire, with different levels of frequency. However, the most commonly used coping strategies in times of inadequate food access were relying on less preferred or less expensive food, borrowing food, relying on help from friends or relatives, sending household members to eat at a friend's or relative's house, restricting food to adults in order for young children to eat and reducing the size of food portions.

5.2 RECOMMENDATIONS

5.2.1 RECOMMENDATIONS FOR STREET TRADERS

Urban agriculture has a strong potential to increase income and improve food security. It would be important for street traders and/or members of their households, to find ways and get involved in urban production of food particularly fruits and vegetables as well as indigenous foods, which can then be eaten or sold on the streets. The study found that in general other members of street traders' households are not contributing significantly to the livelihood of their households as they are completely dependent on the heads of households for their food provision. Therefore their involvement in food production may contribute to the household's income and food security.

Although this was not specifically investigated in this study, it is apparent that existing organisations of street traders are either weak or not addressing the priority needs of street traders. Street traders should either strengthen existing organisations or create structures (cooperatives, associations, stockvels, etc.) that will increase their bulk-buying power with suppliers particularly at Clairwood fresh produce market. Such structures will also give them negotiating power with authorities.

5.2.2 RECOMMENDATIONS FOR POLICY MAKERS

5.2.2.1 Recommendations on improving socio-economic situation of street traders

There is no comprehensive record of all street traders in Durban (both with and without vending permits). The information about the documented traders commonly called "legal traders" (who are issued with vending permits) is very basic and says very little about their socio-economic situation. The census conducted in Isipingo by Econ (2013) is a first step in the right direction and should be extended to all trading regions of eThekweni municipality and be consistently repeated every 3 to 5 years in order to monitor the impact of various interventions to improve the livelihoods of street traders in Durban.

Street traders are self-employed and for most of them, this is the only source of income and therefore of food security for their households. Previous studies, including the municipal census in Isipingo, indicate that the number of undocumented traders (without vending permits) is much higher than that of "legal" traders. If this municipality is serious about addressing food insecurity among the urban poor

and street traders in particular, it should stop treating street trading as a crime. The BSTMU should decriminalise street trading by issuing vending permits to all street traders for instance. This will go a long way to improving their food security status because money used to pay for fines or purchasing products lost because of police confiscation will be used to purchase more food and/or grow their businesses.

The development of a national policy and legislation aimed at decriminalising, promoting and developing the informal economy will go a long way to addressing challenges faced by street traders and will play a major role in alleviating food insecurity in general and in the street trading sector in particular.

Since the majority of street traders are young and educated, the government should provide training programmes and create incentives and opportunities for these people to find formal employment or graduate to small formal businesses so that they can leave space for entrants in the street vending sector.

Most street traders live far from where they trade and have to commute daily. The local government should encourage wholesalers to open branches in major townships where the majority of traders reside. Instead of having one big bulk fresh produce market in Clairwood, the municipality should create smaller bulk markets in different municipal areas and improve low cost public transport. The money spent by building flashy airports and football stadiums could be better used to build high-speed, low cost trams or train services from the townships into the centre and other important trading areas and obviously to the wholesale market.

5.2.2.2 Recommendations about improving the food security situation of street traders

South Africa is still to develop a policy regarding urban and peri-urban farming. If the food security situation of the urban poor in general and street traders in particular is to improve, the Department of Agriculture, Forestry and Fisheries should develop a policy/strategy on urban and peri-urban agriculture. Such a policy should clearly indicate the role of local government among others in promoting small scale farming and creating the link with informal traders. It should also enable the promotion of best practice and enhance the role of agriculture in urban and peri-urban livelihoods. A special focus of such a policy should be to encourage the participation of street traders' households in

urban agriculture. The government should also consider carrying out tailor made training courses on food security in general and regarding the nutrition and dietary issues for the associations of street traders in the city.

The National Food Security Policy for South Africa, which is in the process of being adopted by the parliament, should contain clear guidelines on programme interventions at municipal level for the promotion and support of urban and peri-urban small scale farming.

Sustainable agricultural production should be promoted at household level. The KZN Department of Agriculture and Environmental Affairs should promote urban and peri-urban small scale farming by assisting urban subsistence farmers by providing production inputs, for example, provision of vegetable seeds, mechanization, and infrastructure and extension advice. This can encourage even households with limited access to land to cultivate mixed gardens around their homesteads.

There are valuable initiatives undertaken by eThekweni municipality aimed at alleviating food insecurity in Durban. However, these initiatives are neither linked to the national IFSS nor to vulnerable sectors of the urban poor, like street traders. They are also poorly funded. This has to change if these initiatives are to make the impact that is expected from them.

Ethekewini municipality, the private sector and the civil society should invest more in initiatives aimed at addressing food insecurity in households of the urban poor including informal traders. Attention should also be given to the promotion of non-farming activities that reduce food insecurity such as job creation and support to various informal businesses. The community and households should actively engage in the design and implementation of policies and strategies for farming and non-farming interventions.

5.2.3 RECOMMENDATIONS FOR FURTHER RESEARCH

The study has focused on understanding the food security situation of street traders in Durban. It is therefore important to extend the study of food security to other sectors of the informal economy within the city and to extend this kind of research to other urban municipalities in the province and the country. Further investigation could focus on a range of issues, such as the sources of income and expenditure of street traders and the proportion of income spent on food, the impact of transport costs on food security, the kind of food that people consume over a certain period of time, the various ways in which

households have applied specific coping mechanisms to deal with food insecurity, and gender relations within households concerning coping mechanisms.

If the food security status of street traders and/or workers in informal economy is established throughout the province and found to be as critical as it is in Durban, the provincial government would be under considerable pressure to design policies and programmes that are aimed at improving the situation.

More comprehensive research initiatives, with adequate time allocation and adequate funding should be undertaken with regards to how to effectively support the representative organisations of street traders in the promotion of informal urban agriculture, promotion of indigenous and traditional food crops and livestock and their sources.

Current food security and related policies and strategies at national, provincial and municipal levels need to be researched to investigate whether they cover all four components of food security (food availability, accessibility, utilization and stability), whether they are able to capture adequately the food insecurity situation of the vulnerable people in this country and whether these policies and strategies effectively enhance food and livelihood security of poor households particularly in urban areas.

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APPENDICES

APPENDIX A. SOCIO-ECONOMIC SECTION OF THE QUESTIONNAIRE

No	QUESTION	RESPONSE OPTIONS	RESPONSE
1	Gender	1 = Male 2 = Female	... ___
2.	Age group	1 = 20 to 35 years 2 = 35 to 50 years 3 = Above 50 years	... ___
2a.	Size of household	1 = 1 to 3 2 = 4 to 6 3 = Above 6	... ___
2b.	How many of those are completely dependents on your income	1 = 1 to 3 2 = 4 to 6 3 = All of them	... ___
3.	As a Street trader, what products or service to you trade in	1= Street barber 2= Fruits and Vegetables 3= Other food products 4= Manufactured goods and/or confectionaries 5= Other	... ___
4.	What is your average earnings/month	1 = Below R2000 2 = R2000 to 3500 3 = Above R 3500	... ___
5.	Do you have any other source of income than street trading?	1= No 2= Social Grant 3= Receive food parcels 4=Other (please specify)	... ___
6.	Source of Food	1 = Backyard gardening 2 = Receive grocers from working relatives	... ___

		3 = Purchase 4 = Other (please specify)	
7a.	Is indigenous food consumed in your household?	1= Yes 2= No	... __
7b.	If yes, where do you get it from?	1= Collected from veld 2= Collected from fallow cropping fields 3= Planted in garden or field 4= Other	... __
8.	How many meals do you and members of your household have in a day	1=Once 2=Twice 3= Three times or more	... __
9.	What should be done to improve the food security situation in your household?		
10.	Is there any chronic disease in your household?	1= Yes 2= No	... __
10a.	If yes which one?	1= Blood Pressure 2= Diabetes 3= Tuberculosis 4= HIV/Aids 5= Other (please specify)	... __

APPENDIX B. HOUSEHOLD FOOD ACCESS SECTION OF THE QUESTIONNAIRE

N O	QUESTION	RESPONSE OPTIONS	Response s
1.	In the past month, did you worry that your household would not have enough food?	0 = No (skip to Q2) 1=Yes	... ___
1a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
2.	In the past month, were you or any household member not able to eat the kind of foods you preferred because of a lack of resources?	0 = No (skip to Q3) 1=Yes	... ___
2a.	How often did this happen in the last month?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
3.	In the past month, did you or any household member have to eat a limited variety of foods due to a lack of resources?	0 = No (skip to Q4) 1 = Yes	... ___
3a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
4.	In the past month, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	0 = No (skip to Q5) 1 = Yes	... ___
4a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
5.	In the past month, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	0 = No (skip to Q6) 1 = Yes	... ___

5a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
6.	In the past month, did you or any other household member have to eat fewer meals in a day because there was not enough food?	0 = No (skip to Q7) 1 = Yes	... ___
6a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
7.	In the past month, did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (skip to Q9) 1 = Yes	... ___
8a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
9.	In the past month, did you or any household member go a whole day and night without eating anything because there was not enough food?	0 = No (questionnaire is finished) 1 = Yes	... ___
9a.	How often did this happen?	1 = Seldom (once or twice) 2 = Sometimes (three to ten times) 3 = Often (more than ten times)	... ___
10.	What should be done to improve the situation of your household	1 = Register for grant 2 = Provide job opportunities 3 = Support our farming activities	... ___

APPENDIX C: HOUSEHOLD FOOD DIVERSITY SECTION OF THE QUESTIONNAIRE

No.	Questions	Responses	
		NO=0	YES=1
1.	Any grain or cereal (corn/maize, rice, wheat, sorghum, millet or any other grains or foods made from these (e.g. bread, noodles, porridge or other grain products) + <i>insert local foods e.g. phutu, pap, porridge or pastes or any other locally available grains</i>)		
2.	Any tubers and roots (potatoes, yams, cassava or any other foods made from roots or tubers)		
3.	Any vegetables (dark green/leafy vegetables, including wild ones + <i>locally available leaves such as amaranth, cassava leaves, spinach etc.</i>)		
4.	Any fruits (ripe mangoes, apple, pear, orange, grapes, apricots (fresh or dried), ripe papaya, dried peaches + <i>other locally available fruits, including wild fruits</i>)		
5.	Any meat (blood-based foods, flesh based food i.e. beef, pork, lamb, goat, mutton, turkey, rabbit, chicken, other birds; organ based food i.e. liver, kidney, heart, or other organ?)		
6.	Any egg		
7.	Any fish (fresh, dried or shellfish?)		
8.	Any food made of/from beans, peas, lentils, soya, seeds or nuts?		
9.	Any milk or milk product (milk, cheese, yogurt or other milk products)		
10.	Was oil, fat or butter added to the food or used for cooking		
11.	Any Sweets (sugar, honey, sweetened soda or sugary foods such as chocolates, candies, cookies and cakes)		
12.	Any spices or condiments and beverages (black pepper, salt, soy sauce, hot sauce, coffee, tea, alcoholic beverages etc.)		
13.	Did you or anyone in your household eat anything (meal or snack) outside of the home yesterday or today?		

APPENDIX D: FOOD CONSUMPTION COPING STRATEGIES SECTION OF THE QUESTIONNAIRE

NO	QUESTION	RESPONSE OPTIONS	CODE
In the past 7 days, if there have been times when you did not have enough food or money to buy food, how many days has you and/or your household had to:			
1.	Rely on less preferred and/or less expensive food	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
2.	Borrow food or rely on help from a friend or a relative	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
3.	Buy Food on Credit	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
4.	Gather wild food, hunt, or harvest immature crops or eat seed stock held for next season?	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
5.	Send children and other household members to eat at a friend or relative's house	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
6.	Limit portion size at mealtime	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
7.	Restrict consumption by adults in order for small children to eat?	1= Less than once 2= 1 to 2 times a week __

		3 = 3 to 6 times a week 4= All the time	
8.	Feed working members of HH at the expense of non-working members?	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
9.	Only eat two meals in a day	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
10.	Eat only at night or in the morning	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __
11.	Skip entire days without eating?	1= Less than once 2= 1 to 2 times a week 3 = 3 to 6 times a week 4= All the time __