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Faculty of Community and Health Sciences

PhD THESIS

Title: The development of a street-food vending model that offers healthy foods for sale

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Abstract

Background: Street foods (SF) contribute significantly to the nutritional intake of adults and children in developing countries. They are inexpensive and a major source of income for a vast multitude. A major concern is the so-called 'nutrition transition', which has led to an increase in foods high in saturated fats, trans fats, sugar and salt, along with processed food items sold on urban community streets in developing countries. These foods contribute to nutritional disorders in the communities where consumed. South Africa's stable unemployment rate, estimated at 25%, has further influenced business growth in the informal sector, particularly SF vending. As such, a well-developed SF-vending model (SFVM) could potentially address the challenges of unemployment and improve the nutritional status of poorer South Africans.

Aim: To develop a sustainable SFVM for selling healthy and safe SF in the City of Cape Town enabling street vendors to make a decent living, and consumers to make healthy choices regarding food purchasing.

Methods: This cross-sectional study employed mixed methodology (collecting qualitative and quantitative data). The study was conducted in three phases. **Phase 1a: Situation Analysis. This** a SF-vendor survey which collected a) socio-demographic factors, b) vendors' business operational models, c) food items sold, d) available facilities, e) challenges faced, f) certification, and g) nutrition knowledge using a validated questionnaire. An observational checklist capturing data on the appearance of vendors, their stalls, available equipment and type of food sold, supplemented this survey. **Phase 1b:** A consumer survey included collecting, a) socio-demographic factors, b) purchasing habits, c) consumption preferences, and d) nutrition knowledge using a validated questionnaire. **Phase 2a:** Semi-structured-interviews and focus group discussions with Environmental Health Officials and Economic Development

Officials from the City of Cape Town were conducted to explore the existing -vending regulations and/or policies in the City of Cape Town and gain insight into the SF-vending operations from a regulatory perspective. **Phase 2b:** A document review was conducted to identify existing regulations and policies on SF vending. **Phase 3:** conducted in three steps: Step 1, data integration of the previous phases. Step 2, a participatory action research component checking the relevance, acceptability and practicability of identified themes and resulting components from Step 1. Step 3, development of the proposed SFVM using the findings of the previous two steps.

Data Analysis: Quantitative data were analysed using IBM SPSS, 2010 Statistics version 23. Descriptive statistics and cross-tabulations were used to analyse data. Qualitative data were thematically analysed using the qualitative data software package Atlas ti 7.5.7.

Results: Phase 1a: vendors in the Cape Town and surrounding areas work long hours up to seven days a week making a minimal income. Types of food items sold by vendors, their nutrition knowledge and hygiene practices were not ideal. A major lack in basic facilities existed. **Phase 2a:** SF consumers indicated spending a significant amount of their income on SF, and are open to buying healthier options should these be available. **Phase 2a:** government officials thought the SF-vending business should be guided by national legislature and provincial bylaws, and felt strongly about nutrition and health education for vendors and consumers. **Phase 2b:** thirteen regulations and bylaws applicable to SF vending were sourced. **Phase 3:** Data from the previous phases were integrated within a socio-ecological framework to develop the proposed SFVM. The components of this model are divided into four areas, i.e. a business component, food and nutrition component, hygiene component, and a vending cart.

Conclusion: The four components in the proposed SFVM take into account various elements of the socio-ecological framework, i.e. intrapersonal/individual, interpersonal, the physical

environment/community and the policy environment. This SFVM should be piloted, evaluated, adapted and before rolling it out on a large scale to test its effectiveness.

Declaration

I declare that *The development of a street-food vending model that offers healthy foods for sale* is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Full name..... Date.....

Signed.....

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List of abbreviations

BMIs:	Body mass indices
BTI:	Bellville transport interchange
CAQDAS:	Computer-Aided Qualitative Data Analysis Software
CBD:	Central business district
CHD:	Coronary heart disease
COA:	Certificate of acceptability

CPUT:	Cape Peninsula University of Technology
DoH:	Department of Health
EHP:	Environmental health practitioners
FAO:	Food and Agricultural Organization
GIS:	Geographic Information System
GPS:	Global positioning system
IFTP:	Informal food trading programme
KAP:	Knowledge attitudes and practices
Kcal:	Kilocalories
kj:	Kilojoules
NCD:	Non-communicable diseases
NGOs	Non-governmental organisations
PAR:	Participatory action research
QLFS:	Quarterly Labour Force Survey
RDA:	Recommended daily allowance
SAFBDG:	South African food-based dietary guidelines
SF:	Street foods
SFVM:	Street-food vending model
SFVBM:	Street-food vending business model
TCP:	Technical Co-operation Programme
WHO:	World Health Organization
ZAR:	South African Rand

Chapter 1

Introduction

The street-food (SF) vending business as an informal employment sector has grown significantly in South Africa (Charman & Petersen, 2013; von Holy & Makhoane, 2006; Martins, 2006). This has been fuelled by the fact that the formal sector cannot grow fast enough to cater for all the nations' employment requirements (Martins, 2006; Stats SA, Census 2011). According to Statistics South Africa's Quarterly Labour Force Survey (Stats SA's QLFS, 2014) the unemployment rate has been estimated to have risen to 25.5% in the second quarter (April to June). This is despite the South African government's initiatives to grow employment in the country. Since commencement of the QLFS reports in 2008, this has been the highest unemployment rate, which has shown to be the highest among young women aged 15–34 years, the black African population, and those with an educational level less than matric.

In response to this high unemployment rate, it is typical that most street traders are mainly of African origin and the sole breadwinners in their families (von Holy & Makhoane, 2006). In a recent survey conducted on the informal economy of the Western Cape, over 1800 informal businesses were interviewed. Of these businesses, 40% were in food and drinks trade, with almost half of them (46%) making less than R1000 profit per month (Charman & Petersen, 2013). Evidence also suggests that most African street traders are "survivalist" (subsistence) traders (International Labour Organization, 2003). Willemse (2011) echoes this in stating that street trading encapsulates a survival or coping strategy for the poor to escape hunger by generating a small income. In addition to street trading being a source of income, it also contributes significantly to the diet of numerous people living in developing countries, including South Africa (Steyn *et al*., 2013). In South Africa, 11.3% of the population purchase

SF (Steyn & Labadarios, 2011). Black Africans are the most regular buyers of SF, with nearly one out of five (19%) consuming SF at least twice a week. Street foods are also convenient, cheap, and easily accessible and serve as a source of income to many poor people, who would otherwise not find employment (Dawson & Canet, 1991; Steyn *et al*. 2013).

A study undertaken in Kumba, Cameroon (Acho-Chi, 2002) has shown that mobile food vending is part of a survival strategy for the poor, who attempt to maintain and expand the subsistence business. As such, it is imperative that municipal policy-makers forge strategies directed at growing the economic well-being of poverty-stricken families and develop SF enterprises into city food establishments. Willemse (2001) also argues that it will be valuable if policy makers as well as researchers address problems encountered/experienced by the poor who are trying to enter informal trading.

As important as SF vending is, this business increases the strain on local government as it is difficult to manage because of its informal nature, microbiological hazards and its promotion of unhealthy foods (von Holy, 2004a, b; von Holy & Mahoane, 2006). For example, regulating what is sold in the streets becomes a challenge, as governments are not always in a position to monitor the type of food sold (whether nutritious, hygienic or safe). In this regard, initiatives that foster healthy, safe products, and profit SF vendors are needed, hereby ensuring that SF are not sold at the expense of the client's health. Ideally, one wishes to create street-food vending businesses which are economically sustainable, and offer healthy foods which are microbiologically safe to clients. Such a model would provide the greatest benefit to both vendors and their clients, and would also reduce the monitoring burden on local government.

1.1 Problem statement

South Africa is experiencing a very high burden of chronic disease (Bradshaw et al., 2011), coupled with a very high percentage of unemployment and people living below the poverty

line (Labadarios et al., 2009). It is well known that chronic diseases are as a result of an unhealthy lifestyle and that these diseases can be prevented if one knows what to do. One of the most important parts of knowing what to do is eating healthily. Currently the majority of bad eating habits can be attributed to the low-socioeconomic status and circumstances which is also wrought with the unavailability and accessibility to healthy foods (Pampel, Krueger & Denney, 2010; Freeman, 2007). Street vending can in essence moderately address the challenge of unemployment as well as better the nutritional status of South Africans.

There is no existing street-food vending model (SFVM) in Cape Town that encompasses good business practices with the sale of nutritious foods which are safe to eat. There is also strong evidence presented above that street food vending is a growing enterprise. Martins, 2006 concludes that it is critical that poor people in a developing country such as South Africa be granted the opportunity to earn their living by starting an 'easy-to-enter' business such as street food vending when all necessary standards are adhered to. The above background sketches the need for a viable SF-vending model (SFVM) that sells healthy and safe food in the country, and enables the business owner (street food vendor) to make a profit that will sustain a decent livelihood. As the study proposes that once the SF vendor makes a better profit, which enables an improved lifestyle, the vendor will then be motivated to improve the business even further by selling a better, healthier product using sound business practices. This would make the SF vendor a reputable business owner with a regular client base which will sustain the business over time.

This research therefore applies a socio-ecological approach to analyse, address and affect change by considering the following factors, 1) Intrapersonal factors, i.e. knowledge, attitude, behaviour and skills, 2) Institutional factors, i.e. local/district municipalities, 3) Community factors, i.e. local suppliers, and 4) Public policy, i.e. local policy (policy brief to local government.

1.2 Aims, objectives and conceptual framework

1.2.1 Overall aim

The overall aim of the study is to develop a sustainable SFVM which enables the vendor to make a reasonable income by selling healthy and safe SF in the city of Cape Town and surrounding areas.

1.2.2 Specific objectives

1. To determine the current business operations of the SF vendors in Cape Town and surrounding areas.
2. To determine the current business operations of the SF vendors in Cape Town and surrounding areas.
3. To determine the types of SF and their nutritional value, sold in Cape Town and surrounding areas.
4. To determine the hygienic practices of SF vendors in Cape Town and surrounding areas.
5. To determine the purchasing habits of SF consumers living in Cape Town and surrounding areas.
6. To determine the KAP and intentions of consumers to purchase healthy and safe street foods in the city of Cape Town and surrounding areas; and
7. To identify the current regulations and policies governing SF vending.
8. To integrate the data obtained from objectives 1-5 to make recommendations for a sustainable SFVM.
9. To develop a SFVM.

1.3 Theoretical framework

1.3.1 Socio-ecological approach

The social ecological perspective on health promotion is not based on a single discipline or theory, but a broad paradigm that links a number of different research fields (Stokols, 1996).

The conceptualisation of an ecological model/perspective supposes that individual behaviour should be regarded as being affected by and effecting various levels of influence, including both individual and environmental determinants (McLeroy *et al*., 1988).

Bronfenbrenner (1977) developed a model that illustrated environmental influences on behaviour into four levels, i.e. the micro-, meso-, exo-, and macrosystem levels of influence. The microsystem refers to one-on-one almost daily influences and interactions in specific settings, such as exchanges with immediate family, informal social networks, or work groups. The mesosystem is the network of microsystems and alludes to the linkages among the different settings in which the individual finds him/herself i.e. family, school, peer groups and church. The exosystem refers to powers in the greater social system in which the individual is entrenched. The macrosystem refers to cultural beliefs and values that influence both the micro- and macrosystem (Bronfenbrenner (1977).

Based on the work of Bronfenbrenner, and McLeroy *et al*. (1988), the current research considered the four levels of influence with regard to the operation of SF vending. These also served as a conceptual framework for this study and included:

1. Intrapersonal factors: the knowledge, attitudes, business skills, hygienic practices and behaviour of the SF vendors were determined.
2. Interpersonal processes and primary groups: the knowledge, attitudes, and behaviour of the clients of SF vendors were determined.
3. Community factors: the various organisations and bodies regulating the SF vendors were studied as well as the local food suppliers.
4. Public policy: all aspects relating to the regulations and governing of SF vending were studied, see figure 1.1.

Figure1.1 Ecological model for health promotion (Mc Leroy, 1988)

In this study the results of the four influencing levels above were used to develop a context appropriate, practical, and sustainable SFVM.

1.3.2 Participatory Action Research

The researcher used the participatory action research (PAR) to promote a profound sense of ownership, in an effort to stimulate the sustainability of the proposed SFVM.

The principle of PAR is designed to enable relatively disempowered groups to embark on research into their own situations (Cornwall & Jewkes, 1995 in Hecker, 1997). Participatory action research takes away the element of passiveness of the research participants by involving them as co-researchers (Wadsworth, 1982 in Hecker, 1997). As such, this type of research recognises the importance of involving those who are intended to be the beneficiaries of the research; with specific reference to the working classes, the labourers, the exploited and the poor in a breakdown of their reality (Reason & Rowan, 1982 in Babbie & Mouton, 2001). In this regard, vendors will be regarded as the main stakeholders in the current project. As such, they have been involved in the cycles of planning the project, action, reflection and evaluation of the project as informed by McTaggart and Kemmis (1988) as well as Hecker (1997).

This research, therefore, is directly related to an action informed by an appreciation of history and culture of the SF-vending business, local milieu as entrenched in the vendors' social relationships as informed by the Braun *et al*. (2006) research.

1.4 Outline of the thesis

This thesis comprises eight Chapters, see figure 1.2.

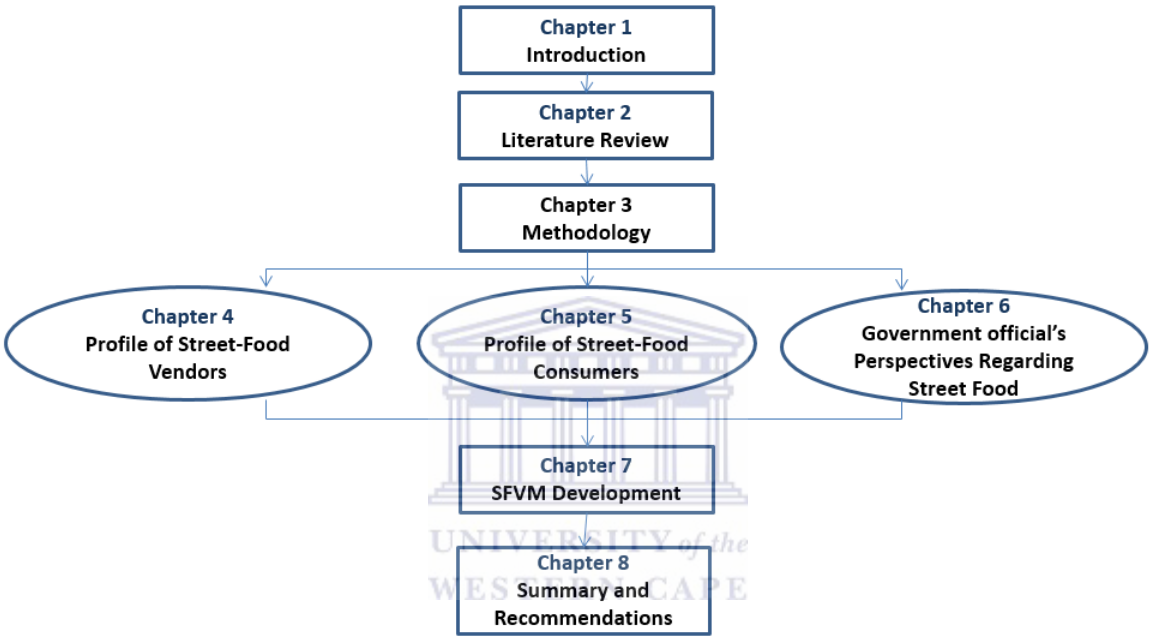


Figure 1.2: Outline of the thesis

In Chapter one, the Introduction, the significance and growth of SF vending, as a means of income and a mode of preserving culture and heritage through food is outlined. In the Literature Review, Chapter two, an overview of the SF vending business with reference to the literature in South Africa and international countries is given. In this chapter, the particular focus is on the operators of the vending stalls, their operational environment as well as the customers they serve (i.e. the consumers). The nutrition knowledge and hygiene aspects of vendors, and the regulations and policies that guide the SF business are reviewed in Chapter two.

In Chapter three, methodological approaches which were used throughout the entire research will be described while the situation analysis of SF vending and consumption are outlined in chapters, i.e. four and five.

The qualitative findings from the study conducted with government officials, pertaining to the SF-vending operation in Cape Town and its surroundings are outlined in Chapter six and Chapter seven maps the development of the SFVM is mapped. In this chapter the main findings from the situation analysis of the SF vending and consumption, and focus group discussions with environmental government officials are integrated. Focusing on issues that especially might enhance or hinder the business and its management. Possible solutions and/or suggestions are provided in an effort to develop a viable SFVM that will also sell healthy and safe foods in Cape Town and its surroundings.

The most important findings, and the strengths and limitations of the study are drawn together in Chapter eight. The implications and recommendations for future work in respect of the proposed SFVM are also discussed/outlined in this final Chapter.

This study was a mixed methodology study. Figure 1.3, below, depicts the structure and the various elements of the study.

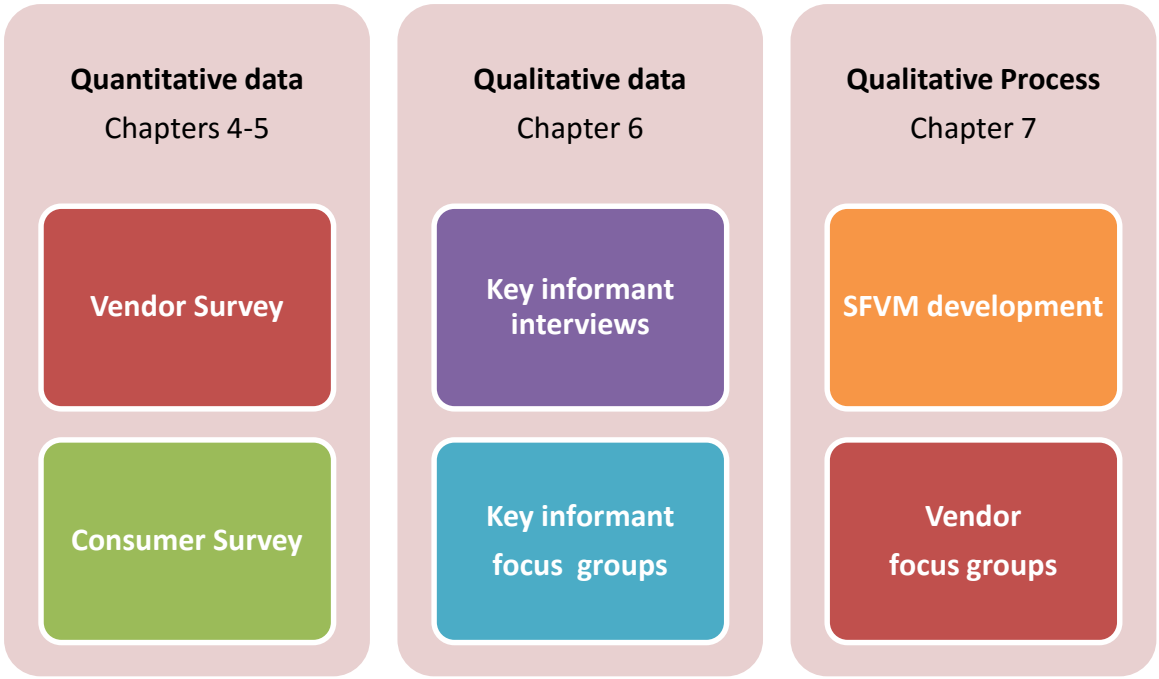


Figure 1.3: Mixed methodology research design

SFVM = street-food vending model

Chapter 2

Literature Review

This Chapter draws on existing literature surrounding street-food vending and consumption, internationally. In this regard, the definitions given to SF and SF vending are outlined, with the general profiles of the SF vendor and -consumer presented. In addition, the review of the nutrition and hygiene aspects of SF as well as the regulations and policies that guide the SF vending are presented. Specific reference is given to the South African cooked SF situation and existing laws and policies that govern SF trade in different provinces in the country. Moreover, the challenges encountered by SF vendors in their day to day business operations are reviewed. Finally, the existing business models for street-food vending internationally that can be adopted as the basis of our proposed SF-vending model (SFVM) will be presented.

2.1 Scope of the problem/significance of street food

As a trade, SF vending has been established for centuries and is considered an integral part of the historical and cultural heritage of numerous cities worldwide (WIEGO, 2013; Bromley, 2000). As such, SF vendors are present in most cities around the world, vending an assortment of goods ranging from whole foods, packaged snacks and drinks to cooked meals (Draper, 2006; Steyn *et al*., 2013). In some countries, cooked foods are regarded as depicting unique dimensions of culture, lifestyle and heritage, and are considered to be tourist attractions (Henderson *et al*., 2012; Steyn *et al*., 2013). Although SF vending is present worldwide, this is most widely practiced in developing countries (Dawson & Canet, 1991), because of unemployment (Martins, 2006).

City centres in developing countries and urban centres, in particular, have become a melting pot for different ethnic groups, who bring their specific food traditions to the streets (Dawson

& Canet, 1991). In 2007, South Africa had approximately 500 000 street vendors. Street vendors selling food were more common (nearly 36%) than non-food-selling vendors (Wills, 2009). In South Africa, similar to many other countries, SF have gained popularity for various reasons. That is, they are usually inexpensive; socially and culturally appropriate; and available at places convenient for travellers and workers, i.e. around factories, offices, schools, universities, and transit points, such as bus terminals, and market places (Dawson & Canet, 1991; Majunga *et al*., 2011; Steyn *et al*., 2013). Research available has shown that 11.3% of the South African population purchase SF on a regular basis (Steyn & Labadarios, 2011). Furthermore, with an increasing urban workforce and more people working away from home, SF becomes one of the most convenient sources of meals and snacks (Harvard School of Public Health, 2013). Likewise, many people lack proper housing and cooking facilities, and hence, SF become an ideal choice of cheap and labour-free meals (Dawson & Canet, 1991; Steyn *et al*., 2013).

2.1.1 Definition of Street Food

Street foods are defined as ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers, especially in streets and other similar places (Food and Agricultural Organization [FAO], 1989). Martins (2006) also defines SF according to its location, in that this is food sold mainly on the streets. Escalante de Cruz (2003) proposed three types of SF vendors: mobile vendors, semi-mobile vendors, who could move from one site to another or remain on one site, and 'stationary' vendors, who trade from the same site daily. Charkravotory and Chanet (1996) also identified three distinctive features of SF, i.e. 1) foods that are prepared in small factories and then sold on the streets, 2) foods that are prepared at home and then sold on the streets, and 3) foods that are prepared and sold on the street.

2.1.2 Definition of Street Vendors

The informal sector plays an important role in many developing economies, particularly in big cities and tourist destinations (Timothy & Wall, 1997). In most countries, the informal economy is a practise of income generation which is "unregulated by the institutions of society" (Castells & Porters, 1989 in Timothy & Wall, 1997). Statistics South Africa's definition of the informal sector states: "The informal sector consists of those businesses that are not registered in anyway. They are generally small in nature, and are seldom run from business premises. Instead they are run from homes, street pavements or other informal arrangements" (StreetNet International, 2012: i). StreetNet International (2012: i), used the following description for a vendor in their study, "A street trader is someone who sells goods and services on the street, including street entertainment, goods loaders and street car guarding. It can be on a fixed or mobile basis, in markets or other public spaces."

2.1.3 Street-food vendor profile

In South Africa alone, the estimated number of street vendors in 2007 was approximately 500 000 (Wills, 2009), with SF vendors more common than non-food-selling vendors. In a survey conducted on SF vending in Gauteng, it was found that 48% of street vendors had a secondary school qualification, and 13% had no formal schooling (Martins, 2006). Most of these vendors (90.5%) were female. The age group distribution varied from 38.5% (31–40 years), 27% (21–30 years) to 24.5% (41–50 years). Less than a quarter (18%) of vendors were aware of training for informal traders, with a third (31.5%) being aware of the ten golden rules for healthy food preparation (Martins, 2006). The review by Steyn *et al*. (2013) also showed that numerous illiterate and unemployed individuals, often women, find street vending an easy means to earn money with little monetary investment necessary.

Literature shows that female vendors dominate in most developing countries with the exception of some Asian countries (Mwangi *et al*., 2001; Adjrah *et al*., 2012). In Nairobi for instance,

Mwangi *et al*. (2001) argued that in the early 1960s vendors were described as being uneducated men, with the consumers, for the most part, also being men with low incomes. However, by the late 1980s, women began to outnumber men as vendors, with women selling more cooked food, while men sold roasted maize, processed food, and grilled meat. In the early 1990s, SF vending also expanded into middle-income residential areas and parts of office areas, with women leading this trade (Mwangi *et al*., 2001). Similarly, a study in West Africa showed that the SF sector is dominated by women. Seventy-one percent of these women were educated, however, they lacked training on food, personal safety and hygiene (Adjrah *et al*., 2012). A study in Uganda found that 87.6% of street vendors were women with a low education level (Majunga *et al*., 2011). In Latin America, the available information on SF vendors also indicates that they have limited education and that their knowledge of safe food-handling practices is poor (Arambulo *et al*., 1994). None of the studies reviewed reported on the nutrition knowledge of SF vendors.

2.1.4 Street-food consumer profile

In this study SF consumers will be described as people who purchase food from SF vendors. Literature suggests SF consumers to be mostly young, single, unskilled workers, with a low level of education and lacking hygiene knowledge (Faye *et al*., 1998, Martins 2006, Rheinlander *et al*., 2008). In a study conducted by Martins (2006), the consumer profile in Gauteng was described as mostly black (98.9%), single (50%), males (88.4%), between the ages 26 and 35 years. Most (64.1%) of these consumers had some high-school education with only 8% having post high-school qualifications and university degrees. Moreover, fairly large numbers (40.4%) of SF consumers were found around the taxi transport interchange area. Studies reviewed made no referral to the nutrition knowledge of SF consumers, as the focus was purely on hygiene.

The most recent study of SF consumers by Steyn and Labadarios (2011), showed that black Africans are the most regular SF buyers, with nearly one out of five (19%) consuming these foods at least twice a week. According to the survey the highest consumption of SF is in the urban informal (19.4%) and urban formal areas (16.7%). The lowest percentage of SF buyers are in the rural areas (4.7%).

2.2 Nutritional aspects of street foods

2.2.1 Types of street foods sold

Numerous types of SF are available globally. Street foods differ from one country to another, from one town to the next, and from vendor to vendor (Draper, 1996). Cultural cuisines seem to be the most popular SF, although large-scale processed foods also constitute a significant category of food items sold on the streets (Draper, 1996). In general, SF vendors sell more than one food item, while some specialise in a specific type of food, e.g. bread with various fillings (Draper, 1996). Street food can be categorised in different ways, by meal (even these may vary in food groups); by single food items or beverages; by level of processing; and by method of cooking, e.g. fried, boiled, baked, grilled, roasted, steamed or raw (Draper, 1996).

The number of the types of food sold would be impossible to calculate or mention, below are a few examples from various countries, including South Africa.

In Asia, popular foods that are sold on the streets are hot noodles, meatballs, *soto* (soup, which sometimes contains coconut milk), *asinan* (mixture of fruits and raw or fermented vegetables with a sour sauce), *Rujak* (mixture of fruits with a spicy or sweet sauce), rice and vegetable dishes mixed together. In addition, boiled and fried peanuts, fried *tempeh* (fermented soybean cake), and tofu (soybean curd) are also sold. Meats include barbequed chicken and mutton, fried fish and other local meat and fish dishes (Winarno & Allain, n.d.).

Examples from Italy include the *fritolini* (freshly fried fish) in Venice; the *polentat* (cornmeal into a thick, solidified porridge, and consumed instantly or baked, fried or grilled) served with fried fish in Milan, the *farinotti* in Liguria and Tuscany; tripe in Florence, and the *meusari* (soft bread flavoured with sesame, stuffed with chopped veal's lung and spleen that have been boiled and then fried in lard) in Palermo (Privitera & Nesci, 2015).

In Cotonou, Benin, popular foods sold on the street are wheat bread, maize-based dough and porridges, rice and pasta. Starchy roots and tubers comprise yam- or cassava-based dough, boiled or fried yam, cassava, potatoes, sweet potatoes, and bananas. Fruit include pineapples, apples and oranges, while green leafy vegetables are consumed with sauces. Eggs, milk and milk products are also popular. Sweet foods, such as sweetened beverages, candies, chocolate and lollipops are also for sale (Nago *et al*., 2010).

In Burkina Faso, popular foods sold include *toˆ* (a paste made from cereal flour of maize, millet or other) with okra; rice with peanut sauce; soft drinks – mainly zoom-koom (pearl millet flour with sugar); peanuts; buns/cookies; bread; alcoholic beverages; fruit – mainly mangoes (Becquey and Martin-Prevel (2010).

In Uganda, traditional dishes are the most commonly prepared street foods. Examples are boiled rice, steamed bananas, steamed sweet potatoes, steamed cassava, *posho*, millet bread, steamed yams, beef stew, fish stew, bean sauce, groundnut sauce, boiled *amaranthus*, and fried cabbage (Namugumya & Muyanja, (2012).

On the streets of Ghana, fast-food meals consisting of fried rice with meat are popular. Meals made of staple foods (rice, beans, *banku* made of fermented maize dough, and *fufu* made of boiled and pounded starchy root vegetables) with side dishes of stews or vegetable sauces are usually sold with accompanying salads dishes, raw vegetables such as lettuce, cabbage, and spring onions (Rheinlander *et al*., 2008). Other popular items found in Ghana are, *koko*

(porridge) and *koose* (bean cake), salad, *talia* (homemade macaroni), *fufu* (pounded cassava with plantain, cocoyam or yam), *kenkey* (fermented maize dough dumplings), rice, fried fish, light soup, ground nut soup, Tomato stew, *shito* (vegetable oil with onion, pepper, tomatoes, with dried fish and shrimps), and *nkontomre* (cocoyam leaves) stew (Mensah *et al*, 2002).

In Mozambique, the most common food items for sale that were observed are sorghum, cassava, white fleshed sweet potatoes, sugar cane, pepper and sesame. Most women in Mozambique also have cooked foods for sale – the types of cooked food are not mentioned (Companion, 2010).

In South Africa, typical SF dishes consist of maize porridge, served with either chicken or beef pieces or stew, tomato and onion gravy or salad (Canet & N'Diaye, 1996; Kubheka *et al*., 2001; Lues *et al*., 2006). Tea, [steamed] bread, vetkoek (a type of dumpling) and eggs are also sold by vendors (Martins, 2006). Fruits and vegetables, soft drinks, savoury snacks (e.g. potato crisps), biscuits, etc. are also popular items sold by vendors on the street (Steyn & Labadarios, 2011; Steyn *et al*., 2011).

2.2.2 Nutritional value of street foods

The most recent, and only review assessing the nutritional contribution of SF (Steyn *et al*., 2013) showed that many studies indicated a significant contribution to adults and children's nutritional intake in developing countries. The review concluded that energy intake from SF in adults ranged from 13% to 50,3% and in children from 13% to 40% per day. The authors highlighted that although the energy intake varied from place to place, even at the lowest values of the percentage energy range, the energy contribution from SF still made a substantial contribution to children and adults' diets.

Pertaining to macronutrients, in the aforementioned review, most studies indicated that SF contributed significantly to the daily intake of protein, often as much as 50% of the RDA. In

an early (1995) study on the contribution of SF to nutrient intakes of Nigerian adolescents, it was found that over 50% of the children's total protein came from SF. Also interesting to note, was that 70% of protein from animal meat came from SF (Oguntona & Kanye, 1995). Other studies in the 1990's showed that SF also contribute to more than 50% of the daily protein intake in Nigerian adults, i.e. 53.2% and 50.7% for males and females, respectively (Oguntona *et al*, 1997). In Nairobi, SF meals sold to labour-intensive workers provided more than 50% of the RDA for protein intake (Korir *et al*., 1998). In a Ugandan study, the protein intake from SF was found to contribute slightly less i.e. 38.6–44.9% to the daily total (Namugumya & Muyanja, 2012).

Data of fat and carbohydrates are very concerning. For example, in a study in Barkino Faso, findings showed that ready-to-eat foods bought outside the home contributed up to 52% of daily fat intake and 72% of sugar intake (Becquey & Martin-Prevel, 2010). The fat intake of Nigerian adolescents was up to 70.8% and 24.8% for carbohydrates, which was derived from SF (Oguntona & Kanye, 1995). In the case of Nigerian adults, SF provided 37.9% and 54% of the total daily intake of fat and carbohydrates, respectively (Oguntona *et al*., 1998).

In the aforementioned nutrition review, very few studies have provided data on the intake of micronutrients, but these tended to be high for iron and vitamin A, while low for calcium and thiamine (Steyn *et al*., 2013). Again, in the Nigerian adolescent study, over 50% of total mineral and vitamin intake came from SF. The mean intake for calcium was 64%, with females having a calcium intake from SF of up to 70%. With vitamin intake, males had a higher thiamine intake (1.1 mg vs. 0.7 mg) as well as a higher vitamin C intake (32 mg vs. 7.6 mg) than females (Oguntona & Kanye, 1995). In the Nigerian adult population, intakes derived from SF were 35.2% for iron, 46.2% for Ca, 55.3% for vitamin A, 57.3% for vitamin C, and 47.5% for thiamine (Oguntona *et al*., 1998).

In a study conducted in India on the macronutrient content of SF, it was found that the mean energy from SF was 250 Kcal, ranging from 239–311 Kcals (Koodagi *et al*., 2013). Sweet items supplied the most energy (311 Kcal), followed by non-vegetarian items (305 Kcal) and 239 Kcal from fast foods. The carbohydrate content of sweet items were recorded at 49.46 g, fried foods at 42.09 g and non-vegetarian foods at 24.08 g. In this study, it was also surprising to learn that fried and fast-food SF contained more fibre than other food items. In this study, it was shown that fried food also had a higher content of protein (Koodagi *et al*., 2013).

Research conducted in Cotonou, Benin, established that people, who consume SF regularly were more likely to have diets high in saturated fats, trans-fatty acids, sugar, salt and high-energy carbohydrates as opposed to irregular consumers, who consumed more fruits and vegetables (Nago *et al*., 2010). Similarly, in the review on contribution of SF to nutrition (Steyn *et al*., 2013), there was a concern that SF contributed to the total intakes of fat, trans-fat, salt and sugar in many of the studies.

Total fat, trans-fat, salt and sugar are implicated in the development of obesity and non-communicable diseases (NCD) (Vorster *et al*., 2014; Joubert *et al*., 2007; NHBP EP, 2003). The afore-presented evidence shows that SF are often energy-dense and low in micronutrients. Street foods provide significant amounts of energy to those who consume these foods. Thus, close attention should be given to the content of nutrients in SF that are known to be risk factors for obesity, other chronic diseases and their consequences.

Obesity and NCDs are known to be the result of unhealthy lifestyles, and these diseases can be prevented if one knows what to do. One of the most important parts of knowing what to do is eating healthily. Currently poor eating practices can often be attributed to the low-socioeconomic status and circumstances, which are also wrought with the unavailability and accessibility to healthy foods (Pampel, Krueger & Denney, 2010).

A study in Calcutta, India, found that SF can be affordable and nutritious; an average meal consisted of about 30 grams of protein, 15 grams of fat and 180 grams of carbohydrates (FAO, 2012).

2.3 Hygiene aspects of street foods

Street-food vending in developing countries has become a viable food outlet used by poor and middle-income individuals. However, because of the lack of adequate understanding of basic food safety issues, foodborne illnesses have become a public concern (World Health Organization [WHO], 1996; FAO Plan, undated). Major sources contributing to microbial contamination are during food preparation and cooking; the use of unclean serving utensils, mixing cooked and raw food, time and temperature abuse of cooked food as well as vendor and stall hygiene (WHO, 1996). Indeed, Muinde and Kuria (2005) noted that common perceptions around SF are that they are unsafe, by virtue of contamination, simply because of the environment in which they are prepared, sold and consumed. Furthermore, findings from Ghana showed that the settings where food vending is normally practiced are scarcely resourced with low environmental and sanitary standards, posing a major threat to food safety (Rheinlander *et al*., 2008).

Studies that explored the microorganism infestation of SF surveyed food items which included cooked food (such as red meat, poultry and pasta dishes); ice cream; gravy; salads (raw and cooked); green leafy vegetables; other cooked vegetables; offal/tripe (e.g. intestines); organ meat (e.g. liver); raw meat carcases; as well as cooking water and dishwater. The most common food pathogens found in food samples in the studies reviewed were, Bacillus cereus, Staphylococcus aureus; E. aureus; Escherichia coli; Clostridium perfringens; Enterobacter spp.; Enterococcus spp.; Vibrio metschnikovii; Salmonella typhimurium; Shigella flexneri; Salmonella Enteritidis; Salmonella Brancaster; Salmonella Hadar; Shigella spp.; Vibrio cholerae, Campylobacter spp.; Klebsiella pneumoniae. (Mathee

et al., 1996; Umoha & Odoba, 1999; Aidara-Kane *et al*., 2000; Mosupye & von Holy, 2000; Kubheka *et al*., 2001; Muleta & Ashenafi, 2001; Mensah *et al*., 2002; Cardinale *et al*., 2005; Murindamombe *et al*., 2005; Amposah-Doku *et al*., 2006; Lues *et al*., 2006; Barro *et al*., 2006; Gadaga *et al*., 2008; Nkere *et al*., 2011; Bartkowiak-Higgo *et al*., 2006; van Nierop *et al*., 2005; Mosupye & von Holy, 1999; Ahmed & Shimamoto, 2014; Garin *et al*., 2002; Kibret &Tadesse, 2013).

Access to potable water is problematic in most low-income countries, particularly in Africa (WHO Global InfoBase, 2012). In Uganda for instance, irregular water flow from taps for hand- or dishwashing, cooking or drinking, causes street vendors to store water under risky conditions, including the possibility of contamination by insects, rodents, and animals, and through air pollution (Hanashiro *et al*., 2005).

In Kumasi, Ghana studies on the evaluation of the microbial quality of water, used to irrigate vegetables destined to be sold in markets, fresh or salads included in street-food meals, reported traces of faecal coliforms and helminths in each water type (three main types of irrigation water, i.e. stream, well and piped) (Amoah *et al*., 2005, 2007).

In Latin America, vendors seldom have access to safe running water for cooking, washing utensils and cutlery, personal hygiene or the preparation of drinks, ice or ice products. Consequently, the water used is largely considered the leading single cause of food contamination. A typical occurrence is that of water being used over and over again during the course of the day. At times the water is not changed at all, thus allowing significant quantities of dissolved organic matter and in some cases faecal contamination affording an opportune medium for bacteria to grow. (Arambulo *et al*., 1994).

Majunga *et al*. (2011) echoed these afore-mentioned findings, highlighting that the safety of SF is influenced by several factors, such as the quality of raw supplies, food-handling and storage practices.

Some evidence of improvement in sanitation and improved quality of drinking water can be observed on the WHO Global Info Database (WHO Global InfoBase, 2012). The WHO graphical output shows that in 2012, 12 countries (South Africa, Algeria, Namibia, Botswana, Burkina Faso, Cote d'Ivoire, Ghana, Benin, Gabon, Malawi, and Zimbabwe) had 76% or more of their population with access to safe, clean drinking water. However, one has to take cognisance that even in those areas where water is available this does not mean that the water sources are free of pathogens which cause illnesses. For instance, some of the water sources, supplies and storage may not be good enough to interrupt endemic transmission of the pathogens that prevent major outbreaks of diseases (Shaheed *et al*., 2014). Even the WHO 2014 update on the, *Progress on Water and Sanitation* has shown that most African countries have populations which still use water of poor quality (WHO/UNICEF report, 2014).

Finally, according to a few studies in South Africa, SF have been shown to be reasonably safe, with acceptable bacterial counts (Monsupye & von Holy, 1999; Monsupye & von Holy, 2000; Lues *et al*., 2006; Martins & Anelich, 2000, Van Nierop *et al*., 2005; Mathee *et al*., 1996). However, von Holy and Makhoane's (2006) review of these South African studies showed that there is a great need for proper hygiene practices, access to sanitary facilities and clean running water. They further propose that success in this regard will only be achieved if all stakeholders including food-control authorities, street-food vendors as well as academic institutions work together to improve the SF-vending sector.

2.4 Regulations, policies and operational models of street foods

In the previous section, it is highlighted that SF are generally recognised as posing a major public health risk as a result of the absence of basic infrastructure and services. However, governments in developing countries experience a challenge in regulating SF-vending operations, because of the short-lived and mobile nature of many vending operations in the streets (Rane, 2011). According to Dawson and Canet (1991), in many developing countries, there are no existing licencing requirements or regulatory control procedures for SF vendors. They further argue that SF vending is typically not recognised, but simply tolerated or overlooked until the vendors become a nuisance. In a study of six African cities, including South Africa, local authorities were shown to be recognised as the chief barriers to the development of the informal sector. This is because they use dated restrictive policies, bylaws and regulations, originally intended for the purpose of controlling and regulating the formal sector. (Mitullah, 2003). The South African national government has, however, committed to ensure an enabling environment for small informal economic activities, which include street vending (Mitullah, 2003).

During 1991, the national government of South Africa passed the Business Act (Government Gazette, 1991). This national law recognised street traders as business people, since they are important for the economy and need assistance from the government. Prior to the introduction of this Act, street traders required a license for trading, however, according to the new Act a license is not required (International Labour Organization, 2003). Furthermore, municipalities are not allowed to prevent street trading, however, they can take control by making bylaws and regulations which stipulate where trading is allowed (International Labour Organization, 2003).

In South Africa, various provinces have introduced bylaws pertaining to SF trading. In Durban for example, a bylaw has incorporated informal trading into its long-term strategy to

support its economic development. However, the street vendors are allowed to operate in allocated areas. This minimizes the problem of vendors becoming a public nuisance in the city and surrounding towns. Prior to obtaining the certificate of acceptability which allows SF vendors to operate, the Durban Metro ensures that SF vendors are trained in critical food safety. This therefore aids them to observe the minimum hygiene standards (Martins & Anelich, 2000).

In Mpumalanga Province, the Ehlanzeni District Municipality is one of the first municipalities to have implemented the recommendations of the Technical Co-operation Programme (TCP) on improving SF vending in South Africa. The objective of the TCP project is to improve the quality of SF vending in South Africa to ensure consumer safety and provide vendors with health education and training regarding acceptable SF preparation and practices (http://www.doh.gov.za/docs/foodcontrol/trainingmanuals/2012/tcp_project.pdf).

The Ehlanzeni District Municipality compiled street trading bylaws. With the implementation of these bylaws, the municipality provided basic facilities for the vendors including cleaning services, running water, wash basins, storage facilities and toilets. The vendors pay for the maintenance of these facilities. They are obliged to observe the minimum requirements that are based on the National Hygiene Regulations (Martins & Anelich, 2000). The municipality continually provides training to vendors and conducts inspections as part of compliance monitoring (Martins & Anelich, 2000).

In Gauteng the Department of Health (DoH) developed the informal food-trading programme (IFTP) to promote safe food handling within the informal food-trading sector in the province (Martins & Anelich, 2000). This forms part of the WHO's initiative to promote healthy cities among communities of Gauteng. Objectives of the programme include providing SF vendors with general knowledge and awareness of good hygiene practices, regulations and bylaws; motivating the SF vendors to become responsible and diligent in providing safe food to

consumers and thus decreasing the risk of food contamination and the incidence of foodborne disease outbreaks. As part of programme implementation, the Gauteng DoH developed a pack of flipcharts that are used in training SF vendors on basic food hygiene. During the implementation process, the Johannesburg Metropolitan Council took the initiative to register SF vendors within its jurisdiction and provided space for them in which to operate. The Metro also provided vendors with basic facilities such as shelter, running water, toilets, and in certain areas electricity was made available (Mosypye & von Holy, 2000).

In the North West Province, a policy that contains the minimum requirements to which SF vendors should comply, has been developed (Martins & Anelich, 2000). However, it is not certain whether compliance is regulated.

Despite the absence of a published food-vending policy in the Western Cape municipalities, SF vending is also regulated in terms of the National Hygiene Regulations (Anon., 1999 in Martins & Anelich, 2000) and Regulation no. 962, governing general hygiene requirements for food premises and the transportation of food (Government Gazette, 2012). In terms of these regulations, SF vendors are required to have a Certificate of Acceptability. In addition, the City of Cape Town has an informal trading bylaw which regulates informal trading, pertaining to types of informal trading plans, permits, restrictions on informal trading, waste removal, cleansing and hygiene, special events, etc. (Provincial Gazette 6677, 2009). In this province, initiatives used for monitoring and regulating of SF vending include educating vendors via the flip charts that were developed by the Gauteng Province DoH. Also inspections of SF-vending premises take place regularly and food samples are collected for microbiological examination (Martins & Anelich, 2000).

2.5 Challenges experienced by street-food vendors

Street-food vendors in Africa face many challenges in their businesses even though SF vending is an important economic role-player in developing economies. In most cases, local authorities and planning agencies are inclined to see vendors as a nuisance to the intended development of the city and thus frequently carry out street clearing exercises, destroying stalls and confiscating goods (Acho-Chi, 2002; Mitullah, 2003). For example, in Kumba, Cameroon, the urban planning process does not consider the needs of individuals involved in the informal economic sector (Acho-Chi, 2002). Instead of regulating, prevailing laws seem to perpetuate stress, stifle productivity and inhibit novel approaches to SF vending as a family survival strategy. Acho-Chi (2002) argues that in the city of Kumba about 70% of SF-vending businesses trade without the required health certification or a public sales license, which attests to the failure of suitable regulatory policies.

Two studies examined the main constraints facing informal street traders, of which the following four were identified, i) economic pressures; ii) socio-cultural challenges; iii) adverse political conditions, and iv) policies and operational challenges (Tambunan, 2009; Willemse, 2011).

Economic pressures include, but are not limited to, finances and competition among vendors. When it comes to start-up finances; bank loans are often not available to street vendors as banks require surety. As such, alternative financing has to occur either via personal savings, loans from family members, money lenders or other informal sources (Willemse, 2011; Tambunan, 2009). Often loans incurred have high interest rates, which vendors struggle to repay. Moreover, the competition among vendors limits their ability to work together which would enable them to improve or maintain their income (Tambunan, 2009; Willemse, 2011).

Socio-cultural constraints: Women are unduly confronted by gender-specific barriers to informal street trading. Informal traders, particularly women, are often debarred from the

labour market, resources, income, education, decision-making, social services and networks (Tambunan, 2009; Willemse, 2011).

The lack of technical, business and entrepreneurial skills discourage informal street vendors from effectively running and improving their informal businesses, and marketing these among finance providers. The absence of good social and marketing knowledge is also a constraint in improving and sustaining their businesses, as their business skills are often self-taught or acquired from another untrained, poorly skilled street vendor (Tambunan, 2009; Willemse, 2011).

Political conditions and policies often present a challenge for traders (Willemse, 2011). A lack of suitable policies can cause a number of problems for informal traders. This can result in an escalation of taxation rates, increase of income vulnerability, limited trading participation, restricted growth, and altered incentive structures. The lack of vital infra-structure, such as decent access roads, efficient, accessible and affordable public transport and accommodation, schools, hospitals, banks and post offices impede on productivity. The lack of vital services, such as electricity, water, toilet and health facilities severely impacts on the ability of informal street traders to do their work properly and deliver a quality service (Willemse, 2011).

Operational challenges: Often informal traders operate at the boundaries of the law (e.g. no registration, permits or health certificates) (Willemse, 2011). As a result they are associated with criminal activities and are thus exposed to harassment. Informal traders thus operate with a fear of violence, crime and theft of stock on a daily basis. Those street traders who have licences are overburdened with permit fees to operate in demarcated areas. The acquirement (which entails availability of space as well as financial implications) and security of storage facilities often pose a huge challenge to those who live far from their

operating sites or stalls. Some transport their goods via taxis or trolleys, while others pay to store their products and goods in storage facilities.

For the SF vendor a lack of facilities calls for the introduction of appropriate modern preservation technologies, for example, inexpensive refrigeration and heating units to store and reheat leftover foods, respectively. Food waste as a result of low demand and/or poor quality is a major problem. After all, evidence has shown that SF vendors with proper safety/hygiene and suitable storage facilities tend to make a substantial profit (Tambunan, 2009; Willemse, 2011; Companion, 2010; Skinner 2008a, b; Mitullah, 2003; Acho-Chi, 2002).

In the study conducted by Willemse (2011), most street vendors were the sole breadwinners and had to provide on average for four dependants, on a very minimal income. According to Willemse (2011), street vendors complained about cash-flow problems as well as the availability of financial assistance. Vendors had problems with sufficient stock, damaged stock and also fresh produce. Increasing competition between vendors also results in a decrease in customer demand and profit (Willemse, 2011).

Lack of transport is a major constraint for street vendors. Over 53% of vendors in the study transport their goods by either carrying or pushing these in trolleys. Just over 21% made use of public transport to transport their goods (Willemse, 2011). Another constraint was the finding that most participants in the study did not belong to a trade union; the membership fee was listed as a serious constraint. Not belonging to a trade union prevents them from collective action to attain legal protection, formalise and improve their businesses as well as ensuring a better working environment (Willemse, 2011).

Other challenges experienced by vendors were inadequate structure or shelter, inadequate services and infrastructure (e.g. water, waste bins), lack of equipment, lack of storage with

sufficient security, lack of policing, lack of support from local municipality as well as the location of their business (Willemse, 2011). Willemse (2011) concluded that regrettably, economical, sociocultural, political and operational constraints in some instances outweigh the opportunities informal trading affords.

National as well as local policies and regulations have a big role to play in making SF safer and the SF business thrive. Small initiatives can make life easier for vendors and inspectors, while ensuring that food is safer for the consumer. Impartial licensing and inspections, combined with education campaigns, are excellent long-term actions to safeguard the public and ensuring a legal, well-run, and thriving business (Winarno & Allain, n.d.).

The abundance of constraints in the SF operation call for a concerted effort by the formal sector (policymakers, private sector, health and research authorities) to find solutions regarding, i) the business/economic aspects, ii) the safety of food, and iii) the promulgation of healthy food items.

2.6 Business models for street-food vending

There is a dearth of data on business models used by street-food vendors both internationally and in South Africa.

The Food and Agriculture Organization of the United Nations (FAO, 2012: 17) have provided guidelines for starting a small-scale business in selling street food. These guidelines include researching, i) the market feasibility of the business; ii) the technical feasibility, and iii) the financial feasibility (Table 2.1).

Table 2.1: Important factors to consider when conducting a feasibility study for a street food enterprise (FAO, 2012: 17)

Guideline	Factors to consider
Market feasibility	Types of street foods sold
	Selling prices of street foods
	Types of customers (families, children, office workers, etc.)
	Customer buying frequency
	Quantities sold
	Competition
	Quality and safety required by customers
Technical feasibility	Processing and preparation methods required to provide quantities desired
	Hygiene and safety requirements for processing
	Law requirements on hygiene and safety
	Farm produce required to supply the ingredients
	Equipment needed
	Labour needed
	Skills required
Financial feasibility	Start-up costs
	Operational costs
	Cash flow
	Profit potential
	Loans

In a survey conducted on the informal sector in the Western Cape by Charman and Petersen (2013), questions were asked about business strategies including purchasing strategy, bulk purchasing, credit, and discounting. Only 8% of vendors were found to have purchased via a collective formal group, of which most were from the food and drink retail sector. Thirty percent of respondents reported receiving a discount for bulk purchases, 22% reported the purchase of discounted stock. The challenges faced by the informal sector were mainly, affordability of finance, electricity and water access and affordability, a lack of specialised

equipment, and lack of business premises. Trouble with law enforcement and crime was mentioned by respondents, while the lack of licensing was identified by the researchers (Charman & Petersen, 2013). The study concluded that the informal sector cannot be generalised as a "survivalist" (subsistence) sector, though it may be true that businesses are "survivalist" in a financial sense, the demonstration of sustainability of these businesses over time is positive. The study also reported that three quarters of the sample population would not trade their informal business for a formal job even at a minimum wage of R126 per day (Charman & Petersen, 2013).

Frese and colleagues have written about the psychological factors that contribute to the success of small-scale businesses (Frese, Brantjies & Hoorn, 2002; Frese, Gelderen & Ombach, 2000; Hiemstra, van der Kooy & Frese, 2000). They hypothesised that various psychological strategic processes are associated with business success. These strategies include complete planning, critical point planning, opportunistic planning, reactive planning as well as entrepreneurial orientation.

In South Africa, information regarding SF-business models is still to be explored taking into consideration the issue of safe food handling including, nutrition, profitability and sustainability. Safe food handling would include the physical environment, vendor hygiene, food preparation methods, surfaces and utensils required for safe food preparation, food storage as well as food temperature control. Nutritional aspects would include the preparation and types of food best suited to attain a healthy meal or snack at a sustainable cost. The business component of the SFVM should consider long-term profitability and sustainability, but should include aspects, such as start up financing, licencing, marketing and other good business practices to ensure economic growth over time.

The current research is structured against the above background and the gaps recognised in the literature.

2.7 Overall summary

In the Introduction (Chapter 1) the importance of the SF-vending business as an informal business that provides a livelihood for many South Africans is outlined. However, it is clear that most governments are simply not coping with the demands of this informal business boom.

The section on the Literature Review also highlighted ten key matters that serve as background to the SF business, i.e.:

1. The wide recognition that has been given to street vendors as significant contributors to urban economies globally.
2. The significance of SF in representing the unique dimensions of culture, lifestyle and heritage of a country is also generally acknowledged.
3. The commonly accepted SF definition based on the definitions by FAO (1989) and the StreetNet International (2012: i).
4. The general profile of the SF vendor described in the literature as individuals with limited education, skills and poor knowledge of safe food-handling practices.
5. The general definition and profile of SF consumers being mainly young, single, unskilled workers, with a low level of education and lacking in hygiene knowledge, making their profile very similar to that of the vendor.
6. The richness of SF in nutrition and their provision of significant amounts of energy to those who consume these.
7. Also, according to the few studies conducted in South Africa, SF are shown to be reasonably safe, with acceptable bacterial counts; however, there is a great need for proper hygiene practices, access to sanitary facilities and clean running water.
8. Despite the absence of a published food-vending policy in the Western Cape municipalities, SF vending is shown to be regulated using the National Hygiene

Regulations (Anon., 1999 in Martins & Anelich, 2000) and Regulation no. 962, governing general hygiene requirements for food premises and the transportation of food (Government Gazette, 2012).

9. Vendors have been shown to be faced with an array of challenges which can be combined in four different spheres, i.e. economic pressures, socio-cultural constraints, political conditions and policies as well as operational challenges.
10. Lastly, the information regarding SF-business models is still to be explored in its totality; taking into consideration the various issues of safe food handling including, nutrition, hygiene, profitability and sustainability.

In the next chapter, Chapter 3, the methodology applied in this study is described.

Chapter 3

Research Methodology

3.1 Introduction

This chapter describes the methodology used in this study. In an effort to achieve the objectives of this study and understand all the anomalies at play in the SF-vending operation in Cape Town, a cross-sectional design using mixed methodology was applied. This approach was chosen as the combination of quantitative and qualitative data collection allows for a better understanding of the research phenomena, as opposed to when only one type of data collection method is used (Creswell, 2005). The limitations of one method is effectively negated by the strengths of the other method (Creswell & Clarke, 2007).

Statement of the problem

There is no existing street-food vending model (SFVM) in Cape Town that encompasses good business practices with the sale of nutritious foods which are safe to eat.

3.2 Overall aim

The overall aim of the study is to develop a sustainable SFVM model which enables the vendor to make a reasonable income by selling healthy and safe SF in the City of Cape Town and surrounding areas.

3.2.1 Specific objectives

1. To determine the socio-demographic characteristics of vendors operating in Cape Town and surrounding areas
2. To determine the current business operations of the SF vendors in Cape Town and surrounding areas.

3. To determine the types of SF and their nutritional value, sold in Cape Town and surrounding areas.
4. To determine the hygienic practices of SF vendors in Cape Town and surrounding areas.
5. To determine the purchasing habits of SF consumers living in Cape Town and surrounding areas.
6. To determine the knowledge attitudes and practices (KAP) and intentions of consumers to purchase healthy and safe street foods in the City of Cape Town and surrounding areas; and
7. To identify the current regulations and policies governing SF vending.
8. To integrate the data obtained from objectives 1–5 to make recommendations for a sustainable SFVM.
9. To develop a SFVM.

To achieve the objectives of this research, a *socio-ecological model* was used (McLeroy *et al*., 1988). Furthermore, the FAO guidelines listed in **Table 2.1** were adopted when developing the SFVM.

3.2.2 Research design

This was study was designed as a cross-sectional study, which took place over a short time, and was descriptive in nature informing the development of the SFVM. The advantages of a cross-sectional design is that it is at relatively low-cost, does not require much time, the sample is representative of the population of interest, and is useful in public health planning (Levin, 2006).

3.2.3 Research approach

In this study, mixed methodology was used as it allowed for the following key principles in strengthening research as identified by Bryman (2006), in a review of mixed methodology studies:

1. Triangulation to ensure convergence or corroboration.
2. Complementarity: enhances and clarifies findings.
3. Offset: quantitative and qualitative each have their set of strengths and weaknesses, thus combining the two offset weaknesses and enhances strengths.
4. Completeness: provides a more comprehensive view.
5. Credibility: using mixed methods improves integrity of finding.
6. Context: enables contextual understanding and generalizability of data.

   (Bryman, 2006).

The study was conducted in three phases, as the subsequent phase built upon and was informed by the previous phase/s. The first phase comprised a situational analysis of SF vendors and -consumers. Phase 1 employed quantitative methodology. Phase 2 comprised qualitative methodology, whereby key informants from the Departments of Environmental Health and Economic Development were interviewed and participated in focus group discussions. The third phase entailed three steps and employed interpretative qualitative methods. Step one entailed integrating the survey findings with the key informant interviews and focus group discussions to establish themes to take forward into the next steps in the development of the SFVM. Step two assessed the relevance of the integrated themes and evaluated the acceptability and practicability of the various components recognised in the previous phases of this study. This would fit into the proposed model by conducting focus groups discussions with SF vendors. The last step, comprised the development of the SFVM.

During this phase the data from the previous phases were integrated within a sociological framework to develop the proposed SFVM.

Below follows a description of each phase's methods.

3.3 Phases

3.3.1 Phase 1: The Situation Analysis

3.3.1.1 Phase 1a

Street-food Vendor Survey

The objectives of the SF-vendor survey are presented below:

Objectives

1. To determine the socio-demographic characteristics of vendors operating in Cape Town and surrounding areas
2. To determine the current SF-business operations in Cape Town and surrounding areas
3. To determine the hygiene practices of SF vendors in Cape Town and surrounding areas.
4. To determine the nutrition knowledge and attitudes of SF vendors

Methods and procedures

A cross-sectional study design was used for this phase of the study, data were collected using a survey questionnaire and were administered by trained fieldworkers. The methods applied, sought to explore the characteristics of the vendors and their stalls, their business operation as well as environmental constraints hindering the smooth and optimal operation of the SF business.

Study population

Study area

South Africa has a total population of 51.7 million people (Census 2011). The country is divided into nine provinces, which are subdivided into 53 districts (47 municipal and 6

metropolitan districts). Four municipal districts were included in the study sample namely Cape Town Metropolitan, Swartland, Breede Valley and Drakenstein municipalities.

Sampling of vendors

A three-step approach to sampling SF vendors was employed.

Step 1: At the time of our sample selection the Cape Town Metropolitan municipality did not have registration records or documentation of the number of persons selling food or beverages on the streets, whose business is not conducted from formal buildings/sites. As such, meetings with knowledgeable district environmental managers and local authorities were convened to identify the locations of SF-vending activities taking place in Cape Town and its surrounding areas. Data gathered (regarding the areas of focus, i.e. where SF vendors operate) from these meetings were then identified on a map of Cape Town.

Step 2: A fieldworker trained in the Geographic Information System (GIS) used this map to take photographs with a handheld portable satellite navigation instrument known as a Garmin [Montana™ 650, Kansas, USA (www.garmin.com)] to map the exact locations of all SF vendors. The Garmin is a portable Global Positioning System (GPS) satellite navigation instrument/device with a built-in megapixel autofocus camera that takes aerial photographs in the form of detailed topographic maps that cover the finer points of the outdoors. Most vendors (as far as possible) within Cape Town and surrounding towns and townships were captured by this GPS instrument. Numbered, exact GPS coordinates identifying the vendor visibility in the areas of focus were then produced (figure 3.1). The total population of vendors mapped was 1159.

Step 3: The GPS coordinates were then used to generate transparent map grids, which were later superimposed on the map of Cape Town and surrounding areas (Figure 3.2, Mchiza *et al*., 2014, with sites marked by the blue lines and denoted by blue and red dots and flags).

The map of Cape Town with the total number of mapped vendors was then used to select a random sample of vendors per geographic location as shown in Figure 3.3, (Mchiza *et al*., 2014). In summary, urban formal and informal areas comprised four geographic areas, i) large city centres, ii) peri-urban centres, iii) townships, and iv) informal settlements. The total number of geographic areas included on the map was 16. Fifty vendors selling different types of food were randomly selected within each of these 16 geographic areas – with particular focus on the high population-density areas giving a desired sample size of 800 vendors. As a result of oversampling, the realized sample was 831 SF vendors. The final sample included vendors from 40 different townships and central business districts around the, i) transport interchange areas (i.e. train, bus stations, and taxi ranks), ii) community centres, iii) market areas, and iv) major streets (Figure 3.3, Mchiza *et al*., 2014).

Street Food Project - Sampling Framework Information					
ID (Location)	GPS location	Q1 a bus terminus	Q1 b Taxi rank	Q1 c Train station	Q1 d Main road
0509	S3401621 E01839746	0	0	1	0
0510	S3401619 E01839758	0	0	1	0
0511	S3401627 E01839720	0	0	0	1
0512	S3401630 E01839730	0	0	1	0
0513	S3401623 E01839746	0	0	1	0
0514	S3401627 E01839743	0	0	1	0
0515	S3401625 E01839746	0	0	1	0
0516	S3401603 E01839818	0	0	1	0
0517	S3401596 E01839823	0	1	0	0
0518	S3401601 E01839797	0	0	1	0
0519	S3401598 E01839811	0	0	1	0
0520	S3401599 E01839805	0	0	1	0
0521	S3401600 E01839801	0	0	1	0
0522	S3401600 E01839800	0	0	1	0
0523	S3401610 E01839797	0	0	1	0
0524	S3401607 E01839801	0	0	1	0
0525	S3401611 E01839804	0	0	1	0
0526	S3401613 E01839806	0	0	1	0
0527	S3401619 E01839808	0	0	1	0
0528	S3401614 E01839807	0	0	1	0
0529	S3401622 E01839808	0	0	1	0

Figure 3.1: Numbered, transparent grids identifying the street-food vendor visibility and their locations

Of note is that the good response was as a result of the recruitment processes followed in the research, whereby the advertisement of the project, through pamphlet distribution, (Appendix 1) was carried out prior to commencement of the fieldwork. This sampling strategy was useful, as it permitted the project team to see the spread of SF vendors across Cape Town and surrounds, and enabled representative sampling.

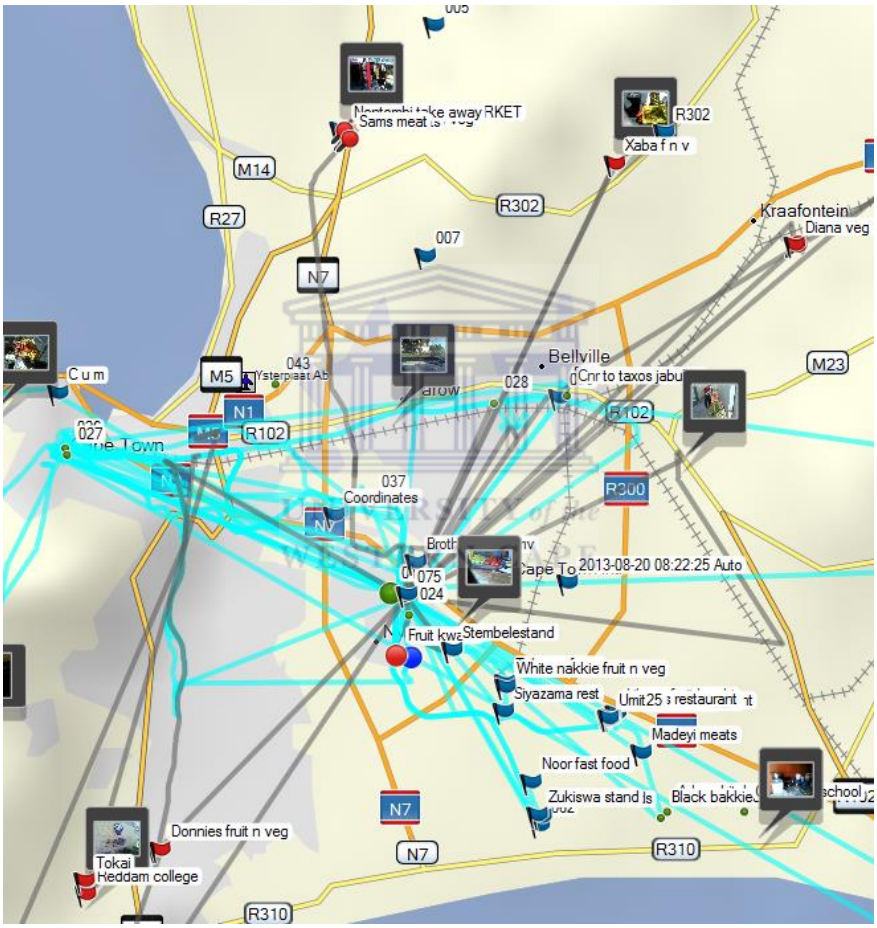


Figure 3.2: Map grids

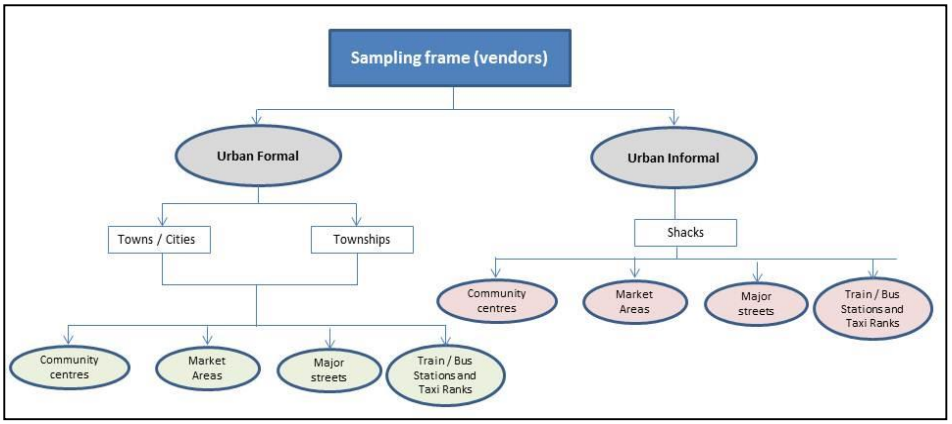


Figure 3.3: Vendor Sampling Frame

Data collection

Two types of data collection tools were used, the vendors' questionnaire, and the observation schedule/checklist. Trained fieldworkers, under the supervision of a trained fieldwork coordinator and the primary researcher, conducted structured interviews with vendors pertaining to, a) vendors on socio-demographic factors, b) vendors regarding their business operational models, c) food items sold, d) facilities available to them, e) challenges faced, f) certification, g) nutrition knowledge, and g) nutrition attitudes from October 02 to November 30, 2013. All vendors selling foods, including fruit and vegetable vendors qualified to participate in the study.

In addition to the survey questionnaire, the fieldworkers completed observational checklists to provide information regarding the business operational models of vendors. Checklists comprised, a) the food items sold, b) vendor's site/stall/cart, c) the hygiene status of vendors and their sites, which included their hygiene and sanitation practices when preparing and handling food, access to water and sanitation, and the cleanliness of the surrounding environment.

Instruments

Vendor questionnaire development

The knowledge and attitude section of the vendor questionnaire has been developed and validated for use in the current study as part of an MTech study (Ncube, 2013). The vendor questionnaire (Appendix 2) was developed as part of a Consumer Science master's student project (Ncube, 2013). The questionnaire involved the development of valid and reliable KAP questions, which entail content domain selection based on the South African Food Based Dietary Guidelines (SAFBDG) (Gibney & Vorster, 2001: S3).

The questionnaire included socio-demographic questions as well as business operational questions, which were developed by the research team. The questionnaire was developed in English. The content-related validity of the KAP questions was evaluated by five nutrition experts. Face validity, on the other hand, was evaluated using 15 participants with similar characteristics as those to be interviewed in the current study.

Vendor questionnaire validation

To test for item analysis and reliability of the vendor KAP questions, 70 factory workers were used as the less-knowledgeable group, while 66 first- and third-year Consumer Science and Somatology students were used as the more-knowledgeable group. Data were analysed using the IBM SPSS, 2010 Statistics version 19, for item analysis and reliability testing. Points considered for item analysis and validation were the, i) correlation of the items within the questionnaire, ii) easiness/difficulty experienced by the participants to understand the items, and iii) total reliability of the constructs. All items that had correlation co-efficiencies that were greater than 0.20 and difficulty indices that were between 0.35 and 0.85 (indices suggesting that the questions were not too easy/difficult) were retained in the final questionnaire. The rest were discarded. Overall, the questionnaire indicated strong reliability since they generated Cronbach's ∞ values that were greater than 0.8.

The observation schedule/checklist

The hygiene checklist was a previously validated observational checklist used by Cape Peninsula University of Technology.

Data analysis

Survey data: Data entering was done by two trained data capturers and checked by the primary investigator for quality control. Data were entered into Microsoft Access 2010. For quality assurance, data entry was double-checked by the primary investigator and corrected accordingly. The data were then exported to Microsoft Excel 2010 by the primary investigator and cleaned to prepare for analysis. While in Microsoft Excel 2010, some data (responses) were recoded and/or collapsed for more meaningful analysis to develop new Excel worksheets. These worksheets were then imported to IBM statistics SPSS version 23.

As a first-level analysis, univariate analysis or frequencies were run on all variables in the questionnaire and observational checklist. For descriptive purposes, frequencies were tallied and percentages calculated. At a second level of analysis, cross-tabulations were conducted to establish whether relationships existed or whether certain independent variables, such as age, gender and race influenced dependent variables, such as types of food sold and income for example. Pearson-product moment correlation coefficients were used to measure the strength of linear associations between two variables. In addition, open-ended questions were entered into Microsoft Excel 2010 and exported into Atlas ti version 7.0.83 for coding and analysis by the primary investigator.

3.2.1.2 Phase 1b

Street-food consumers

Objectives

1. To determine consumer purchasing practices;

2. To determine the KAP of consumers to purchase healthy and safe street foods in the City of Cape Town and surrounding areas; and
3. To determine the intentions of these consumers to purchase healthy and safe street foods.

Methods and procedures

A cross-sectional study design was used for this phase of the study, data were collected using a survey questionnaire and administered by trained fieldworkers.

The objectives of the consumer survey are listed below.

Study population

Sampling of consumers

On the basis of the 2011 Census, the urban population in the Western Cape was 4,088,709. The minimum sample size to represent this population is 785, based on the 95% level of significance, 80% power, 50% defects (which gives the maximum sample size) and 0.05 margin of error (http://www.wessa.net/rwasp_sample.wasp). Accounting for a 25% non-response, the final sample required was 1,047. Consumers were selected from the site where the selected vendors were drawn. The first ten clients who visited the vendor were approached and requested to participate. If anyone refused to participate the next client was selected. Unfortunately, because of time constraints of the consumers, all available consumers regardless of vendor used were asked to participate in the study. The final sample of consumers comprised 1121.

Data collection instrument

Consumer questionnaire development

The consumer questionnaire (Appendix 3) was developed as part of a Consumer Science master's student project (Stimela, 2013). This questionnaire involved the development of valid and reliable KAP questionnaire of which the content domain was based on the

SAFBDG (Gibney & Vorster, 2001: S3). The questionnaire included socio-demographic questions as well as questions regarding intentions of consumers to purchase safe and healthy street-foods. The questionnaire was also developed in English and content-related validity of the KAP questions evaluated by five nutrition experts. Face validity, on the other hand, was evaluated using 15 participants with similar characteristics to those interviewed in the current study.

Consumer questionnaire validation

To test for item analysis and reliability of the consumer KAP questions, 74 factory workers were used as a less nutrition-knowledgeable group and 56 first- and third-year Consumer Science and Somatology students were used as a more-knowledgeable nutrition group. Data were analysed using the IBM SPSS, 2010 Statistics version 19, for item analysis and reliability testing. Points considered for item analysis and validation were the, i) correlation of the items within the questionnaire, ii) easiness/difficulty experienced by the participants to understand the items, and iii) total reliability of the constructs. All items that had correlation co-efficiencies that were greater than 0.20 and difficulty indices that were between 0.35 and 0.85 (indices suggesting that the questions were not too easy/difficult) were retained in the final questionnaire. The rest were discarded. Overall, the questionnaire indicated strong reliability since they generated Cronbach's ∞ values that were greater than 0.8.

Data collection methods

Trained fieldworkers under the supervision of a trained fieldwork coordinator and the primary researcher conducted structured interviews with consumers on a) socio-demographic factors; b) purchasing habits; c) consumption preferences; d) and nutrition knowledge using a validated questionnaire. All consumers of SF qualified to participate in the study.

Data analysis

Data entering was done by two trained data capturers and was checked by the primary investigator to ensure quality control. Data was entered into Microsoft Access 2010. For quality assurance, data entry was double-checked by the primary investigator and corrected accordingly. The data was then exported to Microsoft Excel 2010 by the primary investigator and cleaned to prepare for analysis. While in Microsoft Excel 2010, some data (responses) were recoded, and or collapsed for more meaningful analysis to develop new Excel worksheets. These worksheets were then imported to IBM statistics SPSS version 23.

As a first level of analysis, univariate analysis or frequencies were run on all variables in the questionnaire. For descriptive purposes, frequencies were tallied and percentages calculated. At a second level of analysis cross tabulations using the Chi square test and Pearson were conducted to establish whether relationships existed or whether certain independent variables influenced dependent variables. Pearson-product moment correlation coefficients were used to measure the strength of linear associations between two variables since the data was normally distributed.

3.3.2 Phase 2: Street-food vending in Cape Town: The government officials' perspective

3.2.2.1 Phase 2a

Semi-structured interviews and focus group discussions with Environmental Health Officials and Economic Development Officials from the City of Cape Town

In the local government, City of Cape Town, the two departments that deal directly with SF vendors were identified as the Departments of Environmental Health and Economic Development.

Objectives

1. To determine the existing street-food vending regulations and/or policies in the City of Cape Town and surrounding areas; and
2. To gain insight into the SF vending operations from a regulatory perspective.

Methodology

A qualitative research approach was chosen, as this allows the researcher to use an interpretive, naturalistic approach to the area of research. Qualitative researchers study phenomena in their natural settings, endeavouring to make sense of, or understand meanings that people attach to these (Denzin & Lincoln, 1994 in Jones, 1995). The premise of qualitative research stems from accepting that there are various ways of making sense of the world, and is accordingly interested in uncovering meanings as held by those under research and by understanding their world view instead of the researcher's views (Jones, 1995).

In this phase, qualitative methodology was used to understand and explore the perceptions and opinions of key role players in the SF-vending business. The information derived from data collection assisted the researcher in developing a clear understanding of the key elements and their relevance to the SF-vending operation to develop a suitable multi-level SFVM that would prove to be sustainable over time.

Study population

In social sciences, non-probability sampling often has to be relied upon. According to Babbie and Mouton, (2001: 288) sampling in studies where qualitative methods are used, is usually purposeful and directed at certain inclusive criteria. Once the study population has been determined, the sample size is often ascertained by practical factors, such as how much time or money is available.

Brink, (1999) stated that the study population should consist of complete groups, persons or entities that are of significance to the research. Since the main focus of this research study was to develop a sustainable SFVM, key informant interviews and focus groups were conducted with managers from the Departments of Environmental Health as well as Economic Development of the City of Cape Town (provincial government officers/managers).

Data collection

Data collection took place from November 2014 to February 2015. The methods employed, included semi-structured individual interviews and focus group discussions. Document review was employed as an additional method of data collection. Semi-structured interviews and focus group discussions with Environmental Health and Economic Development officers took place at the South African Medical Research Council campus in Parow.

All interviews and focus groups were conducted in English by the researcher, who is fluent in English, as this was the language medium most suited to groups of mixed languages. Interviews and focus groups were conducted face-to-face and audio-recorded, using an Olympus Digital Recorder. Interviews and focus group discussions allowed for open discussions, thus allowing respondents to convey their own perspectives (Bles & Higson-Smith, 2000). Two individual interviews and two focus group discussions were conducted with Environmental Health and Economic Development officers.

Individual, semi-structured interviews

An individual interview according to Babbie and Mouton, (2001: 289) "…differs from most other types of interviews in that it is an open interview which allows the object of study to speak for him/herself rather than to provide the respondent with a battery of own predetermined hypothesis-based questions". Although the interview is driven by the researcher, the researcher attempts to draw out the participant's meaning and depth of coverage rather than leading the participant through a range of organized questions. The researcher used prompts and probes to explore the initial responses further. The administration of the interview is of such a nature that researchers often keenly pursue unanticipated issues that arise (Chopra & Coveney, 2008).

Individual interviews were conducted with Environmental Health and Economic Development managers. A semi-structured interview schedule (Appendix 4), was used as a

guide to steer the interview. Questions asked, pertained specifically to regulations, bylaws and policies that related to SF vending; certification; requirements in terms of business and hygiene; and support available to vendors. The interview schedule was checked by senior members of the project team and revised before data collection commenced. Both key informants spoke freely and openly allowing for rich information.

Focus group discussions

Focus group discussions create an environment in which individuals can explore and determine meaning together rather than on their own. Focus group discussions provide information that a researcher would otherwise not be able to gain in an individual interview. These discussions are open-ended and frequently look for fresh lines of inquiry linked to a central issue. People with different opinions are given the opportunity to discuss opinions and listen to others, and in this way shape and reshape their opinions. Furthermore, focus group discussions allow the researcher to acquire direct evidence showing similarities and/or differences in the focus group participants' opinions and experiences instead of establishing these conclusions after data analyses (Babbie & Mouton, 2001). The development of the focus group schedule followed the same process as the development of the semi-structured interview schedule mentioned above.

Two focus group discussions were held with officers from the Departments of Environmental Health (n=10) and Economic Development (n=12). The ideal situation would have been to have four groups of six to eight people instead of the two larger groups. Unfortunately, their schedules did not allow for this to happen. When groups are too big, a tendency for the group to section exists. Some participants are unable to raise their opinion as there is not sufficient pause in the conversation for the individual to talk (Kruger & Casey, 2009). Fortunately, the participants in these groups were familiar with each other and gave each other sufficient opportunity to talk.

Data analysis

The process of data analysis according to Marshall and Rossman (1995) is the progression of bringing order, structure and meaning to the gathered data. Individual interviews and focus groups were transcribed, after which a summary of each interview and focus group was written. This process was followed for the interviews and focus group discussions of Environmental Health and Economic Development officers.

The researcher familiarised herself with the data by reading each transcript several times and then used the Computer-Aided Qualitative Data Analysis Software (CAQDAS) package Atlas ti 7.5.7 to assist in managing data. "Such software allows for basic 'code retrieval' of data, and more sophisticated analysis using algorithms to identify co-occurring codes in a range of logically overlapping or nesting possibilities, annotations of the text, or the creation or amalgamation of codes" (Pope, Ziebland & Mays, 2000: 115). The four transcripts were loaded onto Atlas ti 7.5.7 as four primary documents. The researcher then commenced the coding process by reviewing the transcripts and allocating codes and giving them a concise label (open coding) (Babbie & Mouton, 2001). After consultation with supervisors, the researcher then began reviewing all codes and began to merge and delete codes, this was done a few times. The researcher then began grouping quotes under predetermined themes with summarising sentences, thus placing them into categories. Codes and their connected quotations were retrieved in an effort to explore patterns or tendencies.

Triangulation

Triangulation refers to collecting data in as many different methods possible as well as from various data sources (Terre Blanche & Kelly, 1999). Data convergence or triangulation is a technique of cross-validation when two or more methods are used and produce comparable data (Jick, 1979). Jick (1979) further stated that triangulation can be further employed than just checking reliability or cross-validating, but in fact by providing a more "complete,

holistic, and contextual portrayal" of the phenomenon being studied. To capture a more complete contextual portrayal in the current study, the researcher employed method triangulation as well as source triangulation. The researcher used individual interviews and focus group discussions with participants with different roles in the SF operation to understand the various anomalies at play. The overall study was planned as a mixed-method research study to access a broader as well as an in-depth understanding of the various aspects involved in the SF operation in Cape Town.

Rigour

The researcher conducted all interviews in English, as participants all spoke various languages but were fluent in English. Being able to speak English fluently was the only eligibility criteria. Some researchers, however, argue that it is not possible to translate data into another language without losing depth/meaning (Smith, Chen & Liu, 2008; Regmi, Naidoo & Pilington, 2010). Time and resources also prevented the interview schedules from being translated and back-translated to ensure validity.

The researcher conducted all the interviews and focus group discussions and had debriefing sessions with members of the project team after each interview and focus group discussion. A summary of each interview and focus group discussion was written and presented to the project team. The use of CAQDAS improved the rigour by facilitating data capturing, data organisation and data retrieval (Pope, Ziebland & Mays, 2000).

Credibility

Credibility refers to the degree to which research findings are convincing and believable (Durrheim & Wassenaar, 1999). As a method to ensure credibility, the researcher described and discussed the setting, the participants, and themes of the study in rich detail (Creswell & Miller, 2000). According to Creswell and Miller (2000), a thick description allows readers to

construct realism, giving them the sense that they could or have experienced the events described in the study.

Dependability

"Dependability refers to the degree to which the reader can be convinced that the findings occurred as the researcher says it did" (Durrheim & Wassenaar, 1999: 64). Interviews and focus group discussions were transcribed verbatim so that no information was lost. The transcriptions were randomly checked by the researcher by listening to some of the recordings and comparing these to the transcripts. The supervisors also checked the codes, themes and categories for consensus.

Reflexivity

Reflexivity is an action a researcher takes to critically engage in a self-reflection of how their own "social background, assumptions, and positioning can impact on the research process" (Finlay & Gough, 2003 in Ritchie, Amos and Martin, 2009: 3). Reflexivity was employed as a means to continuously take heed of the researcher's role in the research activities. The researcher participated in a weekly project team meeting and used this space to reflect and debrief with team members.

3.2.2.2 Phase 2b

Document review

Objective

1. To identify the existing regulations and policies on street-food vending

Document review was employed as an additional method of data collection. Documents were accessed through official government websites, nationally, and the City of Cape Town was searched specifically. Documents from websites pertaining to street-vending business guidelines were also searched.

3.3.3 Phase 3: *Street-food vending business model development*

This phase was conducted in three steps. Step 1, was the data integration of the previous phases. Step 2, comprised a participatory action research (PAR) component to check with SF as to the relevance, acceptability, and practicability of the identified themes and resulted components from step 1. Step 3 comprised the development of the proposed SFVM using the findings of the two previous steps.

Objective

1. To integrate the data obtained from objectives 1-5 to make recommendations for a sustainable SFVM.
2. To assess the relevance, acceptability and practicability of the identified themes and resulting components
3. To develop a SFVM.

Methodology

A socio-ecological framework was applied in this phase to understand, interpret and apply results of the previous chapters to inform this SFVM development.

Research approach

Mixed methodology was applied in this study to take advantage of the strengths in the quantitative and qualitative approaches and thus minimise the limitations that each approach pose individually (Creswell & Clarke, 2007). Mixed methodology also allows for a more comprehensive picture of the phenomena under investigation (Bryman, 2006). PAR was used in this phase to gain input and reach consensus with SF regarding the components in developing the proposed SFVM.

Step 1: Data integration

In this study, two surveys were conducted to obtain a general understanding of the SF-vending operations from the perspectives of the SF vendor as well as the SF consumer.

Qualitative methodology was used to understand and explore the perceptions and opinions of key role players in the SF-vending business, and identify the policies and regulations that govern SF vending. The information derived from the mixed data collection methods assisted the researcher in developing a clear understanding of the key elements or themes (as it would be referred to in the rest of the thesis) and its relevance to the SF-vending operation to develop a suitable multi-level SFVM that would prove to be sustainable over time (figure 3.4, Table 5.1 (Chapter 5)).

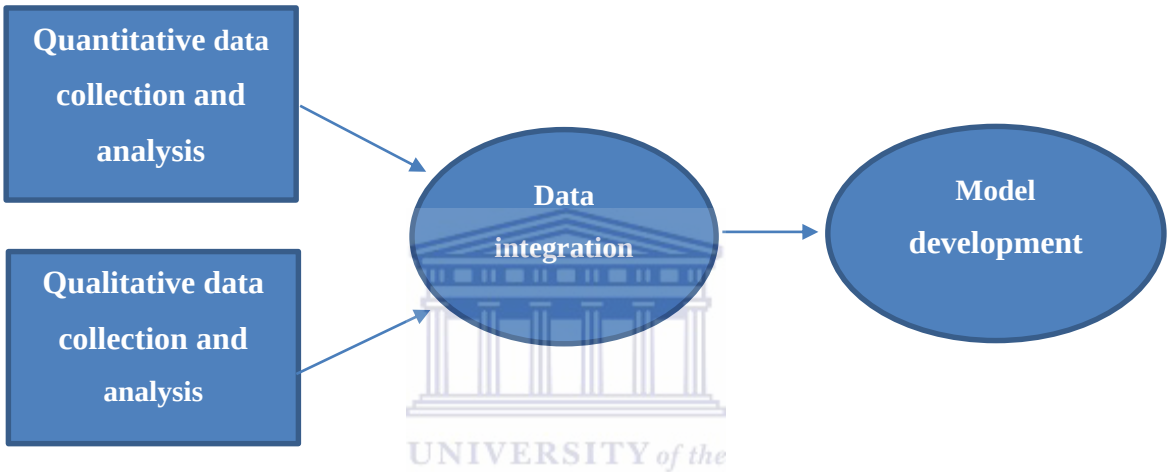


Figure 3.4: Mixed method data integration

Step 2: Relevance, acceptability and practicability of the identified themes and resulting components

Methodology

Participatory action research recognises the importance of involving those who are intended to be the beneficiaries of the research; with specific reference to the working classes, the labourers, the exploited, and the poor in a breakdown of their reality (Reason & Rowan, 1982 in Babbie & Mouton, 2001). PAR also aims to address the practical concerns of people in a problematic situation as well as the larger goals of social science, with impetus on both rigour and relevance (Bhana, 2002). A profound sense of ownership, which a PAR approach enables, would promote the sustainability of the proposed SFVM.

Study population

The study population should consist of complete groups, persons or entities that are of significance to the research (Brink, 1999). As the main focus of this part of the research study was to assess the proposed SFVM, focus groups were conducted with SF vendors to evaluate the acceptability and practicalities of the proposed model.

Data collection

Data collection took place from September 01 to November 17, 2015. Three focus group discussions took place at the Human Sciences Research Council in Cape Town and one took place at a community centre in Mfuleni. Focus groups consisted of 5–9 participants, with a total of 28, 20 females and eight males. All focus groups were conducted in English by the researcher, who is fluent in English, as this was the language medium most suited to groups of mixed languages. A Xhosa co-facilitator was available when any translations were required for better expression by the participants. Focus groups were conducted face-to-face and audio-recorded. Interviews and focus group discussions allowed for open discussions, thus allowing respondents to convey their own perspectives (Bles & Higson-Smith, 2000).

The vendors also completed a short socio-demographic questionnaire.

Focus group discussions

A semi-structured focus group schedule (Appendix 5), was used as a guide to steer the discussion. The interview schedule was checked by senior members of the project team and revised before data collection commenced. Questions were specifically geared to assess various components identified in the previous step, i.e. business, food and nutrition, hygiene as well as the proposed SF-vending cart.

The researcher experienced some difficulty with the organisation of the focus group discussions with vendors. Vendors were often reluctant to leave their little businesses for an hour and a half, and thus focus groups had to take place late afternoon, on “quiet” days.

Group dynamics are an important aspect of this method (Coreil, 1995). Each focus group discussion had a dominant participant and often other participants relied on them to bring their experiences across. The researcher tried to counter this by always asking the other participants their opinion, who often would simply agree with what had been said already.

The participants were all given printed copies of the suggested guidelines/booklets to review. A power point presentation of the various points was displayed for easy reference as the various themes and components were discussed.

Table 3.1 Format of focus group discussions

Vendors Focus Group Format	
1. Power Point Presentation – Themes	A power point presentation of the main findings and integrated themes were presented and discussed with the vendors. Vendors were reluctant to break up into groups and felt it would be better to remain in the big group for discussion and deliberation.
2. **Power Point Presentation – Various components and elements**	Various themes and their relating components were displayed on a power point presentation for easy reference as the various guidelines were discussed. The participants were all given printed copies of the themes and components as a visual aid to review and discuss.
3. Comments/critiques/concerns	Vendors were asked to discuss their opinions and concerns about the resulting components and guidelines, i.e. Business, Food/Nutrition, Hygiene, and the Proposed Vending Cart.

Data analysis

The process of data analysis according to Marshall and Rossman (1995) is the progression of bringing order, structure and meaning to the gathered data. Although the four vendor focus group discussions were not transcribed, the researcher listened to them a number of times before coding commenced. A pre-determined coding list was used to categorise information

into acceptability, practicability, perceived challenges and suggested changes to the proposed SFVM.

The researcher familiarised herself with the data by listening to each recording and then used the Computer-Aided Qualitative Data Analysis Software (CAQDAS) package Atlas ti 7.5.7 to assist in managing data. This software allows for basic 'code retrieval' of data as well as more sophisticated analysis using algorithms (Pope, Ziebland & Mays, 2000). The four recordings were loaded onto Atlas ti 7.5.7 as four audio files. The researcher then commenced the coding process by listening to the audio files and allocating sound bites to pre-determined codes decided upon together with supervisors and senior project consultants. The researcher then began grouping sound bites, transcribed relevant quotes under predetermined themes with summarising sentences, thus placing them into categories.

Dependability

All the steps to ensure trustworthiness of data as described above under the subject headings rigour, triangulation, credibility and reflexivity was followed in this phase of the study.

Step 3: Model development

A model can be interpreted as a descriptive strategy that has a broad conceptual framework (Cohen & Manion, 1994). Models are characterized by the use of analogies to give a visual illustration. Their aim being to simplify phenomenon as a tool for explanation and conceptualization (Mark, 1999).

Sallis *et al*., (2008) explained that ecological models of health behaviour give emphasis to the environmental and policy context of behaviour, though it does include social and psychological issues. An ecological model strongly takes into account each level of influence, thus guiding the development of more comprehensive interventions. The most relevant potential influences should be considered at each level. These assist researchers/intervention

planners in appreciating how people interact with their various environments. In turn, this understanding can be used to develop effective multi-level methodologies to better health practices (Sallis *et al*., 2008). Sallis *et al*., (2008) proposes that environments and policies be shaped to enable people to make healthful choices and then to encourage and educate people about the available choices to their benefit.

The socio-ecological model represents a comprehensive approach to designing, implementing, and evaluating interventions which target multiple influences on behaviour (Elder, 2007).

The premise of an ecological model/perspective supposes that individual behaviour should be considered as being affected by various levels of influence, including individual and environmental determinants (McLeroy *et al*., 1988:355). The five levels of influence particular to health behaviour include intrapersonal factors, interpersonal processes, primary groups, institutional factors, and community factors as well as public policy (Bronfenbrenner, 1977).

From the findings of the Chapters 4–7 the integration of data in Step 1 and the confirmatory PAR in Step 2, the components of the proposed model can be clearly divided into four areas, i.e. a business component, a food and nutrition component, a hygiene component, and a vending cart. These four areas, in turn, impact on various areas of the socio-ecological framework, i.e. intrapersonal/individual, interpersonal, the physical environment/community as well as the policy environment.

3.4 Ethical considerations

This research received ethical approval from the University of the Western Cape's Ethics Committee (Research Project: Street food: The development of a street food vending model which offers healthy foods for sale [as Jillian Hill's PhD dissertation] Registration no:

14/4/17). Ethical approval for the larger study to intervene with street-food vendors and consumers was previously obtained from the Human Sciences Research Council (Protocol No REC13/20/02/13). In addition, permission to intervene with street-food vendors was obtained from the City of Cape Town (ID No. 10341).

All participants were notified that participation was on a voluntary basis, with the understanding that they could withdraw from the study at any time without any consequences. Informed consent was obtained from every participant. They were provided with an information sheet with a detailed explanation of what the study was about and what was expected of them prior to the interview/focus group. Anonymity was assured in that the participants' names were not used in any report and the collected data were only accessible to the study investigators.

Chapter 4

Understanding the street-food vending business in Cape Town and surrounding areas

4.1 Introduction

In Chapter 2, the literature indicates that street-food vending as an informal business is becoming increasingly popular in developing countries, as is the case in South Africa. At the epicentre of this business lies the vendor (definition provided previously), who is the driver of the business. To understand and improve the street-food vending business as a whole, it is important to understand the vendors, their vending operations, and the environment in which this informal business operates.

Chapter 4, therefore, presents Phase 1a (i.e. the Vendor Survey) which is a situational analysis of the SF business in Cape Town and surrounding areas. In summary, this chapter attempts to describe the vending business and the factors affecting the nature of this business.

Background

In South Africa, until recently, there has been a paucity of data regarding the SF-vending business operation, despite Mathee *et al*. (1996) highlighting the growth of this business since 1996, employing up to 25% of the South African workforce.

As a predominant and distinctive part of a large informal sector, the SF-vending business is generally small in size (StreetNet International, 2012); requires no formal education (Steyn *et al*., 2013); and can be operated by any gender or age group (Mwangi *et al*., 2001; Majunga *et al*., 2011). Thus, unemployed individuals, often women, find street vending as an easy means to earn money with little monetary investment necessary (Steyn *et al*., 2013).

Furthermore, it should be recognized that the SF business plays an important socio-economic role by serving as a source of income to many poor people who would otherwise not find employment (i.e. the uneducated, unskilled older people and women (Martins, 2006). Wills (2009) has shown that in South Africa, women and older people (31–50 years) are dominating this industry (90.5% and 63%, respectively) when compared to the younger age group (21–30-year-olds, 27%). Since street foods are convenient, cheap, and easily accessible, they serve as a basic source of nutrition for those who have financial and time constraints as well as those who lack resources to cook their own food (Dawson & Canet, 1991; Steyn *et al*. 2013).

Because of its informal nature, SF vending becomes a formidable task to regulate and keep track of all the vendors in this business sector, since many of them are mobile (i.e. move from one site to another).

Despite its importance, this business is viewed as challenging by under-resourced environmental and health managers, since most of the food sold is exposed to bacterial contamination and may promote the development of NCD.

Against this background, the current research aimed to explore the characteristics of vendors and their stalls, the food items they sell, their business operation, and business constraints and opportunities they experience in Cape Town and surrounding areas. This will enable the investigators of the current research to either adapt an existing model or develop a viable SFVM that will address the challenges of unemployment in the country along with providing better nutrition for South Africans. Therefore, the specific objectives addressed in this chapter are:

1. To determine the socio-demographic characteristics of vendors operating in Cape Town and surrounding areas
2. To determine the current SF business operations in Cape Town and surrounding areas

3. To determine the environmental influences, the vendors experience operating in Cape Town and surrounding areas
4. To determine the nutrition knowledge and attitudes of vendors operating in Cape Town and surrounding areas
5. To determine the hygiene practices of SF vendors in Cape Town and surrounding areas.

This information will help in the development of a SFVM aimed at selling healthy and safe street food. This model is expected to provide vendors with a sustainable income and improve the quality of street foods by promoting healthier ones.

4.2 Methods and procedures

A cross-sectional survey was undertaken within the time frame October 02 to November 30, 2013. The survey sought to explore the characteristics of the vendors, their stalls, business operation, and their nutrition knowledge and attitudes along with environmental constraints hindering the smooth and optimal operation of the SF business.

4.2.1 Study population

Detailed information regarding the sampling framework can be obtained from the research published by Mchiza *et al*. (2014) (Chapter 3). In summary, the current sample includes 831 SF vendors from 40 different townships and central business districts located in, i) urban formal (i.e. towns, cities and townships), and ii) urban informal (shacks) areas (figure 4.1). These vendors operated around, i) transport interchange areas (i.e. train, bus stations, and taxi ranks), ii) community centres, iii) market areas, and iv) major streets (figure 4.1).

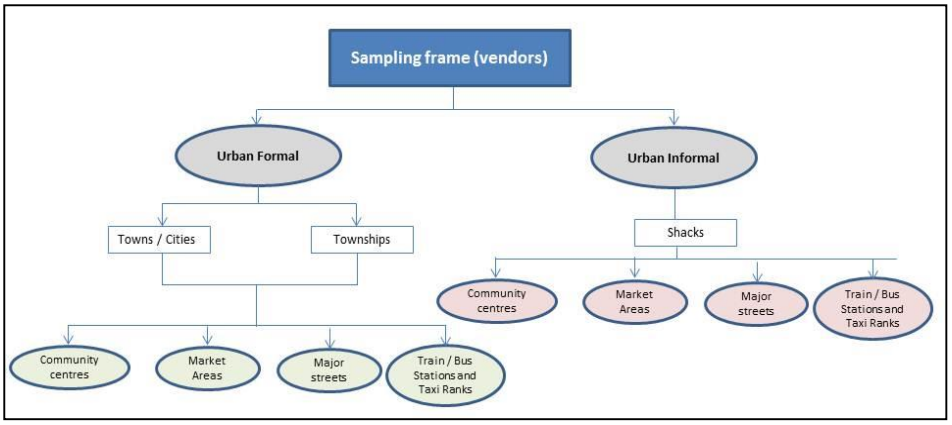


Figure 4.1. Vendor sampling frame

The good response was as a result of the recruitment processes followed in the research, whereby, the advertisement of the project through pamphlet distribution (see Appendix 1) was carried out prior to commencement of the fieldwork.

4.2.2 Data collection

Trained fieldworkers, under the supervision of a trained fieldwork coordinator and the primary researcher, conducted structured interviews with vendors. Interviews pertained to, a) vendors on socio-demographic factors, b) vendors regarding their business operational models, c) food items sold, d) facilities available to them, e) challenges faced, f) certification, g) nutrition knowledge and g) nutrition attitudes from October 02 to November 30, 2013.

In addition to the survey questionnaire, the fieldworkers completed observational checklists to provide information regarding the business operational models of vendors. These were, a) the food items sold, b) the vendor's site/stall/cart, and c) the hygiene status of vendors and their site, which included their hygiene and sanitation practices when preparing and handling food, access to water and sanitation, and the cleanliness of the surrounding environment.

4.2.3 Data analysis

Data entering was done by two trained data capturers and checked by the primary investigator for quality control. Data were entered into Microsoft Access 2010. For quality assurance, data entry was double-checked by the primary investigator and corrected accordingly. The data

were then exported to Microsoft Excel 2010 by the primary investigator and cleaned to prepare for analysis. In Microsoft Excel 2010, some data (responses) were recoded, and/or collapsed for more meaningful analysis to develop new Excel worksheets. These worksheets were then imported to IBM statistics SPSS version 23.

As a first level analysis, univariate analysis or frequencies were run on all variables in the questionnaire and observational checklist. For descriptive purposes frequencies were tallied and percentages calculated. At a second level of analysis Chi-squared tests were conducted to establish whether differences existed between different variables. In addition, open-ended questions were entered into Microsoft Excel 2010 and exported into Atlas ti version 7.0.83 for coding and analysis by the primary investigator. In this regard, most popular themes were extracted and tallied to see those that were more likely to occur.

Data in the current manuscript is presented as numbers and percentages with p-values used to show significant differences between variables.

4.3 Results

4.3.1 Socio-demographic information

A total of 831 SF vendors were interviewed in the SF vendor survey (Table 4.1). There were more females (n=440, 52.9%) than males (n=389, 46.8) vendors in the sample. Most vendors were South African (82.1%), black Africans (63.1%), single (45%), and married (43.8%). Moreover, most vendors were between ages 25 and 44 years (64.3%) and had matric or less education (94.8%). Very few had a post matric qualification; with only 2.2% and 1.2% vendors having a diploma or a degree, respectively. Finally, 1.4% vendors in our sample had no form of schooling.

Table 4.1: Socio-demographic profile of street-food vendors in Cape Town and surrounding areas 2013

Characteristics	Number (n)	Percentage (%)
Sex		
Males	389	46.8
Females	440	52.9
Age group (years)		
<18 years	5	0.6
18–24	65	7.8
25–34	251	30.2
35–44	283	34.1
45–54	150	18.1
55–64	59	7.1
65–74	17	2.0
≥75 years	1	0.1
Nationality		
South African	682	82.1
Other	149	17.9
Race		
Black African	524	63.1
Coloured	151	18.2
Indian/Asian	1	0.1
White	5	0.6
Other	150	18.1
Marital status		
Single	374	45.0
Married	364	43.8
Living with partner	24	2.9
Separated	16	1.9
Divorced	21	2.5
Widowed	32	3.9
Highest level of education		
Primary school	193	23.2
Some high school	423	50.9
Matric	172	20.7
Diploma	18	2.2
Degree	10	1.2
No schooling	12	1.4
Total	**831**	**100.0**

4.3.2 Vendor operational information:

Vendors were interviewed in 40 locations in and around Cape Town (Table 4.2). The most vendors were interviewed around the central business district (CBD) areas (i.e. Bellville [17.9%] and Cape Town [10.7%]) and popular townships (i.e. Nyanga terminus [7.6%], Wynberg [7.2%], Gugulethu [7.0%], and Mfuleni [4.8%]). These areas were a good mix of urban-formal, urban-informal and township areas. Most of these vendors were found around the transport inter-change areas (i.e. train, taxi and bus stations).

Table 4.2: Vendor locations

Location	n (%)
CPT	89 (10.7)
Gugulethu	58 (7.0)
Mfuleni	40 (4.8)
Bellville	149 (17.9)
Mutual/Pinelands	15 (1.8)
Esplanade	13 (1.6)
Tygerberg	3 (0.4)
Ysterplaat	3 (0.4)
Parow	31 (3.7)
Maitland	13 (1.6)
Koeberg	5 (0.6)
Salt River	9 (1.1)
Bonteheuwel	20 (2.4)
Langa station	9 (1.1)
Wynberg	60 (7.2)
Kuils River	8 (1.0)
Claremont	9 (1.1)
Mowbray	12 (1.4)
Rylands/Gatesville	20 (2.4)
Bishop Lavis	0.6 (5)
Mitchells Plain Town-centre	37 (4.5)
Langa taxi rank	14 (1.7)
Khayelitsha mall	24 (2.9)
Site-B Khayelitsha	21(2.5)
Site-C Khayelitsha	24 (2.9)
Nyanga terminus	63 (7.6)
Philippi	16 (1.9)
Elsies River	2 (0.2)
Worcester	13 (1.6)
Dunoon	3 (0.4)
Somerset-West/Strand	7 (0.8)
Mbekweni	1 (0.1)
Sea Point	1 (0.1)
Caledon	2 (0.2)
Grabouw	3 (0.4)
Ravensmead	3 (0.4)
Malmesbury	4 (0.5)
Atlantis	13 (1.6)
Kraaifontein	9 (1.1)
Total	831 (100.0)

Total time worked

Most vendors worked six – seven days a week (85%) (Table 4.3). With most vendors operating about 8–12 hours a day with some vendors working more than 12 hours a day (23.2%). There were significant differences ($p < 0.001$) between total days worked and race, but this did not have an effect on actual income when further analysis was done. In summary,

total time worked had no effect on the amount of income earned, irrespective of socio-economic factors (these data not shown in Tables).

Table 4.3: Total time spent working by street-food vendors (n=831)

Socio-demography	Operational Characteristics										
		Total days worked		Total hours worked on a week day		Total hours worked on a Saturday			Total hours worked on a Sunday		
	Total	1-5	6-7	<8	>8	Closed Saturday	<8	>8	Closed on Sunday	<8	>8
	N	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Nationality											
South African	682	104 (15.2%)	578 (84.8%)	77 (11.3%)	603 (88.4%)	53 (7.8%)	127 (18.6%)	472 (69.2%)	235 (42.8%)	106 (19.3%)	208 (37.9%)
Non-South African	149	21 (14.1%)	128 (85.9%)	6 (4%)	142 (95.3%)	22 (14.8%)	19 (12.8%)	108 (72.5%)	95 (67.9%)	16 (11.4%)	29 (20.7%)
Race											
Black	524	76 (14.5%)*	448 (85.5%)*	61 (11.6%)	462 (88.1%)	38 (7.3%)	92 (17.6%)	368 (70.2%)	174 (40.7%)	59 (13.8%)	195 (45.5%)
Coloured	151	26 (17.2%)*	125 (82.8%)*	15 (9.9%)	135 (89.4%)	14 (9.3%)	32 (21.2%)	102 (67.5%)	57 (49.1%)	46 (39.7%)	13 (11.2%)
Indian/Asian	1	0 (0%)*	1 (100%)*	0 (0%)	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)
White	5	2 (40%)*	3 (60%)*	1 (20%)	4 (80%)	1 (20%)	3 (60%)	0 (0%)	3 (100%)	0 (0%)	0 (0%)
Other/ Non- South African	150	21 (14%)*	129 (86%)*	6 (4%)	143 (95.3%)	22 (14.7%)	19 (12.7%)	109 (72.6%)	96 (68.1%)	16 (11.3%)	29 (20.6%)
Gender											
Male	389	52 (13.4%)	337 (86.6%)	24 (6.2%)	364 (93.6%)	36 (9.3%)	61 (15.7%)	284 (73%	168 (50.8%)	61 (18.4%)	102 (30.9%)
Female	440	73 (16.5%)	367 (83.4%)	59 (13.4%)	379 (86.1%)	39 (8.9%)	85 (19.3%)	294 (66.8%)	160 (44.9%)	61 (17.1%)	135 (38%)
Age group (years)											
<18 years	5	0 (0%)	5 (100%)	1 (20%)	4 (80%)	0 (0%)	1 (20%)	4 (80%)	3 (60%)	1 (20%)	1 (20%)
18–24	65	14 (21.5%)	51 (78.4%)	7 (10.8%)	58 (89.2%)	10 (15.4%)	4 (6.2%)	49 (75.4%)	29 (49.2%)	13 (22%)	17 (28.8%)
25–34	251	36 (14.4%)	215 (85.6%)	22 (8.8%)	228 (90.8%)	27 (10.8%)	44 (17.5%)	174 (69.4%)	118 (53.2%)	31 (14%)	73 (32.9%)
35–44	283	38 (13.6%)	245 (78.3%)	28 (9.9%)	254 (89.7%)	21 (7.4%)	57 (20.1%)	193 (68.2%)	108 (46.2%)	43 (18.4%)	83 (35.5%
45–54	150	23 (15.3%)	127 (84.7%)	12 (8%)	137 (91.4%)	12 (8%)	23 (15.3%)	109 (72.7%)	53 (45.7%)	19 (16.4%)	44 (37.9%)
55–64	59	9 (15.3%)	50 (84.8%)	9 (15.3%)	50 (84.8%)	5 (8.5%)	14 (23.7%)	39 (66.1%)	17 (39.5%)	12 (27.9%)	14 (32.5%)
65–74	17	5 (29.5%)	12 (70.6%)	3 (17.6%)	14 (82.3%)	0 (0%)	2 (11.8%)	12 (70.6%)	2 (20%)	3 (30%)	5 (50%)
≥75 years	1	0 (0%)	1 (100%)	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Marital Status											
Single	374	60 (16%)	314 (83.9%)	34 (9.1%)	338 (90.3%)	36 (9.6%)	63 (16.8%)	261 (69.8%)	164 (51.3%)	48 (15%)	108 (33.8%)
Married	364	52 (14.3%)	312 (85.8%)	40 (11%)	323 (88.7%)	31 (8.5%)	65 (17.9%)	257 (70.6)	134 (45%)	63 (21.1%)	101 (33.9%)
Living with partner	24	4 (16.7%)	20 (52.9%)	3 (12.5%)	21 (87.5%	8 (8.3%)	7 (29.2%)	14 (58.4%)	13 (65%)	3 (15%)	4 (20%)
Separated	16	4 (25.1%)	12 (75.1%)	1 (6.3%)	15 (93.8%)	2 (12.5%)	4 (25%)	9 (56.3%)	6 (54.5%)	1 (9.1%)	4 (36.4%)
Divorced	21	1 (4.8%)	20 (95.2%)	2 (9.5%)	19 (90.5%)	1 (4.8%)	5 (23.8%)	15 (71.4%)	6 (31.6%)	5 (26.3%)	8 (42.1%)
Widowed	32	4 (12.5%)	28 (87.5%)	3 (9.4%)	29 (90.6%)	3 (9.4%)	2 (6.3%)	24 (75%)	7 (33.3%)	2 (9.5%)	12 (57.1%)
Education											
Primary school	193	32 (16.6%)	161 (83.4%)	19 (9.8%)	173 (89.6%)	20 (10.4%)	37 (19.2%)	129 (66.9%)	83 (51.2%)	23 (14.2%)	56 (34.6%)
Some high school	423	58 (13.6%)	365 (86.3%)	46 (10.9%)	376 (88.8%)	31 (7.3%)	66 (15.6%)	310 (73.2%)	166 (48.8%)	68 (20%)	106 (31.2%)
Matric	172	25 (14.6%)	147 (85.5%)	15 (8.7%)	156 (90.7%)	14 (8.1%)	36 (20.9%)	117 (68.1%)	57 (38.8%)	25 (17%)	65 (44.2%)
Diploma	18	6 (33.4%)	12 (66.7%)	2 (11.1%)	16 (88.9%)	5 (27.8%)	3 (16.7%)	8 (44.4%)	11 (64.7%)	1 (5.9%)	5 (29.4%)
Degree	10	2 (20%)	8 (80%)	0 (0%)	10 (100%)	2 (20%)	2 (20%)	6 (60%)	6 (66.7%)	3 (33.3%)	0 (0%)
No schooling	12	2 (16.7%)	10 (83.3%)	1 (8.3%)	11 (91.5%)	3 (25%)	2 (16.7%)	7 (58.4%)	5 (45.5%)	1 (9.1%)	5 (45.5%)

*p < 0.001 [Pearson Chi-Square]

Most vendors were the sole owner (80.5%) of their stall, with 46 vendors being joint owners and 113 not being owners (Table 4.4). More female vendors (82.7%) were the owners of their stall compared to 78.1% males. The likelihood ratio (Pearson Chi-Square) indicates only a moderate relationship between gender and ownership. Most vendors (66.4%) operated alone, 19.5% vendors reported having one employee, 8.1% reported having two employees and 5.1% vendors reported having more than two employees. Ninety per cent of vendors reported making their own stock decisions.

There were significant associations between nationality and ownership, nationality and number of employees, and nationality and certification, respectively, all with a p-value of <0.0001. More South African vendors (84.3%) were the owners of their stalls in comparison to foreign nationals (70.5%). Similarly, more South Africans (69.7%) reported not having any employees compared to foreign nationals (52.3%). Only 32.9% of foreign nationals reported not having any form of certification in comparison with 68.6% of South African vendors reporting this. Significant associations were also found between race and ownership, race and number of employees, and race and certification, respectively, with a p-value of <0.0001. More black vendors reported being the sole owner (89.3%), compared to Coloureds (58.9%), while 100% of white and Indian vendors were owners (though small in number five and one, respectively). Most of the black vendors reported having no employees (79.9%) and no form of certification (76.5%) compared to Coloureds reporting 35.1% and 43%, and whites 60% and 0%, respectively, while no Indians, reported these. Furthermore, significant differences, with a p-value of <0.0001, were found for age and ownership as well as for age and number of employees. Young vendors, <18 years old, mostly reported not being the sole owner of the stall, i.e. 80%, while 49.2% in the 18–24-year category reported not being the owner. In the age groups, 25–34, 35–44, and 45–54 years, the majority reported not having any employees,

66.8%, 71.7%, 74.5%, respectively. Further analysis using the Oneway ANOVA, indicated that none of these significant differences had an influence on the vendors' actual income.

Only 35% (n=292) of the vendors had a location permit, 4% had a lease or concession letter and 63% (n=517) had no form of licensing or permission. Interesting to note, was that 66% of the non-South Africans had some form of licensing or permission for their SF vending, while 57% Coloureds, and only 23% black South Africans had one of these. This was seen to be statistically significant ($p < 0.0001$). See Table 4.4 below.

A mere 6% of the vendor sample were in possession of a certificate of acceptability (according to Health Act no. 63 of 1977, the person in charge or the owner of all premises, where food is handled or is permitted to be handled, is required to be in possession of a "Certificate of Acceptability").

Table 4.4: Ownership, number of employees and certification

Socio-demography	Operational Characteristics												
		Ownership			No. of employees				Certification				
	Total	Owner	Joint owner	Non-owner	No. employees	One employee	Two employees	More than two employees	None	Permit	Certificate of acceptability	Lease	Concession letter
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality													
South African	682	564 (84.3)*	39 (5.7)*	76 (11.1)*	474 (69.7)*	107 (15.7)*	54 (7.9)*	45 (6.6)*	468 (68.6)*	199 (29.2)*	36 (5.3)*	6 (0.9)*	5 (0.7)*
Non-South African	149	105 (70.5)*	7 (4.7)*	37 (24.8)*	78 (52.3)*	55 (36.9)*	14 (9.4)*	2 (1.3)*	49 (32.9)*	93 (62.4)*	11 (7.4)*	4 (2.7)*	1 (0.7)*
Race													
Black	524	468 (89.3)*	16 (3.1)*	38 (7.3)*	417 (79.9)*	67 (12.8)*	25 (4.8)*	13 (2.5)*	401 (76.5)*	114 (21.8)*	19 (3.6)*	4 (0.8)*	2 (0.4)*
Coloured	151	89 (58.9)*	23 (15.2)*	38 (25.2)*	53 (35.1)*	38 (25.2)*	29 (19.2)*	31 (20.5)*	65 (43)*	80 (53)*	16 (10.6)*	2 (1.3)*	3 (2)*
Indian/Asian	1	1 (100)*	0 (0)*	0 (0)*	0 (0)*	0 (0)*	0 (0)*	1 (100)*	0 (0)*	1 (100)*	0 (0)*	0 (0)*	0 (0)*
White	5	5 (100)*	0 (0)*	0 (0)*	3 (60)*	2 (40)*	0 (0)*	0 (0)*	1 (20)*	4 (80)*	1 (20)*	0 (0)*	0 (0)*
Other/Non-South African	150	106 (70.7)*	7 (4.7)*	37 (24.7)*	79 (52.7)*	55 (36.7)*	14 (9.3)*	2 (1.3)*	50 (33.3)*	93 (62)*	11 (7.3)*	4 (2.7)*	1 (0.7)*
Gender													
Male	389	304 (78.1)	27 (6.9)	57 (14.7)	241 (62.1)	91 (23.5)	34 (8.8)	22 (5.7)	207 (53.2)	169 (43.4)	25 (6.4)	7 (1.8)	1 (0.3)
Female	440	364 (82.7)	18 (4.1)	56 (12.7)	309 (70.4)	71 (16.2)	34 (7.7)	25 (5.7)	309 (70.2)	122 (27.7)	21 (4.8)	3 (0.7)	5 (1.1)
Age group (years)													
<18 years	5	1 (20)*	0 (0)*	4 (80)*	2 (40)*	2 (40)*	1 (20)*	0 (0)*	2 (0.3)	3 (60)	1 (20)	0 (0)	0 (0)
18–24	65	24 (36.9)*	9 (13.8)*	32 (49.2)*	24 (36.9)*	21 (32.3)*	11 (16.9)*	9 (13.8)*	32 (49.2)	32 (49.2)	1 (1.5)	1 (1.5)	0 (0)
25–34	251	190 (75.7)*	17 (6.8)*	44 (17.5)*	167 (66.8)*	62 (24.8)*	12 (4.8)*	9 (3.6)*	147 (59)	96 (32.9)	18 (7.2)	3 (1.2)	3 (1.2)
35–44	283	253 (89.4)*	11 (3.9)*	17 (6)*	203 (71.7)*	44 (15.5)*	22 (7.8)*	14 (4.9)*	194 (69)	79 (27.9)	11 (3.9)	4 (1.4)	0 (0)
45–54	150	134 (89.3)*	6 (4)*	9 (6)*	111 (74.5)*	19 (12.8)*	12 (8.1)*	7 (4.7)*	97 (65)	51 (34)	9 (6)	4 (1.4)	0 (0)
55–64	59	50 (84.7)*	3 (5.1)*	6 (10.2)*	36 (61)*	11 (18.6)*	7 (11.9)*	5 (8.5)*	33 (56)	25 (42.4)	7 (11.9)	0 (0)	0 (0)
65–74	17	16 (94.1)*	0 (0)*	1 (5.9)*	8 (47.1)*	3 (17.6)*	3 (17.6)*	3 (17.6)*	11 (64.7)	6 (35.3)	0 (0)	0 (0)	0 (0)
≥75 years	1	1 (100)*	0 (0)*	0 (0)*	1 (100)*	0 (0)*	0 (0)*	0 (0)*	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Marital status													
Single	374	273 (73)	28 (7.5)	73 (19.5)	250 (67.2)	70 (18.8)	32 (8.6)	20 (5.4)	231 (61.8)	132 (35.3)	14 (3.7)	7 (1.9)	3 (0.8)
Married	364	317 (87.1)	15 (4.1)	29 (8)	239 (65.7)	72 (19.8)	32 (8.8)	21 (5.8)	221 (60.7)	132 (36.3)	31 (8.5)	3 (0.8)	3 (0.8)
Living with partner	24	19 (79.2)	0 (0)	5 (4.4)	15 (62.5)	6 (25)	1 (4.2)	2 (8.3)	19 (79.2)	5 (20.8)	0 (0)	0 (0)	0 (0)
Separated	16	15 (93.8)	1 (6.3)	0 (0)	13 (81.3)	3 (18.8)	0 (0)	0 (0)	12 (75)	4 (25)	1 (6.3)	0 (0)	0 (0)
Divorced	21	17 (81)	2 (9.5)	2 (9.5)	12 (57.1)	6 (28.6)	0 (0)	3 (14.3)	7 (33.3)	14 (66.7)	0 (0)	0 (0)	0 (0)
Widowed	32	28 (87.5)	0 (0)	4 (3.5)	23 (71.9)	5 (15.6)	3 (9.4)	1 (3.1)	27 (84.4)	5 (15.6)	1 (3.1)	0 (0)	0 (0)
Education													
Primary school	193	161 (83.2)	7 (3.6)	23 (11.9)	138 (71.5)	33 (17.1)	15 (7.8)	7 (14.9)	123 (63.7)*	66 (34.2)*	9 (4.7)*	1 (0.5)*	0 (0)*
Some high school	423	330 (78)	28 (6.6)	64 (15.1)	285 (67.4)	80 (18.9)	35 (8.3)	23 (5.4)	272 (64.3)*	144 (34)*	23 (5.4)*	3 (0.7)*	3 (0.7)*
Matric	172	143 (83.1)	8 (4.7)	21 (12.2)	102 (60)	40 (23.5)	13(7.6)	15 (8.8)	106 (61.6)*	59 (34.3)*	10 (5.8)*	4 (2.3)*	2 (1.2)*
Diploma	18	16 (88.9)	1 (5.6)	1 (5.6)	11 (61.1)	2 (11.1)	4 (22.2)	1 (5.6)	8 (44.4)*	10 (55.6)*	2 (11.1)*	0 (0)*	0 (0)*
Degree	10	7 (70)	1 (10)	2 (20)	5 (50)	3 (30)	1 (10)	1 (10)	3 (30)*	6 (60)*	2 (20)*	0 (0)*	1 (10)*
No schooling	12	10 (83.3)	1 (8.3)	1 (8.3)	8 (66.7)	4 (33.3)	0 (0)	0 (0)	4 (33.3)*	6 (50)*	1 (8.3)*	1 (8.3)*	0 (0)*

*p <0.0001 [Pearson Chi-Square]

Most vendors (68.6%) reported making less than R1 000 per week, with 20.2% making between R1 000 and R4 999, 1.7% making between R5 000 and R10 000, 0.7% making more than R10 000 per week, while 6.5% vendors felt that their income was confidential (Table 4.5). There were no significant differences using the Pearson Chi-Square test, between income generation and gender. However, significant differences were observed for nationality ($p<0.05$), race ($p<0.0001$) and level of education ($p<0.001$). Vendors reported stock mark-ups of less than 25% (n=279), between 25% and 50% (n=403), and only 9% (n=75) vendors reported a mark-up of over 50%. While 6.6% (n=55) vendors either did not know or felt that mark-up was confidential. There were no statistically significant differences recorded regarding the percentage of mark-ups and average income per month. Eighty-five per cent of vendors reported keeping an inventory of their stock. Only 27.8% (n=231) of vendors reported selling cooked food.

Table 4.5: Income generation, stock mark up, storage, and stock inventory street-food vendors (n=831)

Socio-demography	Operational Characteristics											
		Average Income				Stock mark-up		Storage		Stock decisions	Inventory	Cooked food
	Total	<R1000	R1000-R4999	R5000-R10 000	>R10 000	Less 25%	> 25%	Home/stall	Private	Yes	Yes	Yes
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality												
South African	682	463 (67.9)[1]	147 (21.6)[1]	11 (1.6)[1]	5 (0.7)[1]	220 (32.3)	413 (60.6)	523 (76.6)	131 (19.2)	621 (91.1)	580 (85)	221 (32.4)
Non-South African	149	97 (65.1)[1]	21 (14.1)[1]	3 (2)[1]	1 (0.7)[1]	59 (39.6)	65 (43.6)	62 (41.6)	78 (52.3)	129 (86.6)	123 (82.6)	10 (6.7)
Race												
Black	524	390 (74.4)[3]	100 (19.1)[3]	4 (0.8)[3]	0 (0)[3]	162 (30.9)	336 (64.1)	412 (78.6)	93 (17.7)	493 (94.1)	472 (90.1)	196 (37.4)
Coloured	151	68 (45)[3]	46 (30.5)[3]	7 (4.6)[3]	5 (3.3)[3]	53 (35.1)	75 (49.6)	106 (70.2)	37 (24.5)	121 (80.1)	104 (68.9)	22 (14.6)
Indian/Asian	1	0 (0)[3]	0 (0)[3]	0 (0)[3]	0 (0)[3]	0 (0)	1 (100)	1 (100)	0 (0)	1 (100)	0 (0)	0 (0)
White	5	4 (80)[3]	1 (20)[3]	0 (0)[3]	0 (0)[3]	4 (80)	1 (20	3 (60)	1 (20)	5 (100)	3 (60)	3 (60)
Foreign	150	98 (65.3)[3]	21 (14)[3]	3 (2)[3]	1 (0.7)[3]	60 (40)	65 (43.3)	63 (42)	78 (52)	130 (86.7)	124 (82.7)	10 (6.7)
Gender												
Male	389	254 (65.3)	76 (19.5)	6 (1.5)	2 (0.5)	149 (38.3)	200 (51.4)	250 (64.3	118 (30.3)	346 (88.9)	320 (82.3)	51 (13.1)
Female	440	304 (69.1)	92 (20.9)	8 (1.8)	4 (0.9)	129 (29.3)	277 (62.9)	335 (76.2)	89 (20.2)	402 (91.4)	382 (86.8)	180 (40.9)
Age group (years)												
<18 years	5	3 (60)	1 (20)	0 (0)	0 (0)	2 (40)	2 (40)	4 (80)	1 (20)	2 (40)	4 (80)	1 (20)
18–24	65	30 (46.2)	17 (26.2)	4 (6.2)	1 (1.5)	22 (33.8)	31 (47.7)	44 (67.6)	19 (29.2)	49 (75.4)	58 (89.2)	7 (10.8)
25–34	251	168 (66.9)	46 (18.3)	4 (1.6)	2 (0.8)	95 (37.8)	130 (51.8)	164 (65.4)	75 (29.9)	226 (90)	211 (84.1)	66 (26.3)
35–44	283	189 (66.8)	67 (23.7)	1 (0.4)	3 (1.1)	87 (30.7)	174 (61.5)	206 (72.8)	63 (22.3)	264 (93.3)	238 (84.1)	94 (33.2)
45–54	150	109 (72.7)	28 (18.7)	3 (2)	0 (0)	42 (28)	99 (66)	112 (74.7)	32 (21.3)	137 (91.3)	128 (85.3)	41 (27.3)
55–64	59	46 (78)	7 (11.9)	2 (3.4)	0 (0)	24 (40.7)	33 (52.6)	39 (66.1)	18 (30.5)	55 (93.2)	50 (84.7)	18 (27.3)
65–74	17	14 (82.4)	2 (11.8)	0 (0)	0 (0)	6 (35.3)	9 (53)	15 (88.3)	1 (5.9)	16 (94.1)	13 (76.5)	4 (23.5)
≥75 years	1	1 (100)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)	0 (0)	1 (100)	1 (100)	0 (0)
Marital Status												
Single	374	245 (65.5)	76 (20.3)	11 (2.9)	3 (0.8)	118 (31.6)	223 (59.6)	254 (67.9)	102 (27.3)	329 (88)	323 (86.4)	93 (24.9)
Married	364	248 (68.1)	75 (20.6)	2 (0.5)	2 (0.5)	127 (34.9)	204 (56)	272 (74.7)	79 (21.7)	338 (92.9)	303 (83.2)	116 (31.9)
Living with partner	24	14 (58.3)	8 (33.3)	0 (0)	0 (0)	5 (20.8)	17 (70.9)	16 (66.7)	6 (25)	20 (83.3)	20 (83.3)	5 (20.8)
Separated	16	13 (81.3)	2 (12.5)	0 (0)	0 (0)	8 (50)	6 (37.6)	11 (68.8)	4 (25)	16 (100)	11 (68.8)	4 (25)
Divorced	21	14 (66.7)	3 (14.3)	0 (0)	1 (4.8)	8 (38.1)	11 (52.4)	10 (47.6)	10 (47.6)	17 (81)	17 (81)	6 (28.6)
Widowed	32	26 (81.3)	4 (12.5)	1 (3.1)	0 (0)	13 (40.6)	17 (53.1)	22 (68.7)	8 (25)	30 (93.8)	29 (90.6)	7 (21.9)
Education												
Primary school	193	155 (80.3)[2]	28 (14.5)[2]	3 (1.6)[2]	0 (0)[2]	65 (33.7)	116 (60.1)	124 (64.3)	55 (28.5)	175 (90.7)	158 (81.9)	50 (25.9)
Some high school	423	291 (68.8)[2]	76 (18)[2]	4 (0.9)[2]	6 (1.4)[2]	136 (32.2)	245 (57.9)	310 (73.3)	97 (22.9)	381 (90.1)	372 (87.9)	115 (27.2)
Matric	172	92 (53.5)[2]	50 (29.1)[2]	6 (3.5)[2]	0 (0)[2]	57 (33.1)	99 (57.6)	127 (73.8)	40 (23.3)	157 (91.3)	138 (80.2)	58 (33.7)
Diploma	18	9 (50)[2]	8 (44.4)[2]	0 (0)[2]	0 (0)[2]	6 (33.3)	10 (55.5)	12 (66.7)	6 (33.3)	17 (94.4)	16 (88.9)	4 (22.2)
Degree	10	4 (40)[2]	4 (40)[2]	1 (10)[2]	0 (0)[2]	5 (50)	4 (40)	5 (50)	4 (40)	8 (80)	7 (70)	0 (0)
No schooling	12	8 (66.7)[2]	2 (16.7)[2]	0 (0)[2]	0 (0)[2]	8 (66.7)	3 (25)	6 (50)	5 (41.7)	10 (83.3)	9 (75)	4 (33.3)

[1]p < 0.05 [2]p < 0.001 [3]p <0.0001 [Pearson Chi-Square]

Thirty-four per cent vendors used public transport to collect their goods, i.e. taxi (21.4%), bus (1.4%), and train (10.6%), while 29% vendors use their private cars (Table 4.6). A large proportion of vendors (24.2%) walk to get their supplies. A few vendors (4.8%) have their supplies delivered and even fewer (1.4%) hire transport for purchasing and collection of goods, and 4.1% use either a van (bakkie) or small truck (coded under other in Table 4.6 below). Most vendors reported travelling less than 20 km (61.7%), with several vendors (33.7%) reporting having to travel more than 20 km (Table 4.6).

The purchasing of supplies were varied, with most vendors buying their supplies either from a wholesaler (29.1%), a fruit and vegetable market (20.8%), factory shop (14.7%) or a butchery (5.2%). Vendors also shopped at supermarkets or from other vendors to a lesser extent (data not presented). By far, most vendors stored their stock at home (59.3%), followed by storage in a storeroom (25.2%), some vendors stored items at their stalls (11%), while 4.5% had other storage arrangements (data not presented).

Table 4.6: Mode of transport, distance travelled and purchasing of supplies by street-food vendors (n=831)

Socio-demography	Total	Operational Characteristics													
		Location			Transportation				Distance travelled for stock			Purchase of supplies			
		City	Small town	Township	Public	Own/ private	Walk	Other	20 km or less	+20 km	Stock delivered	Wholesaler	F&V market	Factory shops	Butchery
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality															
South African	682	361 (52.9)[2]	26 (3.8)[2]	295 (43.3)[2]	237 (34.8)	189 (27.7)	161 (23.6)	77 (11.3)	419 (61.4)[1]	240 (35.2)[1]	5 (0.7)[1]	169 (24.8)[2]	157 (23)[2]	103 (15.1)[2]	42 (6.2)[2]
Non-South African	149	135 (90.6)[2]	8 (5.4)[2]	6 (4)[2]	41 (27.5)	52 (34.9)	40 (26.8)	10 (6.7)	94 (63.1)[1]	40 (26.8)[1]	1 0.7)[1]	73 (49)[2]	16 (10.7)[2]	19 (12.8)[2]	1 (0.7)[2]
Race															
Black	524	235 (44.8)[2]	4 (0.8)[2]	285 (54.4)[2]	215 (41.1)[1]	119 (22.7)[1]	139 (26.5)[1]	34 (6.5)[1]	327 (62.4)	181 (34.5)	2 (0.4)	142 (27.1)[2]	103 (19.7)[2]	69 (13.2)[2]	34 (6.5)[2]
Coloured	151	119 (78.8)[2]	22 (14.6)[2]	10 (6.6)[2]	21 (13.9)[1]	68 (45)[1]	19 (12.6)[1]	42 (27.8)[1]	88 (58.3)	56 (37.1)	3 (2)	24 (15.9)[2]	54 (35.8)[2]	34 (22.5)[2]	7 (4.6)[2]
Indian/Asian	1	1 (100)[2]	0 (0)[2]	0 (0)[2]	0 (0)[1]	0 (0)[1]	0 (0)[1]	1 (100)[1]	0 (0)	1 (100)	0 (0)	1 (100)[2]	0 (0)[2]	0 (0)[2]	0 (0)[2]
White	5	5 (100)[2]	0 (0)[2]	0 (0)[2]	0 (0)[1]	2 (40)[1]	3 (60)[1]	0 (0)[1]	3 (60)	2 (40)	0 (0)	2 (40)[2]	0 (0)[2]	0 (0)[2]	1 (20)[2]
Foreign	150	136 (90.7)[2]	8 (5.3)[2]	6 (4)[2]	42 (28)[1]	52 (34.7)[1]	40 (26.7)[1]	10 (6.78)[1]	95 (63.3)	40 (26.7)	1 (0.7)	73 (48.7)[2]	16 (10.7)[2]	19 (12.7)[2]	1 (0.7)[2]
Gender															
Male	389	266 (68.4)	13 (3.3)	110 (28.3)	106 (27.3)	132 (33.9)	98 (25.2)	46 (11.8)	240 (61.7)	132 (33.9)	2 (0.5)	117 (30.1)	98 (25.2)	61 (15.7)	13 (3.3)
Female	440	228 (51.8)	21 (4.8)	191 (43.4)	171 (38.8)	109 (24.8)	102 (23.2)	41 (9.3)	271 (61.6)	148 (33.6)	4 (0.9)	123 (28)	75 (17)	61 (13.9)	30 (6.8)
Age group (years)															
<18 years	5	3(60)	0 (0)	2 (40)	2 (40)	1 (20)	1 (20)	1 (20)	2 (40)	3 (60)	0 (0)	0 (0)	2 (40)	0 (0)	0 (0)
18–24	65	44 (67.7)	5 (7.7)	16 (24.6)	19 (29.2)	22 (33.8)	10 (15.4)	13 (20)	34 (52.3)	27 (41.5)	1 (1.5)	18 (27.7)	16 (24.6)	11 (1.3)	2 (3.1)
25–34	251	169 (67.3)	11 (4.4)	71 (28.3)	87 (34.7)	66 (26.3)	67 (26.7)	21 (8.4)	162 (64.5)	74 (29.5)	0 (0)	91 (36.3)	47 (18.7)	28 (11.2)	11 (4.4)
35–44	283	159 (56.2)	11 (3.9)	113 (39.9)	97 (34.3)	81 (28.6)	72 (25.4)	24 (8.5)	174 (61.5)	94 (33.2)	2 (0.7)	86 (30.4)	52 (18.4)	43 (15.2)	15 (5.3)
45–54	150	82 (54.7)	2 (1.3)	66 (44)	55 (36.6)	41 (27.3)	34 (22.7)	18 (12)	92 (61.3)	55 (36.7)	2 (1.3)	30 (20)	33 (22)	29 (19.3)	7 (4.7)
55–64	59	33 (55.9)	3 (5.1)	23 (39)	14 (23.8)	21 (35.6)	15 (25.4)	8 (13.6)	37 (62.7)	21 (35.6)	1 (1.7)	8 (13.6)	18 (30.5)	10 (16.9)	8 (13.6)
65–74	17	6 (35.3)	2 (11.8)	9 (52.9)	3 (17.7)	9 (52.9)	2 (11.8)	2 (11.8)	11 (64.7)	6 (35.3)	0 (0)	8 (47.1)	5 (29.4)	1 (5.9)	0 (0)
≥75 years	1	0 (0)	0 (0)	1 (100)	1 (100)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)
Marital Status															
Single	374	227 (45.8)	14 (3.7)	133 (35.6)	137 (36.7)	105 (28.1)	87 (23.3)	33 (8.8)	240 (64.2)	119 (31.8)	2 (0.5)	98 (26.2)	76 (20.3)	66 (17.6)	19 (5.1)
Married	364	215 (59.1)	17 (4.7)	132 (36.3)	110 (30.2)	118 (32.4)	86 (23.6)	42 (11.5)	215 (59.1)	132 (36.3)	3 (0.8)	110 (30.2)	78 (21.4)	44 (12.1)	20 (5.5)
Living with partner	24	17 (70.8)	2 (8.3)	5 (20.8)	6 (25)	4 (16.7)	9 (37.5)	4 (16.7)	15 (62.5)	8 (33.3)	0 (0)	8 (33.3)	4 (16.7)	6 (25)	66 (17.6
Separated	16	8 (50)	1 (6.3)	7 (43.8)	5 (31.3)	3 (18.8)	7 (43.8)	0 (0)	8 (50)	7 (43.8)	0 (0)	7 (43.8)	2 (12.5)	1 (6.3)	1 (6.3)
Divorced	21	15 (71.4)	0 (0)	6 (28.6)	8 (38.2)	3 (14.3)	7 (33.3)	3 (14.3)	14 (66.7)	5 (23.8)	0 (0)	6 (28.6)	5 (23.8)	3 (14.3)	1 (4.8)
Widowed	32	14 (43.8)	0 (0)	18 (56.3)	12 (37.5)	8 (25)	5 (15.6)	5 (15.6)	21 (65.6)	9 (28.1)	1 (3.1)	13 (40.6)	8 (25)	2 (6.3)	2 (6.3)
Education															
Primary school	193	114 (59.1)	7 (3.6)	72 (37.3)	69 (36.8)	48 (24.9)	51 (26.4)	17 (8.8)	120 (62.2)[2]	65 (33.7)[2]	2 (1)[2]	52 (26.9)	41 (21.2)	34 (17.6)	12 (6.2)
Some high school	423	258 (61)	17 (4)	148 (35)	135 (31.9)	130 (30.7)	102 (24.1)	44 (10.4)	267 (63.1)[2]	140 (33.1)[2]	0 (0)[2]	116 (27.4)	95 (22.5)	61 (14.4)	26 (6.1)
Matric	172	93 (54.1)	8 (4.7)	71 (41.3)	60 (34.9)	48 (27.9)	41 (23.8)	18 (10.5)	98 (57)[2]	67 (39)[2]	0 (0)[2]	61 (35.5)	28 (16.3)	19 (11)	5 (2.9)
Diploma	18	12 (66.7)	1 (5.6)	5 (27.8)	7 (38.9)	8 (44.4)	1 (5.6)	2 (11.1)	11 (61.1)[2]	5 (27.8)[2]	0 (0)[2]	5 (27.8)	5 (27.8)	3 (16.7)	0 (0)
Degree	10	9 (90)	1 (10)	0 (0)	2 (20)	3 (30)	2 (20)	0 (0)	5 (50)[2]	3 (30)[2]	1 (10)[2]	3 (30)	2 (20)	3 (30)	0 (0)
No schooling	12	7 (58.3)	0 (0)	5 (41.7)	3 (25)	3 (25)	3 (25)	3 (25)	10 (83.3)[2]	0 (0)[2]	0 (0)[2]	3 (25)	2 (16.7)	1 (8.3)	0 (0)

[1]p <0.001 [2]p <0.0001 [Pearson Chi-Square]; F&V = fruit and vegetables

Vending sites

Pertaining to the vending sites, only 32% had some kind of roof cover, 20% had a wall of some kind, and only 17% had a counter from which to serve clients (Table 4.7). Fifty-two per cent of the vendors operated on the pavements, while 3% operated in caravans, 8% in kiosks, and 4% in shipping containers. Fifty-nine per cent of vendors had to physically assemble and dismantle their stalls, unpack and pack up their belongings each beginning and end of every day.

Table 4.7: Characteristics of vendor stalls

Vending site	n (%)
Roof cover	238 (28.6)
Walls	170 (20.5)
Counter	143 (17.2)
Caravan	25 (3)
On pavement	433 (52.1)
Kiosk	65 (7.8)
Container	34 (4)
Dismantle after use	492 (59.2)
Total	**831 (100)**

Facilities available to vendors

Vendors had very little facilities to assist them in running successful operations (Table 4.8). Even the bare essentials, i.e. toilets (63%), access to water (18%), and rubbish disposal (40%) seemed to be a luxury to most vendors. Even fewer vendors had access to electricity/gas (16%), a stove (11%), or cold storage (8%).

Significant differences were found between electricity/gas and race ($p < 0.05$), with 15.8% blacks, 11.3% Coloured, 60% whites, and 8.7% non-South Africans reporting having access. There were also significant differences between education level and access to rubbish disposal ($p < 0.0001$), electricity/gas ($p < 0.001$), and water ($p < 0.05$). Vendors with no-schooling (66.7%) had the most access to rubbish disposal, followed by 50% (with a degree), 44.4% (with a diploma), 31.4% (with some high school), and 29% (with primary school).

Regarding access to electricity, vendors with most access had matric (23.3%), followed by 13.2% (with some high school), 11.1% (with a diploma), 8.3% (with primary school), and 8.3% (with no schooling). No vendors with a degree had access to electricity/gas. Again people with no schooling (25%) had the most access to water, followed by those with matric or some high school (both 14.7%), primary school (10.4%), a degree (10%) and a diploma (5.6%).

Storage of cash

Most vendors (59.9%) reported keeping cash in their pocket, 35.6% stored cash in a box, 4.3% vendors made use of a till, and 1.9% vendors used other methods for storing cash.

Safety of area of trade

Overall, only 32.7% of the vendors felt that the area where they traded was very safe, with 38.3% feeling that their area was relatively safe most times. Nineteen per cent felt that their operation areas were dangerous at times. Only 6.3% felt that it was very dangerous (Table 4.8). There were moderate correlations observed between perceived level of safety and race ($p < 0.05$) (Table 4.8). Foreign nationals (41.6%) reported feeling most safe in their area of operation in comparison to Coloureds (33.3%) and Blacks (30.7%). There were 346 (46%) SF vendors who reported to be happy in the area they were trading, while 340 (41%) wanted to move to a busier area, and 108 (13%) wanted to move to a specific other area.

Table 4.8: Facilities, money storage and safety of area of trade

Socio-demography	Total	Operational Characteristics										
		Facilities available				How is money stored			Safety of area of trade			
		Water	Electricity/ gas	Fridge	Rubbish disposal	In a till	In a box/pouch	In vendor's pocket	Very safe	Safe most of the time	Dangerous at times	Very dangerous
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality												
South African	682	106 (15.5%)	103 (15.1)	49 (7.2)	213 (31.2)	17 (2.5)	223 (32.7)	427 (62.6)	211 (31.1)	261 (38.4)	134 (19.7)	46 (6.8)
Non-South African	149	24 (16.1)	13 (8.7)	5 (3.4)	72 (48.3)	19 (12.8)	73 (49)	52 (34.9)	61 (41.2)	52 (35.1)	25 (16.9)	6 (4.1)
Race												
Black	524	84 (16)	83 (15.8)[1]	44 (8.4)	129 (24.6)[3]	11 (2.1)	170 (32.4)	332 (63.4)	160 (30.7)[1]	215 (41.2)[1]	99 (19)[1]	30 (5.7)[1]
Coloured	151	21 (13.9)	17 (11.3)[1]	5 (3.3)	80 (53)[3]	6 (4)	52 (34.4)	89 (58.9)	50 (33.3)[1]	44 (29.3)[1]	34 (22.7)[1]	14 (9.3)[1]
Indian/Asian	1	0 (0)	0 (0)[1]	0 (0)	1 (100)[3]	0 (0)	0 (0)	1 (100)	0 (0)[1]	0 (0)[1]	0 (0)[1]	1 (100)[1]
White	5	0 (0)	3 (60)[1]	0 (0)	2 (40)[3]	0 (0)	1 (20)	4 (80)	0 (0)[1]	2 (40)[1]	1 (20)[1]	1 (20)[1]
Foreign	150	25 (16.7)	13 (8.7)[1]	5 (3.3)	73 (48.7)[3]	19 (12.7)	73 (48.7)	53 (35.3)	62 (41.6)[1]	52 (34.9)[1]	25 (16.8)[1]	6 (4)[1]
Gender												
Male	389	55 (14.1)	33 (8.5)	13 (3.3)	146 (37.5)	25 (6.4)	154 (39.6)	200 (51.4)	132 (34.3)	145 (37.7)	79 (20)	21 (5.5)
Female	440	75 (17)	83 (18.9)	41 (9.3)	137 (31.1)	11 (2.5)	141 (32)	278 (63.2)	139 (31.6)	167 (38)	80 (18.2)	31 (7)
Age group (years)												
<18 years	5	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	1 (20)	4 (80)	0 (0)	3 (60)	2 (40)	0 (0)
18–24	65	12 (18.5)	4 (6.2)	4 (6.2)	30 (46.2)	7 (10.8)	26 (40)	27 (41.5)	28 (43.8)	16 (25)	14 (21.9)	3 (4.7)
25–34	251	43 (17.1)	33 (13.1)	19 (7.6)	97 (38.6)	10 (4)	105 (41.8)	129 (51.4)	79 (31.6)	97 (38.8)	49 (19.6)	20 (8)
35–44	283	38 (13.4)	45 (15.9)	16 (5.7)	81 (26.6)	8 (2.8)	88 (31.1)	182 (64.3)	84 (29.8)	116 (41.1)	54 (19.1)	12 (4.3)
45–54	150	23 (13.4)	22 (14.7)	10 (6.7)	47 (31.3)	7 (4.7)	49 (32.7)	92 (61.3)	48 (32.2)	56 (37.6)	29 (19.5)	10 (6.7)
55–64	59	9 (15.3)	9 (15.3)	4 (6.8)	25 (42.4)	4 (6.8)	21 (35.6)	33 (55.9)	24 (40.7)	20 (33.9)	9 (15.3)	6 (10.2)
65–74	17	9 (15.3)	3 (17.6)	1 (5.9)	4 (23.5)	0 (0)	6 (35.3)	11 (64.7)	8 (47.1)	5 (29.4)	2 (11.8)	1 (5.9)
≥75 years	1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	1 (100)	0 (0)	0 (0)	0 (0)
Marital Status												
Single	374	61 (16.3)	49 (13.1)	28 (7.5)	138 (36.9)	12 (3.2)	138 (37.9)	219 (58.6)	129 (34.6)	140 (37.5)	72 (19.3)	18 (4.8)
Married	364	61 (16.8)	59 (16.2)	22 (6)	124 (34.1)	21 (5.8)	138 (37.9)	201 (55.2)	117 (32.3)	135 (37.3)	68 (18.8)	29 (8)
Living with partner	24	3 (12.5)	3 (12.5)	1 (4.2)	6 (25)	1 (4.2)	4 (16.7)	18 (75)	4 (16.7)	10 (41.7)	7 (29.2)	1 (4.2)
Separated	16	1 (6.3)	2 (12.5)	1 (4.2)	3 (18.8)	0 (0)	5 (31.3)	11 (68.8)	4 (26.7)	6 (40)	4 (26.7)	0 (0)
Divorced	21	0 (0)	1 (4.8)	0 (0)	6 (28.6)	1 (4.8)	6 (28.6)	13 (61.9)	6 (28.6)	7 (33.3)	6 (28.6)	2 (9.5)
Widowed	32	4 (12.5)	2 (6.3)	2 (6.3)	8 (25)	1 (3.1)	13 (40.6)	17 (53.1)	12 (37.5)	15 (46.9)	2 (6.3)	2 (6.3)
Education												
Primary school	193	20 (10.4)[1]	16 (8.3)[2]	6 (3.1)	56 (29)[3]	6 (3.1)	70 (36.3)	11 3 (58.5)	65 (33.9)	72 (37.5)	35 (18.2)	12 (6.3)
Some high school	423	62 (14.7)[1]	56 (13.2)[2]	24 (5.7)	133 (31.4)[3]	18 (4.3)	153 (36.2)	247 (58.4)	139 (33)	159 (37.8)	86 (20.4)	22 (5.2)
Matric	172	42 (14.7)[1]	40 (23.3)[2]	21 (12.2)	73 (42.4)[3]	7 (4.1)	63 (36.6)	93 (54.1)	47 (27.3)	71 (41.3)	33 (19.2)	15 (8.7)
Diploma	18	1 (5.6)[1]	2 (11.1)[2]	1 (5.6)	8 (44.4)[3]	1 (5.6)	4 (22.2)	11 (61.1)	9 (50)	7 (38.9)	0 (0)	1 (5.6)
Degree	10	1 (10)[1]	0 (0)[2]	0 (0)	5 (50)[3]	3 (30)	0 (0)	7 (70)	7 (70)	1 (10)	2 (20)	0 (0)
No schooling	12	3 (25)[1]	1 (8.3)[2]	1 (8.3)	8 (66.7)[3]	1 (8.3)	4 (33.3)	7 (58.3)	5 (45.5)	3 (27.3)	2 (18.2)	1 (9.1)

[1]$p < 0.05$ [2]$p < 0.001$ [3]$p < 0.0001$ [Pearson Chi-Square]

Characteristics of vendors selling cooked food

Only 231 (27.8%) vendors reported and were observed selling cooked food (Table 4.9). Of these, 221 (95.7%) were South African, 195 (84.4%) were black Africans, 15 (10%) were Coloured, nine (3.9%) were foreign and only three (1.3%) white. The majority of vendors reported cooking their own foods 194 (84%), on site 147 (63.6%) or at home 80 (34.6%). Most vendors either took leftovers home to eat 150 (64.9%) or gave these away 43 (18.6%).

Significant differences were found between who does the cooking and nationality ($p < 0.0001$), and race ($p < 0.0001$) and gender ($p < 0.0001$). Slightly more non-South Africans (90%) reported doing their own cooking than South Africans (83.7%). Hundred per cent of whites did their own cooking, with 85.6% blacks and 65.2% of Coloureds reported doing their own cooking.

Significant differences were found between where cooking is done and age ($p < 0.0001$), with 100% of vendors younger than 18 years reporting cooking on site, 14.3% of 18–24-age group, 63.6% of 25–34, 61.6% of 35–44, 24.4% of 45–54, 77.8% of 55–64, and 70% of 65–74-year-old age groups reporting the same.

There were also significant differences found between what do you do with leftovers and race ($p < 0.05$). Seventy-three per cent of Coloureds reported taking leftovers home compared to 67.7% of blacks and 60% of non-South Africans.

Table 4.9: Operational characteristics of vendors selling cooked food

Socio-demography	Operational Characteristics of vendors selling cooked food										
		Who cooks food				Where do you cook		What do you do with leftovers			
	Total	Self	Spouse	Employees	A mix	On site	At home	Throw away	Take home to eat	Sell the next day	Give away
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality											
South African	221	185 (83.7)[2]	4 (1.8)[2]	11 (4.9)[2]	21 (9.5)[2]	140 (62.8)	77 (34.5)	5 (2.3)	144 (67.6)	42 (19.7)	22 (10.3)
Non-South African	10	9 (90)[2]	0 (0)[2]	1 (10)[2]	0 (0)[2]	7 (70)	3 (30)	0 (0)	6 (60)	1 (10)	3 (30)
Race											
Black	195	167 (85.6)[2]	1 (0.5)[2]	10 (5.1)[2]	17 (8.7)[2]	124 (62.9)	70 (35.5)	5 (2.6)[1]	128 (67.7)[1]	40 (21.2)[1]	16 (8.5)[1]
Coloured	23	15 (65.2)[2]	3 (13)[2]	1 (4.3)[2]	4 (17.4)[2]	14 (60.9)	6 (26.1)	0 (0)[1]	16 (72.7)[1]	2 (9.1)[1]	4 (18.2)[1]
Indian/Asian	0										
White	3	3 (100)[2]	0 (0)[2]	0 (0)[2]	0 (0)[2]	2 (66.7)	1 (33.3)	0 (0)[1]	0 (0)[1]	0 (0)[1]	2 (66.7)[1]
Foreign	10	9 (90)[2]	0 (0)[2]	1 (10)[2]	0 (0)[2]	7 (70)	3 (30)	0 (0)[1]	6 (60)[1]	1 (10)[1]	3 (30)[1]
Gender											
Male	51	38 (74.5)[2]	3 (5.8)[2]	5 (5.8)[2]	7 (13.7)[2]	34 (66.7)	14 (27.5)	1 (2)	28 (54.9)	10 (19.6)	12 (23.5)
Female	180	156 (86.6)[2]	1 (0.5)[2]	7 (3.8)[2]	16 (8.8)[2]	113 (62.1)	66 (36.3)	4 (2.3)	122 (70.9)	33 (19.2)	13 (7.6)
Age group (years)											
<18 years	1	1 (100)	0 (0)	0 (0)	0 (0)	1 (100)[2]	0 (0)[2]	0 (0)	1 (100)	0 (0)	0 (0)
18–24	7	4 (57.1)	0 (0)	1 (14.2)	2 (28.5)	1 (14.3)[2]	4 (57.1)[2]	0 (0)	5 (83.3)	1 (16.7)	0 (0)
25–34	65	53 (81.5)	0 (0)	3 (4.6)	9 (13.8)	42 (63.6)[2]	24 (36.4)[2]	2 (3.1)	40 (62.5)	14 (21.9)	8 (8.9)
35–44	94	81 (86.1)	2 (2.12)	4 (4.2)	7 (7.4)	58 (61.1)[2]	37 (38.9)[2]	2 (2.2)	64 (71.1)	16 (17.8)	8 (8.9)
45–54	41	36 (87.8)	2 (4.8)	1 (2.4)	2 (4.8)	10 (24.4)[2]	1 (2.4)[2]	1 (2.6)	25 (64.1)	7 (17.9)	6 (15.4)
55–64	18	16 (88.8)	0 (0)	2 (11.1)	0 (0)	14 (77.8)[2]	4 (22.2)[2]	0 (0)	12 (66.7)	4 (22.2)	2 (11.1)
65–74	5	3 (60)	0 (0)	1 (20)	1 (20)	3 (60)[2]	1 (20)[2]	0 (0)	3 (60)	1 (20)	1 (20)
≥75 years	0										
Marital Status											
Single	93	76 (81.7)	1 (1)	6 (6.4)	10 (10.7)	55 (58.5)	36 (38.3)	2 (2.3)	61 (69.3)	16 (18.2)	9 (10.2)
Married	116	100 (86.2)	2 (1.7)	6 (5.1)	8 (6.8)	78 (66.7)	37 (31.6)	3 (2.6)	76 (66.1)	24 (20.9)	12 (10.4)
Living with partner	5	3 (60)	1 (20)	0 (0)	1 (20)	4 (80)	1 (20)	0 (0)	2 (40)	0 (0)	2 (40)
Separated	4	4 (100)	0 (0)	0 (0)	0 (0)	3 (75)	1 (25)	0 (0)	2 (50)	2 (50)	0 (0)
Divorced	6	5 (83.3)	0 (0)	0 (0)	1 (16.6)	3 (50)	3 (50)	0 (0)	4 (66.7)	0 (0)	1 (16.7)
Widowed	7	6 (85.7)	0 (0)	0 (0)	1 (14.3)	4 (57.1)	2 (28.6)	0 (0)	5 (71.4)	1 (14.3)	1 (14.3)
Education											
Primary school	50	45 (90)	1 (2)	1 (2)	3 (6)	32 (62.7)	19 (37.3)	0 (0)	34 (68)	13 (26)	3 (6)
Some high school	115	98 (85.2)	3 (2.6)	7 (6.1)	7 (6.1)	71 (61.7)	41 (35.7)	3 (2.7)	79 (71.8)	15 (13.6)	13 (11.8)
Matric	58	45 (77.5)	0 (0)	3 (5.1)	10 (17.2)	38 (64.4)	18 (30.5)	2 (3.5)	34 (59.6)	14 (24.6)	7 (12.3)
Diploma	4	3 (75)	0 (0)	1 (25)	0 (0)	3 (75)	1 (75)	0 (0)	1 (25)	1 (25)	2 (50)
Degree	0										
No schooling	4	3 (75)	0 (0)	0 (0)	1 (25)	3 (75)	1 (75)	0 (0)	2 (50)	0 (0)	0 (0)

[1]p < 0.05 [2]p <0.0001 [Pearson Chi-Square]

Food items sold

Sixty-eight per cent of vendors reported selling the same food items throughout the year. The remaining 31.9% of vendors change items according to season, especially fruit and vegetables. Most (46.3%) vendors had packaged snacks for sale, followed by fruit and vegetables (39.4%), and sweetened beverages (29.3%) (Figure 4.2). Some sold other uncooked food (8.1%), a few sold baked goods (2.2%), tea and coffee (2.9%), and water (7.9%). Table 4.10 presents all the food items sold as observed during the time of the survey.

Cooked food

Out of the 831 vendors surveyed, only 27.8% sold cooked food (including baked products). Of those who cooked food and baked products, 77.9% were females and 22% were males. Sixty-four per cent cooked or baked on the site, 34.6% cooked at home and 1.3% cooked at home and at the site. Most (84%) vendors cooked their own food. Of those who sold cooked food, 64.9% vendors reported taking leftovers home to eat, 18.6% vendors sold leftovers the next day, 10.8% vendors reported not having any leftovers and only 0.6% reported throwing away leftover cooked food.

These vendors mostly sold chicken (38.5%), beef (38.5%) and mutton (20.3%), and to a lesser extent fish (10.8%) (Table 4.10). Plain *vetkoek* (22.9%) and *vetkoek* (19.9%) with a filling were also popular items sold (*vetkoek* is a traditional South African fried dough bread).

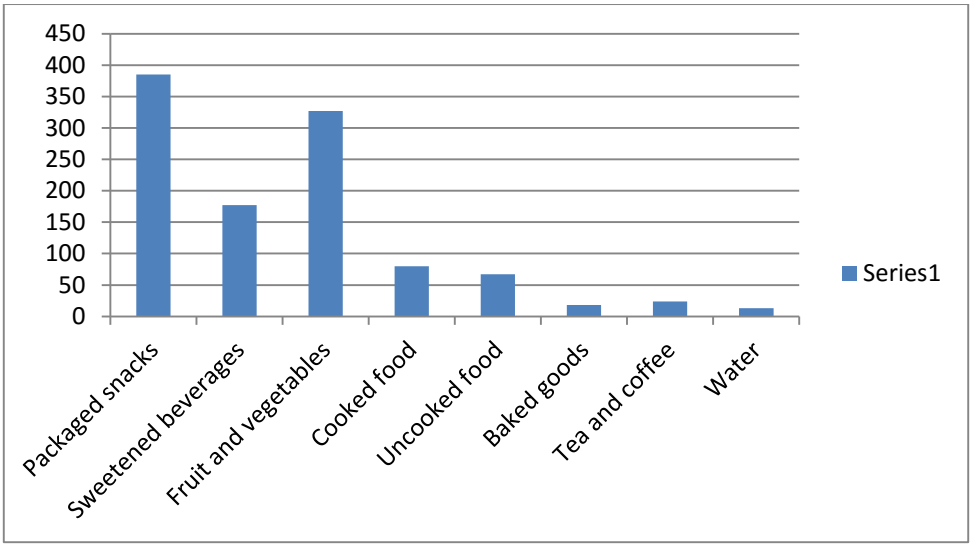


Figure 4.2: Food items sold by street-food vendors

Table 4.10: Food items sold by vendors as observed

Food Item	n	% of total	% of cooked food
Cooked food	191	23	82.7
Baked foods	43	5.2	18.6
Ready to eat foods	363	43.7	
Beverages	183	22	
Pap with beef/chicken	65	7.8	28.1
Rice with beef/chicken	65	7.8	28.1
White bread sandwiches	25	3	
Brown bread sandwiches	23	2.8	
Vetkoek (plain)	53	6.4	22.9
Vetkoek with protein filling	46	5.5	19.9
Gatsby	3	0.4	1.3
Kota	18	2.2	7.8
Vegetables	195	23.5	
Salad	28	3.4	12.1
Fruit	290	34.9	
Rice	50	6	21.6
Porridge	36	4.3	15.6
Chicken	89	10.7	38.5
Beef	89	10.7	38.5
Mutton	47	5.7	20.3
Fish	25	3	10.8
Hotdogs	11	1.3	4.8
Burgers	20	2.4	8.7
Soup	21	2.5	9
Hot chips	26	3.1	11.6
Biscuits/cakes/muffins (packaged)	282	33.9	
Sweets	369	44.4	
Chocolates	265	31.9	
Chips/crisps	375	45.1	
Tea/coffee	38	4.6	
Soft drinks	182	21.9	
Juices	99	11.9	
Water	66	7.9	

Hygiene and safety

From observations most vendors appeared to have short, clean nails (91%) and their hands were free of sores (94%) (Table 4.11). Very few smoked (2%) or had a runny nose while dealing with consumers. However, as much as 80% of vendors handled money and food without washing their hands in-between.

Table 4.11: Vendors general appearance and practices

Hygiene status of vendors	n (831)	%
Short, clean nails	740	91
Hands free of sores	783	94
Smoked while working	51	2
Jewellery on hands/arms	126	15
Handles money/food without washing hands in-between	665	80
Runny nose/cold	20	2

The hygiene and food-handling practices of vendors who sold cooked food

During observation, it was noted that 84.8% and 97% of vendors had short, clean nails and their hands were free of sores, respectively (Table 4.12). At the time of the survey only 1.7% showed flu-like symptoms (i.e. either sneezing or had a runny nose). Twenty-two per cent of vendors had jewellery on their hands and 76.6% and 2.2% of vendors handled money and smoked while handling food, respectively. Pertaining to protective clothing, 35.5%, 32% and 6.5% of vendors either wore a full apron, a half apron or an overall, respectively. Only 35.1% of these vendors had clean aprons or overalls. Just over half (51.9%) of them had their hair covered, and very few (6.1%) wore gloves while handling cooked food.

Of note is that 28.6% of the vendors who sold cooked food used water in a basin or bottle to clean their hands, utensils and surfaces, with only 14.3% and 8.2% using soap or antiseptics, respectively when cleaning (Table 4.12). Only 24.7% had a dry cloth to dry their hands and 29% and 33.3% had a clean sponge or cloth to wash or dry the dishes, respectively.

During observation, it was also noted that 43.3% used separate utensils for cooked and uncooked food (Table 4.12). Moreover, 42.4% had enough cutlery and 45.5% of them had

clean cutlery to serve food. Fifty-four per cent used proper utensils, while 39% used their hands to serve the food. The surfaces on which food was prepared, ranged from wood (35.9%), metal (35.1%), plastic (22.9%), cardboard/newspaper (16%), cloth (14.3%), cement (10.8%) to glass (9.1%).

Table 4.12: Hygiene and food-handling practices of those vendors (N=231) who sold cooked food

Hazards that may lead to food contamination	n	%
Jewellery on hands	50	21.6
Handle money and food simultaneously	177	76.6
Smokes in-between serving food	5	2.2
Flu-like symptoms	4	1.7
Those who wore protective clothing		
Full apron	82	35.5
Half apron	74	32
Overall	15	6.5
Clean apron/overall	81	35.1
Hair covering	120	51.9
Plastic gloves	14	6.1
Hand hygiene		
Clean & short nails	196	84.8
Hands free of sores	224	97
Method of hand- and dishwashing and surface cleaning		
Basin/bottled water	66	28.6
Soap	33	14.3
Antiseptic	19	8.2%
Cloth to dry hands	57	24.7
Clean wet sponge/cloth	67	29
Clean dry sponge/cloth	77	33.3
Food handling		
Separate utensils for cooked and raw food	100	43.3
Adequate takeaway containers	95	41.1
Adequate cutlery	98	42.4
Clean cutlery	106	45.9
Use cutlery	122	52.8
Use hands	90	39
Cooked food kept covered	100	43.3
Cooked food kept warm	123	53.2
Surfaces		
Plastic	53	22.9
Wood	83	35.9
Metal	81	35.1
Cement	25	10.8
Cardboard/newspaper	37	16
Glass	21	9.1
Cloth	33	14.3

A cooked food-handling score was developed by pooling together eight food-handling practices, i.e. separate utensils for cooked and raw food, adequate takeaway containers, adequate cutlery, clean cutlery, use of cutlery, use of hands, cooked food kept covered, and cooked food kept

warm (Table: 4.12). A score of eight would indicate good hygiene for handling food, whereas anything below that would indicate that hygiene practices require improvement. A total of 77 (33.3%) of vendors scored 0/8, seven (3%) scored 1/8, 13 (5.6%) scored 2/8, 15 (6.5%) scored 3/8, 17 (7.4%) scored 4/8, 17 (7.4%) scored 5/8, 22 (9.5%) scored 6/8, 33 (14.3%) scored 7/8, and 30 (13%) scored 8/8 (Figure 4.3).

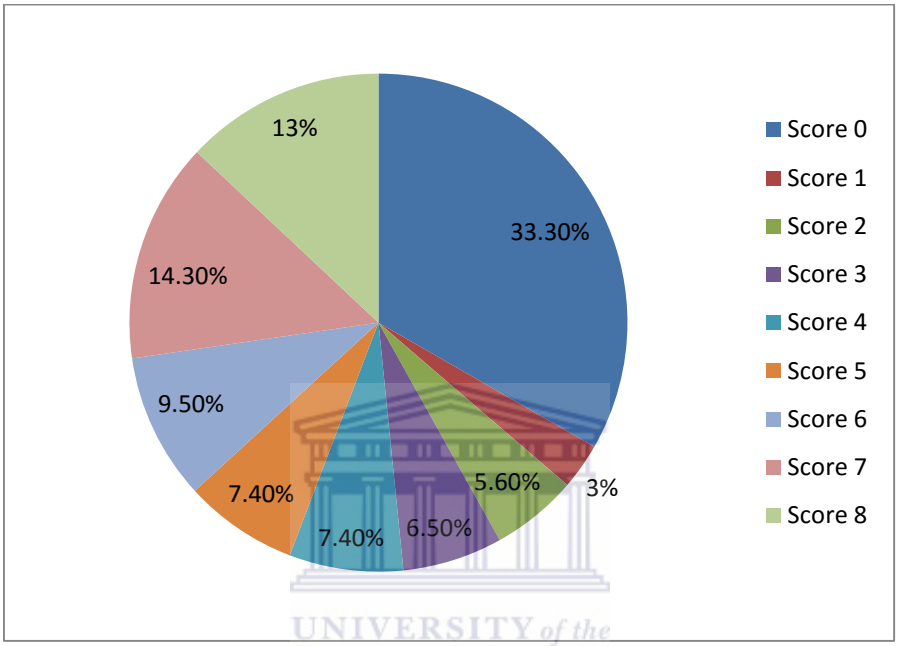


Figure 4.3: Total cooked food-handling score

Nutrition knowledge

Fifteen nutrition-related questions were included in the vendor survey questionnaire. Questions asked pertained to fruit and vegetables; fat and oils; starchy foods; meat and milk; legumes and nut; salt and sugar. Each vendor was allocated a score out of 15. The scores were then grouped together, i.e. 0–5 would indicate a low/poor score, 6–10 would indicate an average score and a score of 11–15 would indicate an acceptable/good nutrition knowledge score.

Most vendors obtained an average score of 56%, with 28% obtaining a low score and only 15% of vendors obtained an acceptable score (also indicating a good nutrition knowledge; Table 4.13). Statistical significant associations were found between nutrition knowledge and

education (p <0.0001). The most vendors (40%) who scored an acceptable nutrition knowledge score had a degree, while those with a diploma (83.3%) were the most to score an average score. A low nutrition knowledge score was mostly scored by vendors with no-schooling (41.7%).

Table 4.13: Nutrition knowledge scores of street-food vendors

Socio-demography	Nutrition Knowledge			
		Score out of 15		
	Total n	0–5 (low) n (%)	6–10 (average) n (%)	11–15 (acceptable) n (%)
Nationality				
South African	682	181 (26.5)	395 (57.9)	106 (15.5)
Non- South African	149	52 (34.9)	81 (54.4)	16 (10.7)
Race				
Black	524	158 (30.2)	291 (55.5)	75 (14.3)
Coloured	151	21 (13.9)	100 (66.2)	30 (19.9)
Indian/Asian	1	0 (0)	1 (100)	0 (0)
White	5	2 (40)	2 (40)	1 (20)
Other/non-South African	150	52 (34.7)	82 (54.7)	16 (10.7)
Gender				
Male	389	127 (32.6)	216 (55.5)	46 (11.8)
Female	440	104 (23.7)	260 (59)	76 (17.2)
Age group (years)				
<18 years	5	2 (40)	3 (60)	0 (0)
18–24	65	17 (26.1)	31 (47.7)	17 (26.2)
25–34	251	85 (33.8)	138 (55.9)	28 (11.2)
35–44	283	71 (25)	169 (59.7)	43 (15.2)
45–54	150	42 (28)	85 (56.7)	23 (15.3)
55–64	59	12 (20.3)	39 (66.1)	9 (15.3)
65–74	17	5 (29.4)	10 (58.8)	2 (11.8)
≥75 years	1	0 (0)	1 (100)	0 (0)
Education				
Primary school	193	60 (31)*	104 (53.9)*	29 (15)*
Some high school	423	117 (27.7)*	250 (59.1)*	56 (13.2)*
Matric	172	48 (27.9)*	95 (55.2)*	11 (6.4)*
Diploma	18	0 (0)*	15 (83.3)*	3 (16.7)*
Degree	10	1 (10)*	5 (50)*	4 (40)*
No schooling	12	5 (41.7)*	6 (50)*	1 (8.3)*

*p <0.0001 [Pearson Chi-Square]

Challenges faced by vendors

Vendors face an array of challenges on a daily basis, making it very difficult for them to keep their businesses afloat. They were asked three open-ended questions where they had to express i) what they would change about their vending operation, ii) the problems they

experienced running their vending operation, and iii) if there was anything the municipality could do to help improve their business.

Most vendors (69%) mentioned the lack of facilities, i.e. access to electricity, water, and toilets as major challenges in their operation. Sanitation issues (2.2%) and a call for regular cleaning (5.4%) also came up. The need for a permanent structure (61.6) and shelter and storage (21.7%) came through very strongly, which would address the challenge that vendors face with weather conditions (31.6%) as well as the problem of building and dismantling their stall (3.5%) daily. Vendors reported incidents with law enforcement/securities as a major challenge (22.4%), those trading in or on train stations also reported having issues with Metrorail security services (4.5%). Crime and theft (26.7%) were a big issue vendors had to contend with, and they expressed the need for improved security or policing (6.9%). The need for permits (22.4%) were expressed, along with some issues surrounding permits (3.6%).

Vendors expressed the need to expand their business (n=73), sell a bigger variety (n=87), including cooked foods (n=39), and many vendors indicated the need for financial assistance (n=186) (Figure4.6). Some vendors mentioned making a small profit and that their businesses were not thriving (n=48), however, very few identified the need for business training and ideas (n=11). Vendors expected these basic needs to be addressed by the municipality, but there appeared to be a distrust of the municipality by some (n=14), some vendors, however, felt the need to have access to and support from the municipality (n=37).

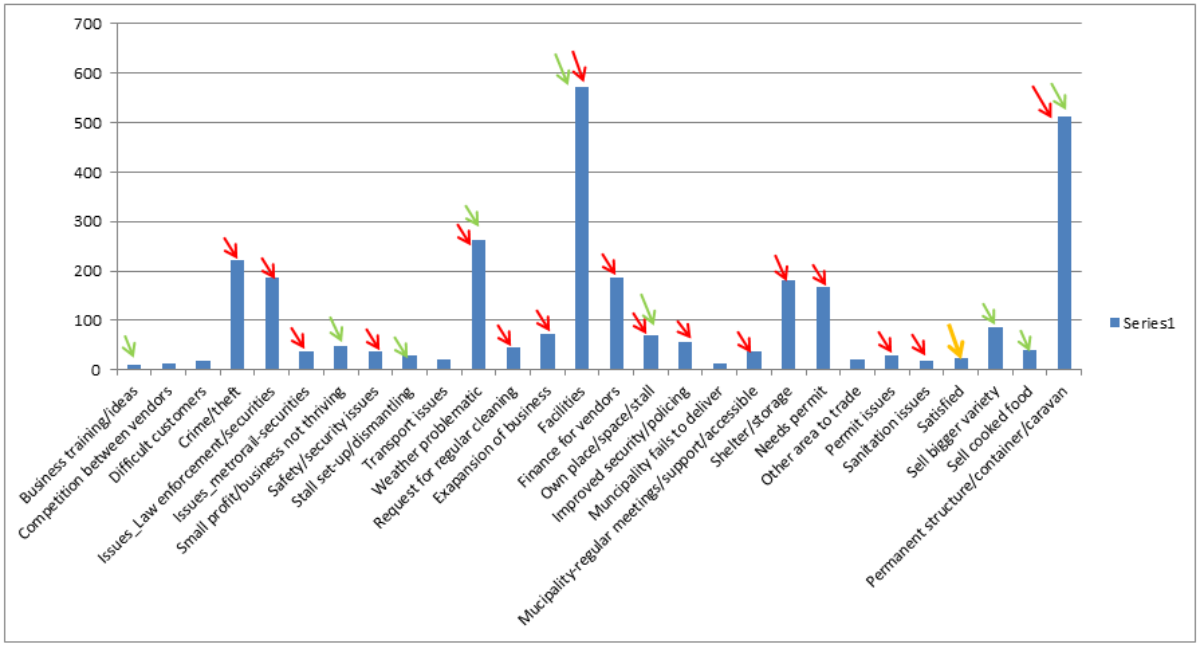


Figure 4.4: Challenges/needs expressed by vendors in running their business

Red arrow indicates challenges that cannot be addressed fully by a SFVM; Green arrow indicates challenges that might be moderately addressed by the development of a SFVM

4.3 Discussion

In most developing countries, the literature shows that female vendors dominate the business, with the exception of some Asian countries (Mwangi *et al*., 2001; Martins, 2006; Adjrah *et al*., 2012; Majunga *et al*., 2011). In our study, female vendors outweighed male vendors only by a small margin. Similar to other studies, our vendor profile had a low education level, with very few having matric or a higher education (Arambulo *et al*., 1994; Mwangi *et al*., 2001; Martins, 2006; Majunga *et al*., 2011; Adjrah *et al*., 2012).

Vendors work long hours for up to seven days a week to earn a living, sometimes under strenuous environmental conditions. Even though these long hours are worked, most vendors make less than R1 000 per week, some make between R1 000 and R4 999, and only a small percentage earn more. One can thus assume that most vendors barely make enough to feed their families. Bhowmik (2005), also reported that vendors often do not make much profit

and they tend to move from one place to another in the hope of finding better markets and increasing their profit.

Street foods have an enormous potential to generate income, i.e. create employment as well as improve the nutritional status of consumers, but SF vendors in Cape Town are not reaching their full potential. Street foods, as part of the informal sector, contribute significantly to the country's economy in general, (von Holy & Makhoane, 2006) and also encourage economic self-sufficiency (Winarno & Allain, n.d.; Cohen, n.d.). People who cannot find employment in the formal sector because of various reasons, being either economic, social, or personal (i.e. insufficient education), could begin their own SF business or start working there (Wilnarno & Allain, n.d.; Cohen, n.d.). Martins, (2006) noted that economic instability, which results in millions of job losses in the formal sector, also contributes significantly to unemployed individuals who start their own informal business for survival.

Entering the SF-vending business requires modest skills, basic facilities and little capital (Wilnarno & Allain, n.d.). Steyn *et al*., (2013) noted that many uneducated, unemployed people, often women, find this an easy way to earn at least some money with little initial capital investment required.

In South Africa, SF are sold by vendors at public transport centres such as railway and bus stations as well as taxi ranks, as seen in the present study too. People are either waiting for their initial transport, or their connecting transport, which creates an opportunity to purchase (Mosupye & von Holy, 2000) The SF vendors are conveniently situated, either in the living areas, near the workplaces or en route of thousands of commuters, and they provide a source of inexpensive, convenient and comparatively nutritious food (Lues *et al*., 2006). Street food reflects traditional cultures based on local products which boosts the local economy.

In the present survey, ready-to-eat items, such as packaged snacks (chips/crisps, sweets and chocolates), fruit and vegetables, and sweetened beverages were the most popular items sold by vendors. These items are acquired by vendors in wholesale quantities and sold as is. The fresh fruit and vegetables that are being sold are of great value (monetary and nutritional value) for the consumer. The packaged snacks and sweetened beverages are, however, of concern, since they are laden with added sugars, total fat, and trans- and saturated fats. For example, a small packet (30 g) of potato chips (e.g. 'Lays'), sold in the streets of Cape Town, consist of about 696 kJ of which 10 g comes from fat, with 3 g (28%) being saturated fats (Wolmarans *et al*., 2010). According to the South African Food Composition Tables by Wolmarans *et al*., (2010) this total energy is equivalent to four thin slices of health bread (694 kJ). The differences being that the health bread is low in fat and only has traces of saturated fats (Mchiza *et al*., 2014). Similarly, one bar (53 g) of chocolate candy (Snickers bar) consists of 1220 kJ and 16 g of fat of which 10 g comes from saturated fat (Wolmarans *et al*., 2010). These results show that SF may be detrimental to the health of South Africans, since it is biologically plausible that energy-dense and high-fat diets promote weight gain, especially abdominal obesity, an important determinant of the risk of developing chronic NCD (Astrup, 2005 in Mchiza *et al*., 2014). In a study conducted in Italy, Palermo, Buscemi *et al*., (2012) concluded that high SF consumption may lead to higher body mass indices (BMIs), larger waist circumferences, and higher levels of cholesterol compared to those with a low frequency SF consumer.

However, the problem of packaged snacks and sweetened beverages is difficult to address, because of mass production. Exploring the possibilities of making cooked food healthier (more nutrient-dense) might be a more plausible option.

In a Street Food Project Report completed in 1990, it was estimated that the average content of SF is about 679 calories (2840.936 kJ) (Street Food Project Report No. 2, 1990). The

recommended daily energy intake, reportedly, can be met by simply consuming SF at the mere cost of 1$ (US dollar). These foods were noted to be of good nutritional value. Examples were boiled and fried peanuts, fried tofu, barbequed chicken and mutton, fried fish, etc. (Wilnarno & Allain, n.d.). The fact that these foods were all fried, however, takes away their nutritional benefits. In general, the consumption of saturated fat is considered a major contributor to NCD, such as coronary heart disease (CHD), cancer, diabetes and hypertension. However, Saguy and Dana (2003) conclude that fried foods can be nutritive and that they are in fact comparable with other cooking methods, for example baking and boiling.

One strategy to address the energy density of food and portion size, is regulating the amounts and types of food sold in the streets. This can be complemented by promoting behaviour change in the general population through a long-term disease prevention strategy involving dietary change (Mchiza *et al*., 2014).

The Ministry of Health, (2013: 26) via its Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17, has instituted ten goals/targets to be reached by the year 2020. Two of these targets could be related directly to SF, i.e. “Reduce mean population intake of salt to <5 grams per day by 2020”; “Reduce by 10% the percentage of people who are obese and/or overweight by 2020.”

The strategy for salt reduction includes, “addressing the primary causes of mortality and morbidity or the broad social determinants of NCDs”; “preventing the specific behavioural risk factors”; to “pass regulations on salt content in processed foods”; “monitor salt content in regulated food” as well as to “introduce a public campaign to reduce salt intake” (Ministry of Health 2013: 53).

The strategy for overweight and obesity reduction includes engaging relevant government departments “to increase the accessibility and availability of healthy foods” as well as to “run public campaigns to improve eating habits” (Ministry of Health, 2013:53).

Wilnarno and Allain (n.d.), concluded that SF vendors’ capacity to produce inexpensive, nutritious meals should be preserved, encouraged and supported. Furthermore, rules and regulations should be put in place for safe food production, and education and information made available to provide a basic foundation for good practice. The vendors in the present study did not have optimal nutrition knowledge, which would make decision-making in what types of food to sell and portion size estimation difficult. This is even more critical in supporting the recommendation of education and information provision to SF vendors.

The results presented above also show that the hygiene practices of the SF vendors are not optimal. This could be because of a lack of facilities, for example taps, basins, and electricity, but could also be because of a lack of knowledge. Major sources contributing to microbial contamination are preparation practices, lack of cooking and serving utensils, raw material handling and/or storage as well as time and temperature abuse of cooked foods, and personal hygiene of vendors.

Majunga *et al*., (2011) indicated that the safety of SF is influenced by several factors, such as the quality of raw supplies, and food-handling and storage practices. Moreover, access to potable water is problematic in most low-income countries. In Uganda, irregular water flow from taps for hand- or dishwashing, cooking or drinking, causes street vendors to store water under risky conditions including the possibility of contamination by insects, rodents, and animals and by air pollution (Hanashiro *et al*., 2005). Muinde and Kuria, (2005) in their research, noted that common perceptions around SF, are that they are unsafe by virtue of contamination, simply because of the environment in which they are prepared, sold and consumed. Findings from Ghana showed that the settings where food vending is normally

practiced are scarcely resourced with low environmental and sanitary standards, posing a major threat to food safety (Rheinlander *et al*., 2008).

According to a few studies in South Africa, SF are reasonably safe, with acceptable bacterial counts; however, there is a great need for proper hygiene practices, access to sanitary facilities and clean running water (von Holy & Makhoane, 2006; Monsupye & von Holy, 1999; Monsupye & von Holy, 2000; Lues *et al*. 2006; Martins & Anelich, 2000).

Winarno and Allian, (n.d.) contest the flawed notion that food contamination is inevitable in SF, as masses of people depend on this source of nutrition daily. Policy makers, researchers, etc. simply have to find and invest in methods to overcome the lack of hygiene practices by SF vendors. One such initiative has been the WHO's five keys to safer foods endorsed by the DoH to address some of the issues surrounding hygiene practices (WHO, 2006). However, the issues around facilities are more complicated to address.

Another aspect to consider in food preservation is the availability of facilities, which in our study was far and in-between. A recommendation by a study conducted in Kumba, Cameroon, suggested the introduction of suitable modern preservation technologies, e.g. affordable refrigeration and heating units, which would enable the storage and reheating of leftover foods, correspondingly. As food losses owing to low demand and/or poor quality was found to be a common occurrence. Furthermore, with reliable safety and storage facilities, the mobile SF vendors would be able to better their incomes. (Acho-Chi, 2002).

Our study indicated that most vendors were not in possession of a permit, licensing or a certificate of acceptability. Similarly in Kumba, Cameroon, it was found that 70% of SF vendors engage in business without health certification or a public sale license. The author attributed this lack in certification to the non-existence of a proper regulatory policy (Acho-Chi, 2002). Following on, this the author suggested that the Kumba urban management

authorities arrange non-formal participatory working groups with representatives of SF vendors, non-governmental organisations (NGOs) in addition to law enforcement agents to speed up the necessary evaluations of the industry and to define suitable regulations that bring together the needs and stresses of the vendors with the laws in place. Furthermore, the author emphasises that amidst the fast-growing SF sector, it is of great importance for the urban council to make the SF vendors an essential part of local plans "to encourage a competitive modern urban delivery system" (Acho-Chi, 2002:137).

Street-food vending is indeed a complex system, with various elements at play. Business, nutrition, hygiene, physical environment, and facilities and equipment available to the vendor all play a role in the operation of SF vending. And ultimately how "healthy", "safe" and "profitable" can this business be.

4.4 Conclusion and recommendations

According to literature, SF vending, in fact, has shown to be a viable, sustainable business. However, what is lacking, is that the SF vendors in the Cape Town and surrounding areas are only making a minimal income. The types of food items sold by vendors, their nutrition knowledge as well as their hygiene practices are not ideal.

Thus, a SFVM encompassing aspects, such as good business practice guidelines, basic nutrition, recipe ideas and hygiene information, which address the improvement of the physical environment, facilities and equipment will be ideal. This model would also address some of the concerns reported by vendors in Figure 4.6 above (Result section). The green arrows indicate where the proposed model could make a difference, i.e. business training/ideas, small profit, stall set-up, combatting weather challenges (by means of a cart with a bit of cover), facilities (such as heat and cooling systems and water that can be housed

in a cart), own stall, to sell a bigger variety, to sell cooked food as well as having some sort of permanent structure. See Figure 4.5 for proposed model.

Figure 4.5: Proposed Street-Food Vending Model

Chapter 5

The profile of street food consumers in Cape Town, Western Cape and surrounding areas

5.1 Introduction

As described in Chapter 2, the Literature Review, the sight and smell of street foods are a common phenomenon in developing countries, with urban settings outnumbering rural settings. In these settings, street foods are not only appreciated for their unique flavours, convenience, and affordability, they also contribute to the economy of the country, the perseverance of cultural and social heritage of society, and the potential for maintaining and improving the nutritional status of populations (Draper, 1996; von Holy & Makhoane, 2006; Rheinlander *et al*., 2008; Rane, 2011; Arambulo *et al*., 1994; Martins & Anelich, 2000; van't Riet, den Hartog, Mgwani *et al*., 2001 and Steyn *et al*., 2013).

As a result, SF contribute significantly to the diet of numerous people living in developing countries, including South Africa (Steyn *et al*., 2013). In fact, in South Africa, 11.3% of the population purchase SF (Steyn & Labadarios, 2011). Black South Africans are the most regular buyers of SF, with nearly one out of five (19%) consuming these at least twice a week. Furthermore, with an increasing urban workforce and more people working away from home, SF become one of the most convenient sources of meals and snacks (Harvard School of Public Health, 2013). Also, many people lack proper housing and cooking facilities, and hence SF become an ideal choice of cheap and labour-free meals (Dawson & Canet, 1991; Steyn *et al*., 2013).

In the literature, street-food consumers are mostly described as young, single, unskilled workers, with a low level of education and lacking hygiene knowledge (Faye *et al*., 1998, Martins 2006, Rheinlander *et al*., 2008). Indeed, in a study conducted by Martins (2006), it was shown that most street-food consumers were black (98.9%), single (50%), male (88.4%),

and between ages 26 and 35 years. Most of these consumers (64.1%) had some form of high-school education, with less people (8%) having post high-school qualifications and university degrees. Worthy to note, is that a fairly large number of street-food consumers were in the taxi business (40.4%).

5.2 Methods and procedures

A cross-sectional survey using a socio-ecological framework was used in this study of consumers to understand, interpret and apply the results.

Specific objectives

1. To determine consumer purchasing practices;
2. To determine the KAP of consumers to purchase healthy and safe street-foods in the city of Cape Town and surrounding areas; and
3. To determine the intentions of these consumers to purchase healthy and safe street-foods

5.2.1 Study population

Sampling of consumers

On the basis of the 2011 Census, the urban population in the Western Cape was 4,088,709. The minimum sample size to represent this population is 785, based on the 95% level of significance, 80% power, 50% defects (which gives the maximum sample size) and 0.05 margin of error (http://www.wessa.net/rwasp_sample.wasp). Accounting for a 25% non-response, the final sample required was 1,047. Consumers were selected from the site where the selected vendors were drawn. The first ten clients who visited the vendor were approached and requested to participate. If anyone refused to participate the next client was selected. Unfortunately, because of time constraints of the consumers, all available consumers regardless of vendor used were asked to participate in the study. The final sample of consumers comprised 1121.

Data collection methods

Trained fieldworkers under the supervision of a trained fieldwork coordinator and the primary researcher conducted structured interviews with consumers on a) socio-demographic factors; b) purchasing habits; c) consumption preferences; d) and nutrition knowledge using a validated questionnaire.

Data analysis

Data entering was done by two trained data capturers and was checked by the primary investigator to ensure quality control. Data was entered into Microsoft Access 2010. For quality assurance, data entry was double-checked by the primary investigator and corrected accordingly. The data was then exported to Microsoft Excel 2010 by the primary investigator and cleaned to prepare for analysis. While in Microsoft Excel 2010, some data (responses) were recoded, and or collapsed for more meaningful analysis to develop new Excel worksheets. These worksheets were then imported to IBM statistics SPSS version 23.

As a first level of analysis, univariate analysis or frequencies were run on all variables in the questionnaire. For descriptive purposes, frequencies were tallied and percentages calculated. At a second level of analysis cross tabulations using the Chi square test and Pearson were conducted to establish whether relationships existed or whether certain independent variables influenced dependent variables. Pearson-product moment correlation coefficients were used to measure the strength of linear associations between two variables since the data was normally distributed.

5.3 Results

Socio-demographic results

Overall, a total of 1121 consumers were interviewed in 31 areas around the central business district areas in major cities, town centres as well as transport interchange areas in the townships and informal settlement areas (Table 5.1). There were more male (55.6%) than female (44.2%) consumers in the sample. Most consumers were South African (94.7%), with black South African consumers (77%) outweighing others by far, followed by Coloureds (17.3%), non-South African consumers (5.1%), whites (0.4%), and only one (0.8%) of Indian descent. Most consumers (93.5%) were between the ages of 18 and 54 years, mostly single (59.7%) or married (31.2%), and had matric (40.7%) or less education (45.5%). Only 13% of them had a post matric education, and 0.5% had no formal education. Fifty-one per cent were employed full-time, while 11.4% were employed part-time, 24.6% were unemployed, 7.3% were students, and 5.2% were self-employed.

The vast majority of consumers (50.6%) earned less than 3 000 ZAR a month. Nineteen per cent earned between 3 000 ZAR and 4 000 ZAR, 14.5% earned between 4 000 ZAR and 6 000 ZAR, and 15.3% earned more than 6 000 ZAR per month. Most consumers used public transport (i.e. travelled either by train (39%) or taxi (37.7%) or by bus (7.4%), while a few 8.6% used their own transport. Some consumers (6.9%) either walked or cycled to work (coded as “other” in Table 5.1).

Table 5.1: Socio-demographic profile of street-food consumers (n=1121) in Cape Town and surrounding areas 2013

Characteristics	n (1121)	% (100.0)
Sex		
Males	623	55.6
Females	495	44.2
Age group (years)		
13 – 17	23	2.1
18 – 24	217	19.4
25 – 34	420	37.5
35 – 44	289	25.8
45 – 54	122	10.9
55 – 64	36	3.2
≥65 years	13	1.2
Nationality		
South African	1062	94.7
Other	59	5.3
Race		
Black African	863	77
Coloured	194	17.3
Indian/Asian	1	0.1
White	5	0.4
Other	57	5.1
Location		
CPT Upper Deck and Inside Station	37	3.4
CPT CBD Area	167	15.5
Gugulethu	122	11.3
Mfuleni	71	6.6
Bellville	260	24.1
Mutual/Pinelands	1.7	18
Esplanade	11	1
Tygerberg	4	0.4
Ysterplaat	2	0.2
Parow	2.1	23
Maitland	4	0.4
Koeberg	5	0.5
Salt river	16	1.5
Bonteheuwel	14	1.3
Langa station	14	1.3
Wynberg	52	4.8
Kuils River	9	0.8
Claremont	2	0.2
Mowbray	18	1.7
Rylands/Gatesville	9	0.8
Bishop Lavis	3	0.3
Mitchell's Plain Town-centre	21	1.9
Langa taxi rank	13	1.2
Khayelitsha mall	24	2.2
Site-B Khayelitsha	23	2.1

Site-C Khayelitsha	19	1.8
Nyanga terminus	55	5.1
Philippi	13	1.2
Elsies River	8	0.7
Mbekweni	13	1.2
Sea Point	10	0.9
Missing	46	4.1
Marital status		
Single	669	59.7
Married	350	31.2
Living with partner	45	4
Separated	19	1.7
Divorced	16	1.4
Widowed	22	2
Highest level of education		
Primary school	86	7.7
Some high school	424	37.8
Matric	456	40.7
Diploma	113	10.1
Degree	32	2.9
No schooling	6	0.5
Employment status		
Unemployed	276	24.6
Full-time employed	576	51.4
Part-time employed	128	11.4
Scholar/student/training	82	7.3
Self-employed	58	5.2
Income bracket		
<R3 000	567	50.6
R3 000 – R4 000	208	18.6
R4 000 – R6 000	162	14.5
>R6 000	171	15.3
Other	13	1.2
Mode of transport		
Train	437	39
Bus	83	7.4
Taxi	423	37.7
Car	96	8.6
Other	77	6.9

Purchasing habits

As seen in Table 5.2, most consumers (43%) bought SF 2–3 times per week, while a significant number (38.3%) bought these almost every day. Nineteen per cent bought SF about once a week or once or twice a month (numbers combined in Table 5.2). More non-South Africans purchased SF on a daily basis than South Africans (42.4% vs. 38%, $p < 0.05$).

Forty-six per cent of the consumers purchased SF near work, while 30.3% purchased these near their homes, 5.9% near their schooling areas (colleges), and 20% purchased anywhere. There were statically significant differences found (Chi-square test, $p < 0.0001$) between vicinity of purchases and age, with older people (>55 years, 42–62%) purchasing close to home and more people (25–54 years, 49-52%) purchasing close to work; between vicinity of purchases and marital status (with over 55% of people who are married, living with a partner purchasing close to work, as opposed to those who are widowed (50%) who purchase close to home); and between vicinity of purchases and level of education (most people (42–63%) with some high school education and above who purchase close to home as opposed to those with some primary school or no-schooling (42–100%) who purchase close to home).

The purchasing of SF seemed to be spread throughout the day; with 30.6% of consumers reporting that they purchased these between 12 pm and 3 pm, 25.8% between 10 am and 12 pm, 14.4% before 10 am, 7.5% between 3 pm and 6 pm, 1.78% after 6 pm, and 19.7% consumers at various times throughout the day. Statistical significant differences were found between time of purchases, age ($p < 0.0001$), marital status ($p < 0.0001$) and level of education ($p < 0.05$).

Thirty per cent of consumers spent between R600 and R999 (28.9%) per month, 28% spent less than R300, 22% spent between R300 and R599 (21.3%), 17% spent between R1 000 and R1 200, while only 3% spent more than R1 200 per month. There was statistically significant differences found in age and money spent ($p < 0.0001$). It appears as if older people spent less than other consumers on SF, with 50% of 55–64-year-olds and 61.5% of those 65 years and older spent less than R300 per month. Of those younger than 18 years old, 34.8% and 37.7% of 45–54-year-olds spent between R600 and 899 per month, while 22.8% of 35–44-year-olds and 20.2% of 25–34-year-olds spent between R900 and 1200 per month on SF.

Table 5.2: Purchasing habits of street-food consumers

Socio-demography	Total	Purchasing habits: Frequency of purchases: Almost every day	Frequency of purchases: 2–3 times p/w	Frequency of purchases: Once a week/month	Money spent on purchases per month: <R300	Money spent on purchases per month: R300 – R599	Money spent on purchases per month: R600 – R899	Money spent on purchases per month: R900 – R1200	Money spent on purchases per month: >R1200	Vicinity of purchases: Near home	Vicinity of purchases: Near work	Vicinity of purchases: Near school/ college	Time of purchases: Am – 12 pm	Time of purchases: 12 – 6 pm	Time of purchases: Any time of day
	n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Nationality															
South African	1062	404 (38)[1]	460 (43.3)[1]	197 (18.5)[1]	292 (27.5)	228 (21.5)	308 (29)	184 (17.3)	29 (2.7)	320 (30.1)	497 (46.8)	65 (6.1)	432 (40.7)	419 (39.4)	208 (19.6)
Non-South African	59	25 (42.4)[1]	22 (37.3)[1]	11 (18.7)[1]	19 (32.2)	11 (18.6)	16 (27.1)	6 (10.2)	4 (6.8)	20 (33.9)	23 (39)	1 (1.7)	18 (30.5)	28 (47.5)	13 (22)
Race															
Black	863	312 (36.2)	393 (45.5)	157 (18.2)	216 (25)	183 (21.2)	260 (30.1)	164 (19)	24 (2.8)	277 (32.1)[3]	386 (44.7)[3]	58 (6.7)[3]	357 (41.3)	325 (37.7)	178 (20.6)
Coloured	194	88 (45.4)	68 (35.1)	38 (19.5)	74 (38.1)	44 (22.7)	48 (24.7)	18 (9.3)	5 (2.6)	42 (21.6)[3]	108 (55.7)[3]	6 (3.1)[3]	73 (37.7)	92 (47.4)	29 (14.9)
Indian/Asian	1	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)[3]	1 (100)[3]	0 (0)[3]	1 (100)	0 (0)	0 (0)
White	5	4 (80)	0 (0)	1 (20)	1 (20)	1 (20)	1 (20)	2 (40)	0 (0)	1 (20)[3]	2 (40)[3]	2 (40)[3]	2 (40)	2 (40)	1 (20)
Foreign	57	25 (43.9)	20 (35.1)	11 (19.3)	19 (33.3)	11 (19.3)	14 (24.6)	6 (10.5)	4 (7)	19 (33.3)[3]	23 (40.4)[3]	0 (0)[3]	16 (28.1)	28 (49.1)	13 (22.8)
Gender															
Male	623	245 (39.3)	271 (43.5)	105 (16.9)	156 (25)	136 (21.8)	175 (28.1)	113 (18.1)	24 (3.9)	180 (28.9)	285 (45.7)	30 (4.8)	240 (38.5)	237 (38)	144 (23.1)
Female	495	183 (37)	209 (42.2)	103 (20.9)	155 (31.3)	102 (20.6)	147 (29.7)	77 (15.6)	9 (1.8)	160 (32.3)	233 (47.1)	36 (7.2)	207 (41.9)	210 (42.4)	77 (15.6)
Age															
<18 years	23	11 (47.8)	9 (39.1)	3 (13)	9 (39.1)[2]	5 (21.7)[2]	8 (34.8)[2]	0 (0)[2]	1 (4.3)[2]	5 (21.7)[3]	3 (13)[3]	14 (60.8)[3]	6 (26.1)[3]	14 (60.8)[3]	3 (13)[3]
18 – 24	217	87 (40.1)	90 (41.5)	40 (18.4)	84 (38.7)[2]	40 (18.4)[2]	60 (27.6)[2]	24 (11.1)[2]	5 (2.3)[2]	64 (29.5)[3]	83 (38.2)[3]	37 (17)[3]	91 (42)[3]	80 (36.8)[3]	46 (21.2)[3]
25 – 34	420	166 (39.5)	183 (43.6)	70 (16.7)	101 (20.1)[2]	96 (22.9)[2]	124 (29.5)[2]	85 (20.2)[2]	6 (1.4)[2]	132 (31.4)[3]	211 (50.2)[3]	13 (3.1)[3]	166 (39.5)[3]	164 (39)[3]	90 (21.4)[3]
35 – 44	289	115 (39.8)	126 (43.6)	47 (16.3)	58 (20.1)[2]	64 (22.1)[2]	75 (26)[2]	66 (22.8)[2]	17 (5.9)	77 (26.6)[3]	151 (52.2)[3]	2 (0.7)[3]	125 (43.3)[3]	105 (36.3)[3]	58 (20.1)[3]
45 – 54	122	44 (36.1)	53 (43.4)	25 (20.5)	32 (26.2)[2]	25 (20.5)[2]	46 (37.7)[2]	13 (10.7)[2]	3 (2.5)[2]	39 (32)[3]	60 (49.2)[3]	0 (0)[3]	45 (36.9)[3]	57 (46.8)[3]	19 (15.6)[3]
55 – 64	36	4 (11.1)	13 (30.6)	19 (52.8)	18 (50)[2]	8 (22.2)[2]	9 (25)[2]	0 (0)[2]	1 (2.8)[2]	15 (41.7)[3]	9 (25)[3]	0 (0)[3]	11 (30.5)[3]	21 (58.3)[3]	4 (11.1)[3]
≥65 years	13	1 (7.7)	8 (61.5)	4 (30.8)	8 (61.5)[2]	1 (7.7)[2]	2 (15.4)[2]	2 (15.2)[2]	0 (0)[2]	8 (61.5)[3]	3 (23.1)[3]	0 (0)[3]	6 (46.2)[3]	6 (46.2)[3]	1 (7.7)[3]
Marital status															
Single	669	258 (38.6)	301 (45)	110 (16.5)	198 (29.6)	143 (21.4)	188 (28.1)	108 (16.1)	18 (2.7)	218 (32.6)[3]	279 (41.7)[3]	63 (9.4)[3]	256 (38.3)[1]	264 (39.4)[1]	149 (22.3)[1]
Married	350	134 (38.3)	147 (42)	67 (19.1)	86 (24.6)	73 (20.9)	104 (29.7)	66 (18.9)	13 (3.7)	85 (24.3)[3]	193 (55.1)[3]	2 (0.6)[3]	147 (42)[1]	137 (39.2)[1]	63 (18)[1]
Living with partner	45	20 (44.4)	15 (33.3)	10 (22.2)	9 (20)	10 (22.2)	17 (37.8)	9 (20)	0 (0)	14 (31.1)[3]	25 (55.6)[3]	0 (0)[3]	20 (44.4)[1]	19 (42.2)[1]	6 (13.3)[1]
Separated	19	6 (31.6)	5 (26.3)	8 (42.1)	7 (36.8)	4 (21.1)	4 (21.1)	3 (15.8)	0 (0)	8 (42.1)[3]	9 (47.4)[3]	0 (0)[3]	11 (57.9)[1]	7 (36.9)[1]	1 (5.3)[1]
Divorced	16	5 (31.3)	9 (56.3)	2 (12.6)	1 (6.3)	5 (31.3)	6 (37.5)	3 (18.8)	1 (6.3)	4 (25)[3]	9 (56.3)[3]	0 (0)[3]	7 (43.8)[1]	8 (50)[1]	1 (6.3)[1]
Widowed	22	6 (27.7)	5 (22.7)	11 (50)	10 (45.5)	4 (18.2)	5 (22.7)	1 (4.5)	1 (4.5)	11 (50)[3]	5 (22.7)[3]	1 (4.5)[3]	9 (40.9)[1]	12 (54.6)[1]	1 (4.5)[1]
Education															
Primary school	86	25 (29.1)	33 (38.4)	28 (32.5)	41 (47.7)	21 (24.4)	14 (16.3)	6 (7)	1 (1.2)	36 (41.9)[3]	31 (36)[3]	1 (1.2)[3]	30 (34.9)[3]	40 (46.5)[3]	16 (18.6)[3]
Some high school	424	169 (39.9)	168 (39.6)	86 (20.2)	123 (29)	87 (20.5)	124 (29.2)	71 (16.7)	13 (3.1)	130 (30.7)[3]	206 (48.6)[3]	15 (3.5)[3]	160 (37.8)	160 (37.7)	103 (24.3)
Matric	456	185 (40.6)	209 (45.8)	61 (13.4)	112 (24.6)	104 (22.8)	134 (29.4)	83 (18.2)	14 (31.1)	142 (31.1)[3]	195 (42.8)[3]	34 (7.4)[3]	191 (41.9)[3]	174 (38.2)[3]	90 (19.7)[3]
Diploma	113	39 (34.5)	54 (47.8)	20 (17.7)	21 (18.6)	23 (20.4)	39 (34.5)	22 (19.5)	4 (3.5)	19 (16.8)[3]	68 (60.2)[3]	15 (13.3)[3]	49 (43.3)[3]	58 (51.3)[3]	6 (5.3)[3]
Degree	32	9 (28.1)	14 (43.8)	9 (28.1)	8 (25)	3 (9.4)	12 (37.5)	6 (18.8)	1 (3.1)	5 (15.6)[3]	20 (62.5)[3]	1 (3.1)[3]	13 (40.6)[3]	13 (40.6)[3]	6 (18.8)[3]
No schooling	6	0 (0)	3 (50)	3 (50)	3 (50)	1 (16.7)	0 (0)	2 (33.3)	0 (0)	6 (100)[3]	0 (0)[3]	0 (0)[3]	5 (83.3)[3]	1 (16.7)[3]	0 (0)[3]

[1]p < 0.05 [2]p < 0.001 [3]p <0.0001 [Pearson Chi-Square]

Consumption preferences

In Table 5.3 can be seen that a large number of consumers indicated they purchased fruit (87.2%), cooked food and baked products (72%), cold drinks (67.3%), and sweets (43.8%) regularly. Peanuts (31.2%), chips/crisps (28.7%), fruit juice (28.5%), biscuits (23.9%), and chocolates (21.7%) were purchased to a lesser extent.

Table 5.3: Types of street food most frequently purchased

Foods	n	%
Fruit	977	87.2
Cold drinks	754	67.3
Crisps/chips	322	28.7
Biscuits	268	23.9
Sweets	491	43.8
Chocolate	243	21.7
Cooked food and baked products	808	72.1
Peanuts	350	31.2
Fruit juice	319	28.5
Other	49	4.4

In Table 5.4, is shown that consumers who indicated purchasing cooked food and baked (flour based) products, 42.1% paid between 20 and 30 ZAR, 24.9% paid between 10 ZAR and 20 ZAR, 10.3% paid less than 10 ZAR, 10% paid between 30 ZAR and 40 ZAR and only 1% paid more than 40 ZAR.

Table 5.4: Amount spent by street-food consumers on cooked food at a time

Amount in ZAR	n	%
<R10	114	10.2
R10 – R20	279	24.9
R20 – R30	472	42.1
R30 – R40	111	9.9
>R40	11	1

Almost (96%, n=1074) of consumers indicated that they would purchase healthier SF if these were available, while only 4% did not think they would do so (n=47). This indicates that there is a willingness to change. Data not shown.

An array of healthier food item options that were preferred by consumers are presented in Table 5.5.

Table 5.5: Consumers' healthy option preferences

Healthier food option	n	%
Milk or milk drinks	396	35.3
Yoghurt	476	42.5
Yoghurt and muesli	242	21.6
Yoghurt and fruit	369	32.9
Nuts	408	36.4
Fresh fruit juice	402	35.9
Fresh vegetable juice	233	20.8
Salad	232	20.7
Fruit	827	73.8
Fruit salad	226	20.2
Dried fruit	248	22.1
Peanuts and raisins	404	36
Cooked veg e.g. corn on the cob	370	33
Vegetable skewers	110	9.8
Fruit skewers	87	7.8
Baked potato	166	14.8
Whole wheat sandwich	163	14.3
Meat or chicken cooked with veg (not fried)	533	47.5
Veggie burgers	98	8.7
High fibre muffins	226	20.2
Pita bread with salad fillings	80	7.1
Wraps with healthy fillings	78	7

Of the consumers who indicated purchasing fruit almost 97% (n=1085) did so. While 84% (n=945) indicated that they purchase vegetables every day (data not shown). Almost 56% bought fruit 2–3 times per week, and 12.5% 2–3 times per month. Only 5.2% consumers indicated that they purchase vegetables every day. Most consumers (44.1%) bought vegetables 2–3 times per week or (34.2%) bought 2–3 times per month (Table 5.6).

Table 5.6: Frequency of fruit and vegetable purchases by street-food consumers

	Fruit		Vegetables	
	n	(%)	n	(%)
Everyday	306	(27.3)	58	(5.2)
2–3 times per week	627	(55.9)	494	(44.1)
2–3 times per month	140	(12.5)	383	(34.2)
Hardly ever	41	(3.7)	183	(16.3)

Nutrition knowledge

Fifteen nutrition-related questions were included in the consumer survey questionnaire having a total score of 15 points (Table 5.7). Questions asked pertained to fruit and vegetables; fat and oils; starchy foods; meat and milk; legumes and nut; salt and sugar. Scores were then grouped together, i.e. 0–5 out of 15 would indicate a low/poor score, 6–10 out of 15 would indicate an average score and a score of 11–15 would indicate an acceptable/good nutrition knowledge score. Most consumers obtained an average score (65%), 22% a low score and only 13% of consumers obtained an acceptable score indicating-good nutrition knowledge. Statistically significant differences were found between nutrition knowledge and age ($p < 0.05$) and education level ($p < 0.0001$) respectively.

Table 5.7: Nutrition knowledge scores of street-food consumers

Socio-demography		Nutrition Knowledge Score out of 15		
	Total	**0–5 (low)**	**6–10 (average)**	**11–15 (acceptable)**
Nationality	N	N (%)	N (%)	N (%)
South African	1062	236 (22.2%)	690 (64.9%)	136 (12.7%)
Non-South African	59	15 (25.5%)	40 (67.8%)	4 (6.8%)
Race				
Black	863	190 (22%)	560 (64.9%)	113 (13.1%)
Coloured	194	45 (23.2%)	127 (65.5%)	22 (5.1%)
Indian/Asian	1	0 (0%)	1 (100%)	0 (0%)
White	5	2 (40%)	2 (40%)	1 (20%)
Foreign	57	13 (22.9%)	40 (70.3%)	4 (7.1%)
Gender				
Male	623	147 (23.7%)	451 (72.3%)	25 (4%)
Female	495	104 (21%)	360 (72.6%)	31 (6.2%)
Age group (years)				
<18 years	23	7 (30.3%)[1]	16 (69.5%)[1]	0 (0%)[1]
18–24	217	45 (20.8%)[1]	140 (64.4%)[1]	32 (14.7%)[1]
25–34	420	99 (23.2%)[1]	265 (63.1%)[1]	56 (13.4%)[1]
35–44	289	59 (20.4%)[1]	194 (67.1%)[1]	36 (12.5%)[1]
45–54	122	27 (22.2%)[1]	82 (67.2%)[1]	13 (10.7%)[1]
55–64	36	11 (30.5%)[1]	22 (61.1%)[1]	3 (8.4%)[1]
≥65 years	13	2 (15.4%)[1]	11 (84.7%)[1]	0 (0%)[1]
Education				
Primary school	86	29 (33.8%)[2]	51 (59.3%)[2]	5 (5.8%)[2]
Some high school	424	109 (25.7%)[2]	270 (63.6%)[2]	45 (10.6%)[2]
Matric	456	85 (18.7%)[2]	304 (66.7%)[2]	67 (14.7%)[2]
Diploma	113	20 (17.7%)[2]	81 (71.6%)[2]	12 (10.6%)[2]
Degree	32	3 (9.4%)[2]	20 (62.4%)[2]	9 (28.1%)[2]
No schooling	6	2 (33.3%)[2]	3 (50%)[2]	1 (16.7%)[2]

[1]$p < 0.05$ [2]$p < 0.0001$ [Pearson Chi-Square]

5.4 Discussion

The consumer population in this study, in many aspects reflect the profile of consumers in the published work of Martins (2006), profiling consumers in Gauteng, South Africa. In the present study, most consumers were black, male, single, and most had either some high-school education or matric. The consumer profile in Gauteng was described as mostly black (98.9%), single (50%), male (88.4%), between ages 26 and 35 years. Most (64.1%) of these consumers had some high-school education, with only 8% having a post high-school qualifications and university degree (Martins, 2006). In our study, there was a much greater age range (<18 – 65+ years) with most consumers falling between the ages 18 and 44 years (83%).

However, more recent literature of SF consumers showed that black Africans are the most regular buyers of SF, with nearly one out of five (19%) consuming SF at least twice a week (Steyn & Labadarios, 2011). In our study, it also transpired that most consumers purchased SF almost every day or two to three times per week, with most consumers being blacks.

Literature suggests that SF consumers are mostly young, single, unskilled workers, with a low level of education, and lacking in hygiene knowledge (Faye *et al*., 1998, Rheinlander *et al*., 2008).

In the SF consumer sample, most of them made use of public transport, a large number purchased SF near their work place and most consumers earned less than R3000 a month. This confirms the findings in the literature, which states that people who have to work long hours, travel extensive distances, and have very little income, SF are an inexpensive alternative when everyday pressures, i.e. time, food prices, fuel, cooking equipment, and transport, are taken into consideration (Winarno & Allain, n.d.; Steyn *et al*., 2013). The street-food vendors are conveniently situated, either in the living areas, near the workplaces

or en route of thousands of commuters, and they provide a source of inexpensive, convenient and comparatively nutritious food (Lues *et al*., 2006).

Even though most consumers earn less than R3 000 per month, over half of them spend between R300 – R999 on SF per month, which is a significant amount of money (± a third of their income). These results echo the findings in earlier studies, indicating that in developing countries, households which fall into the lower-income category, spend up to 50–70% of household earnings on SF (Dawson & Canet (1991). This also applies to school-going children in lower-income groups, who may be given money to buy breakfast and/or lunch instead of a packed lunchbox or snacks (Ag Bendech *et al*., 2000, Nago *et al*., 2010; Mwangi *et al*., 2001). Thus, SF potentially contribute significantly to the diet of adults and schoolchildren (Steyn *et al*., 2013). Monetary needs also leads many women to swap traditional time spent in the kitchen (preparing food) on income-generating activities (Cohen, n.d.).

Eating meals and snacks outside the home, predominantly in urban areas, seems to be a growing part of the urban lifestyle (Cohen, n.d.). Bhowmik (2005) also noted that the fact that prices of SF are low, enables the urban poor to benefit from these. Furthermore, consumers of SF hail from various socio-economic classes, and benefit from cheap, culturally appropriate, often nutritious meals (Winarno & Allain, n.d.; Steyn *et al*., 2013).

Chakravarty and Canet, (1996) concluded that SF could possibly be the most affordable method of finding a nutritionally well-balanced meal time option outside the home environment. However, they add that the consumers should be educated and capable of choosing a healthy meal. Unfortunately, in the present study most consumers only had an average score pertaining to nutrition knowledge, so whether they are able to choose the better/healthier option is questionable. Consumers indicated buying cold drinks and sweets regularly. Other items people purchased frequently, were peanuts, chips/crisps, fruit juice,

biscuits and chocolates. A large number of consumers indicated purchasing fruit. Most consumers indicated buying cooked SF. Ninety-six per cent of our consumers indicated that they would purchase healthier SF if these were available.

Conclusion and recommendations

Various studies have agreed that SF have the potential to provide consumers with excellent value and is key to their nutritional status, provided these are easily accessible; affordable; hygiene conditions are acceptable; and the nutritional value of the foods are high (Winarno & Allain, n.d., Cohen, n.d.; FAO, 1997; Steyn *et al*., 2013). An important point as stated in the discussion, is that consumers must be well-informed to make these healthier choices (Chakravarty & Canet, 1996).

From the discussion above, three things are clear, people consume SF often, they spend a significant amount of their income on SF, and they are open to buying healthier options should these be available for purchase. Thus, one could conclude, that should healthy SF be available at a reasonable price, people would access these.

Street-food vendors should thus be encouraged to sell healthier food items. This could be achieved by educating SF vendors in food and nutrition and providing them with healthier food option ideas.

Chapter 6

Street-food vending in Cape Town: The government officials' perspective

6.1 Introduction

To achieve the objectives of this phase of the study and understand all the anomalies at play in SF-vending operations in Cape Town, it is important to understand the perspectives of public sector officials. For the purpose of this phase of the study only officials from the public sector level closest to street vendors, i.e. local government, were interviewed. Therefore, in this Chapter, the qualitative findings from interviews with participants from two departments in the City of Cape Town, i.e. the Department of Environmental Health and the Department of Economic Development is presented. These two departments were the only departments identified as being directly involved with SF vendors.

As an example, on the City of Cape Town's website, (https://www.capetown.gov.za/EN/CITYHEALTH/ENVIROHEALTH/Pages/EnvironmentalHealth.aspx), it is emphasised that environmental health practitioners focus on informal food handlers' health education and the promotion of specifically good hygiene food handling. The Department of Economic Development, for instance, hosts the Small Business Support office, in which SF vendors could potentially tap into. This office also provides assistance regarding trading permits, etc. as stipulated by the City of Cape Town's Informal Trading Plan (personal communication); (https://www.capetown.gov.za/en/PublicParticipation/Pages/ProposedInformalTradingPlanCapeTownCBD.aspx).

Objective

1. To determine the existing street-food vending regulations and/or policies in the City of Cape Town and surrounding areas; and
2. To gain insight into the SF-vending operations from a regulatory perspective.

6.2 Methodology

6.2.1 Research design

A qualitative research design was chosen, as this allows the researcher to use an interpretive, naturalistic approach to the area of research

In this study, qualitative methodology was used to understand and explore the perceptions and opinions of key role players in the SF-vending business. The information derived from data collection assisted the researcher in developing a clear understanding of the key elements and their relevance to the SF-vending operation to develop a suitable multi-level SFVM that would prove to be sustainable over time.

6.2.2 Study population

Key informant interviews and focus groups were conducted with managers from the Departments of Environmental Health as well as Economic Development of the City of Cape Town (provincial government officers/managers) to elicit a broader view on the SF-operation in the City of Cape Town. This would enable the development of a more comprehensive SFVM which is the overall aim of this study.

6.2.3 Data collection

Data collection took place from November 2014 to February 2015. The methods employed included individual interviews and focus group discussions. Document review was employed as an additional method of data collection. Interviews and focus group discussions with

Environmental Health and Economic Development officers took place at the South African Medical Research Council campus in Parow.

All interviews and focus groups were conducted in English by the researcher, who is fluent in English, as this was the language medium most suited to groups of mixed languages. Interviews and focus groups were conducted face-to-face and audio-recorded. Interviews and focus group discussions allowed for open discussions, thus allowing respondents to convey their own perspectives (Bles & Higson-Smith, 2000). Two individual interviews and two focus group discussions were conducted with Environmental Health and Economic Development officers.

Individual, semi-structured interviews

Individual interviews were conducted with Environmental Health and Economic Development managers. A semi-structured interview schedule (Appendix 4), was used as a guide to steer the interview. The interview schedule was checked by senior members of the project team and revised before data collection commenced. Both key informants spoke freely and openly allowing for rich information.

Focus group discussions

Two focus group discussions were held with officers from the Departments of Environmental Health (n=10) and Economic Development (n=12). The ideal situation would have been to have four groups of six to eight people instead of two such big groups. Unfortunately their schedules did not allow for this. When groups are too big a tendency for the group to section exists. Some participants are unable to raise their opinion as there is not sufficient pause in the conversation for the individual to talk (Kruger & Casey, 2009). Fortunately, the participants in these groups were familiar with each other and gave each other sufficient opportunity to talk.

Document review

Document review was employed as an additional method of data collection. Documents reviewed were mostly applicable national regulations and provincial bylaws pertaining to street vending. Documents from websites pertaining to street-vending business guidelines were also searched.

6.2.4 Data analysis

The researcher familiarised herself with the data by reading each transcript several times and then used the Computer-Aided Qualitative Data Analysis Software (CAQDAS) package Atlas ti 7.5.7 to assist in managing data. The four transcripts were loaded onto Atlas ti 7.5.7 as four primary documents. The researcher then commenced the coding process by reviewing the transcripts and allocating codes and giving them a concise label (open coding) (Babbie & Mouton, 2001). After consultation with supervisors, the researcher then began reviewing all codes and began to merge and delete codes, this was done a few of times (Table 6.1). The researcher then began grouping quotes under predetermined themes with summarising sentences, thus placing them into categories. Codes and their connected quotations were retrieved in an effort to explore patterns or tendencies.

Table 6.1: Analysis process followed

Thematic Analysis Process			
Predetermined Themes	**First cycle coding**	**Second cycle coding** (recoded/re-categorised)	**Categories within themes**
Vending operation/business related issues	Allocated vs. non-allocated zones	Business Act/ license	**Regulations**
	Applicable legislation	Business plan/guidelines	**Business related issues**
	Application process	Certificate of acceptability (COA)	
	Business Act 1991	Concession letters	
	Business license	Financial assistance	
	Business license home base accepted as premises	Informal trading plan	
	Business marketing	Legislation/regulations/bylaws	
	Bylaws of the city	Permit/trading zones	
	Certificate of acceptability	Security of tender	
	COA requirements	Storage	
	Concession letters	Waste management	
	Confusion licensing/permits		
	Finance assistance		
	Formulation of informal trading policy		
	Informal trader law enforcement agency		
	Informal trading plan		
	Legislation		
	Legislative requirements		
	Might not require license/COA		
	Non-trading zone		
	Not applicable legislation		
	Penalty for non-payment permit		
	Penalty no permit		
	Permit		
	Policies vs. legislation		
	Property owner's permission		
	R962		
	R962 diagram		
	R962_non-compliance		
	Revision of policy + bylaws		
	Security of tender		
	Trading from home		
	Trading plans		
	Traffic bylaw		
	Various departments involved		
	Waiting period – Application		
	Waste management		
Nutrition related issues	5 keys to nutrition	Consumer education	**Food/nutrition/health**
	Challenges to selling healthy food	Culture	
	Child nutrition	Food/nutrition/health	

	Compliments salt reduction campaign	Healthy = expensive	
	Consumer education	Vendor education/training	
	Culture		
	Healthy food = expensive		
	Healthy food focus		
	Satiety factor		
	Urban agriculture		
	Vendor education		
	Vendor initiative vs. being prescriptive		
Hygiene-related issues	5 keys to safer foods	Environmental health/hygiene	**Environmental health/hygiene**
	5 keys to safer foods training	Vendor education/training	
	EHP duties		
	Food sampling		
	Health and safety		
	Hygiene practices		
	Inspections		
	Oil usage		
	Site visits		
	Temperature control		
	Training offered		
Vending cart-related issues	Cart requirements	Vendor cart	**Vendor cart**
	Cart challenges	Waste management	
	Cart example		
	Mobile cart business example		
	Mobile facility		
	One size fits all not practical		
	Transporting cart		
Vendor/vending challenges	CCT's infrastructure challenge	Facilities built not used	**Challenges within SF operation**
	Facilities provided not used	Financial assistance	
	Law enforcement complaints	Mobile vending/seasonal trade	
	Occasional/seasonal trade	Storage	
	Prescriptiveness as a strategy	Vendor associations	
	Private storage arrangements	Vendor challenges	
	Security/crime/theft	Waste management	
	Storage challenge		
	Support city/municipality		
	Territorial wars		
	Vendor associations challenge		
	Vendor challenges		
	Vendor involvement		
	Vendors at clinics		
	Vendors at schools		
	Waste water		
	Weather – challenge		

Dependability

All the steps to ensure trustworthiness of data as described in Chapter 3 under the subject headings rigour, triangulation, credibility and reflexivity was followed in this phase of the study.

6.3 Results

6.3.1 Key informant interviews and focus group discussions

Five broad categories were identified through the analysis process, as seen in Table 6.1. These are, Regulations, Business related issues, Food/nutrition/health, Environmental health/hygiene, Vendor cart, and Vendor challenges within the SF operation. Below are results presented from most frequently occurring codes to the lesser occurring codes.

Vendor operation

Participants were asked about what they see as the most important aspects of the SF-vending operation. All codes that were extracted pertaining to the business operation of SF vendors, which were grouped together are presented in Table 6.2.

As can be seen in Table 6.2, the most attention given by participants was by far to the legislation, regulations and bylaws that the SF vendors have to adhere to in order to run a legally compliant operation. This was followed by discussions on the hygiene or environmental health aspects of SF vending. Food, nutrition and trading zones were also mentioned frequently by participants, with food and nutrition-related aspects only mentioned in the focus group discussions and not in the interviews with the managers. From the density of the codes presented in Table 6.2, it is clear that more robust discussions around the perceived integral elements of the business operations of street vendors took place with officials from the environmental health sector.

Table 6.2: Integral elements of the business operations of vendors as identified by participants

CODES	Environmental Health		Economic Development		Total
	Manager SSI	Officials FG	Manager SSI	Officials FG	
Business Act/license	4	5	0	5	14
Business plan/guidelines	1	3	0	2	7
Certificate of acceptability	2	4	0	4	10
Environmental health/hygiene	13	14	2	0	29
Food/nutrition/health	0	16	0	9	25
Informal trading plan	0	0	2	3	5
Legislation/regulations/bylaws	15	11	12	1	39
Permit/trading zones	5	5	0	15	25

Regulations: The Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (R962), was the regulatory aspect to which interviewees most often referred in the interviews and the focus group discussions. One key informant referred to this as, *"*R962 that is the main one that is the Bible". Another key informant explained that "…the certificate of acceptability (COA) is a regulation and has been promulgated under the food stuffs act". Participants explained that vendors selling cooked food have to be in possession of a COA requiring the vendor to comply with certain standards pertaining to health and safety. The COA is issued by the Department of Environmental Health, but before being able to apply for the COA the vendor would have to apply for a "hawkers meal trading licence" promulgated under the Business License Act (1991) at a cost of R10.

Participants also pointed out that in terms of the Informal Trading Bylaw of the City of Cape Town, no-one is allowed to trade informally on City property in a trading area without a valid permit. However, a key informant advised, "in 40% of the municipal area[s] you don't need a location permit". Therefore, a SF vendor potentially has to be in possession of three documents to operate legally.

Environmental health and hygiene: This aspect of SF vending was an obvious concern to officials from the Environmental Health Department. The importance of including health and hygiene aspects into a business model for vendors was discussed from various perspectives.

One participant referred to the importance of temperature control as being key, and in recognising the limitations that SF vendors' experience, the Department of Environmental Health deems the use of cooler boxes as cooling equipment acceptable.

> "But that is why we accept the cooler boxes, and so on. So if your product goes out of your home in the morning at 4 degrees Celsius, you have ice boxes and cooler bags and things like that, you can maintain it at a safe temperature, unless you are going to leave that bin open or that container open, or you going to open and close, open and close it, and things like that. So that is why I say that business model is very important". [Environmental Health Manager]

The participant also emphasised that vendors should possess the knowledge to conduct temperature control measures appropriately.

> "And then of course keeping things hot that is meant to be hot. Don't make the sausage 10 am this morning then it sits outside room temperature, 28 degrees in the centre of town and you only warming it up again to put it on a roll or something like that you know. Or salads and things like that and so on". [Environmental Health Manager]

Participants from the Department of Environmental health mentioned that SF vendors should at least receive a copy of the WHO's, Five Keys to Safer Foods, if not training too. The Environmental Health Manager noted that, "the five safer food [s were] developed for Africa and for every region they sort of took certain things under consideration. So this is really something that has been researched for South Africa. This particular one that we use".

> "We use five keys, that is one of the things that is everybody in the city, we adopt [the] World Organization['s] five keys that is what we preach". [Environmental Health official]

Environmental health officials attested to regular inspections of premises and food sampling of SF vendors.

> "Safety product, what we do is we also do random sampling as well like food sampling. It is easier to do it when you have fixed premises, for example, then you can go back and give the results like we have at Bellville that station we on a quarterly basis take samples there because we [are] struggling with the upgrade but in the meanwhile we trying to at least have sampling … Because you need to guard against food poisoning, so that is one of the things that can be used as well". [Environmental Health official]

Food, nutrition and health was also a concern to the key informants as can be seen from Table 6.2 and the quotations below. Most of the comments were participants' concerns about the unhealthy nature of food items for sale by SF vendors.

> "So they would sell anything from *koeksisters* [doughnuts] to sweets to toffee apples to vetkoek [deep fried bread] to what… and for many of those kids', parents don't give them they don't put in food for lunch so they would get money" [Economic Development official on vendors operating around schools]

> "Another sensitive area is your clinics… vendors are all around the fence and they sell, because now the patients is waiting, they wait in long queues so it's chips, it's cookies, it's 'Niknaks' all of those things and that is carrying into the facility as well" [Economic Development official on vendors operating around clinics]

> "A lot of the items that are sold by the street-food vendors are unfortunately not very healthy items, and it is not going to change on its own" [Environmental Health official]

One key informant felt that although unhealthy foods are sold and not the ideal, he is still not sure on how prescriptive one should be in what vendors can and cannot sell. Because when the vendor then does not make profit, who is to blame in this case.

"I in my mind, [I] haven't drawn that line yet. I absolutely understand cigarettes and school children, but to me where do you start drawing the line, what about somebody selling hamburgers where you fry it in oil that is also not healthy". [Economic Development Manager]

"So to me and then also if the business model doesn't work, whatever you are selling but it is there because the city have [sic] been prescriptive then who takes the responsibility when that person's model doesn't work". [Economic Development Manager]

Although business plans are not required when applying for your business license, COA or location permit, it should be encouraged and there is some support available for this key, informants said.

"We have a unit within economic development called business support and we refer people to do it through that, and then throughout the municipal area there are organizations which the City funds. We can provide that and that helps you develop your business plan, your business case, looks at various financial options so those models are available". [Economic Development Manager]

"The simplest of logs and the simplest of business plans, where do I buy my things and things like that. What do I do to keep it good? What remains of the stock that is left over tonight? Because meat and things like that does not go off, you can use it, keep it refrigerated and frozen and things like that. There's nothing wrong with using it the next day. But don't defrost it [and then] freeze it again. And the volumes that they need to get in and that is where people sometimes get into trouble. And the thing that you throw away is money. The moment that you throw away it is waste, it is absolute money". [Environmental Health Manager]

6.3.2 Challenges pertaining to the street-food vending operation

Codes pertaining to challenges in the vending operation are presented in Table 6.3.

Table 6.3 Codes pertaining to the challenges affecting the street food vending operation

CODES	Environmental Health		Economic Development		Total
	Manager SSI	Officials FG	Manager SSI	Officials FG	
Consumer education	0	13	1	0	14
Facilities built not used	0	0	3	0	3
Financial assistance	0	0	2	0	2
Healthy = expensive	0	0	7	0	7
Mobile vending/seasonal	1	3	1	0	5
Security of tender	0	0	1	0	1
Storage	1	1	1	3	6
Vendor associations	0	0	0	1	1
Vendor challenges	5	1	0	0	6
Vendor education/training	2	5	6	0	13
Waste management	0	4	0	0	4

The salient issues pertaining to challenges in the vendor operation were recognised as a lack of consumer and vendor knowledge pertaining to health and hygiene. This was directed towards the vendor practices and the consumer not 'asking' and thus not knowing any better.

"I think I mentioned it right at the beginning [of] your consumer education, you've got to really look at [this] because as the one thing is, the vendor also will turn if there is no profit" [Economic Development official]

"My other thinking, and it is a long way to get there, is surely what we should be encouraging. That [is] if a trader wants to then sell healthy food stuff we should be encouraging them. But, we shouldn't say you must sell healthy food but to say if you train them in education these are the better alternatives these are the better options and we would encourage. And then if people then like this lady who sells fruit and vegetables that is fine and there is another trader who is selling sushi that is fine, but again what do we do when we in some of your transport inter changes where the mind-set of the trader is saying, I will sell what the commuters want. Now, the commuters are not necessary

talking about healthy food, they want hamburgers and they want…" [Economic Development Manager]

"To me the approach would be two-fold, one is to educate the trader absolutely but one needs to also educate the community…" [Economic Development Manager]

The issue of healthy foods being expensive food came up in one individual interview several times, but not in any of the other discussions or interview.

"And then to me the frustration of the healthy food would be Woolworths or Checkers it is also more expensive than the…" [Economic Development Manager]

"No, no, but when you look at it when I've got a choice of buying sushi which costs R50 or go and buy a sandwich which costs R12, I will buy…" [Economic Development Manager]

The challenge of acquiring storage came up in all the discussions.

"The question of storage, it is personal/private storage arrangements. Most traders have engaged business for their private storing purposes. So they have to get out by a certain time, as obviously businesses must trade, so by 6/7 am. And then they must be in at a certain time as the business close for the day. Even though there might still be 'traffic' in Wynberg, Claremont, they then lose out on that business". [Economic Development Official]

"Irrespective of the design, the issue in my area is storage. I have a situation now where a trader stores her goods in a shop…" [Economic Development Official]

Other challenges were acknowledged in one interview and one focus group discussion. These pertained to crime and theft, because they are in such close vicinity to each other and also the lack of basic facilities were brought to light.

"…[W]hen people are complaining about crime and your safety issues is it… I can see their frustration and things like that, all of those things are nice to have. It would be difficult to operate where you do not have electricity, and so on, but then there are people who are running successful little businesses. That has actually gone in from tiny, tiny starts to bigger things. And have become good caterers and things like that, so it is a constraint, but it does not prevent people from trading". [Environmental Health Manager]

The issue of street vending being difficult to manage because of its mobility and seasonality came up in three of the four discussions.

"*Ja* look, I think that is the reality unfortunately. Because some of the constraints that we have, that the colleagues find is the fact that you have a very seasonal thing, and you have a very occasional sense. Occasional[ly], in the sense of urhm, with pension day, although with the SASSA thing I am not sure how that pans out now. End of month things, end of week things, lots of people actually operate on a Friday, Saturday, Sunday and things like that. And they spring up, some may operate for four, five, six weeks or two months and things like that and then all of a sudden they are no longer there, or whatever the case may be". [Environmental Health Manager]

"One of the other challenges that we have in terms of infrastructure, is the nature of street vending to be mobile for the opportunity so this year there might be passing of foot traffic in this area, next year for some reason it changes". [Economic Development Manager]

Waste management also appears to be a key issue when considering the vendors' operation.

"Did we include waste management?" [Environmental Health Official]

> "It's a big issue for us, especially what do you do with waste? So you've got to try and build in some… A waste minimisation strategy with your thing because people don't like to take the waste home". [Environmental Health Official]

Facilities that were erected by the City of Cape Town and not used by vendors was another contentious issue that came up in an individual interview.

> "At Philippi we built fruit and vegetable, I'm going to call it a market but we built the facility with the intention that it be a distribution point for the fruit and vegetable growers in the Philippi farm lands it didn't work. And I still don't know why it didn't work so we sitting with a problem we got a huge facility which is costing money but I think we've got 20 ripening rooms which is ideal for bananas and avos [sic] and mangoes and that I think we are using a third of it if we are lucky and the rest is being used for storage. And to me that's why I am talking about the challenges of the business model but the way I think we can address it is creating the opportunities and educating trading and what is available".

> "Now, we had a good example, but it is a sad case, where we built a fish market in Grassy Park and the business model and the numbers and everything worked out but that facility never took off so eventually we demolished that facility because it was just lying there and being abused by gangs [sic] and all that sort of thing. Because of that the city is very nervous about building something". [Economic Development Manager]

Cart requirements/suggestions

When key-informants were asked regarding a cart for SF vendors, a few themes emerged as can be noted in Table 6.4.

Table 6.4 Street-food vending cart considerations

CODES	Environmental Health		Economic Development		Total
	Manager SSI	Officials FG	Manager SSI	Officials FG	
Cart requirements	1	9	1	4	15
Cart challenges	0	0	1	4	5
Cart example	1	8	2	8	19

A lot of emphasis was put on the fact that any cart designed for vendors' use should comply with health and hygiene regulations as stipulated by R962 (Appendix 6). A challenge pertaining to the cart was identified as being a financial one, i.e. it might be too expensive for the average street vendor. Lack of storage was also seen as being a challenge. The key-informants were able to provide a number of examples of existing carts and initiatives that the researcher could explore in designing a proposed "ideal cart".

"I think the main thing is that gas thing and stuff like a cooling facility, the most important ones are usually your gas or whatever your preparation things [are] that you use and then your storage facilities. Your cool bags or cool facility, and something to wash hands. I think that is the main aspects of the preparation thing, that cold-chain stuff that cooling system and your cleaning system". [Environmental Health Official]

"You see what the people usually do, they put in something like a little washing basin thing like they do in a caravan with a 25 L or 20 L plastic can draining it down and one at the bottom where your waste water is going, which you can empty tonight, because that is what they usually do". [Environmental Health Official]

"Maybe what I could say regarding the cart, it is a very good idea but just looking at the financing. Have you may be looked at [whether] can the people afford this …" [Economic Development Official]

"…the units are fantastic on one side because if you've got a healthy looking unit it attracts people to buy and be selling healthy food even better. But there are [an] enormous amount of challenges around the units and the key of that is well to forget the finance, it costs money to build a unit but the storage and the ability so when operating at BTI [Bellville transport interchange] where do you store it?" [Economic Development Manager]

"I think the cart of the Cape Winelands will bring with it some answers to what you are looking for. They had a safe component in it. There is, I cannot remember if it is a tap or 25 L water container – clean water thing in whereby one can use the sink maybe to wash maybe your vegetables or whatever meat or anything and then at the bottom there is also an empty 25 L container to drain the actually. So it's a typical – an ideal model that really satisfies us EHP [environmental health practitioners] because it has all the components we are looking for and I think also has a space for them to label their stalls because our regulations R962 requires that if it is a stall that you are selling from then it must be clearly labelled with your name and everything". [Economic Development Official]

6.3.3 Hygiene standards

Pertaining to hygiene training or standards provided to the SF vendors in Cape Town, the "Five Keys to Safer Food" (Appendix 7) developed by the WHO and endorsed by the South African Department of Health appears to be the main document in use by the environmental health officials. Only the officials from the Department of Environmental Health discussed issues around the Five Keys to Safer Food as can be noted in Table 6.5. The five keys of safety covers the following aspects: keep clean; separate raw and cooked food; cook thoroughly; keep food at safe temperatures and use safe water and raw materials.

Table 6.5: Five Keys to Safer Food codes

CODES	Environmental Health		Economic Development		Total
	Manager SSI	Officials FG	Manager SSI	Officials FG	
Five keys to safer food	4	3	0	0	7
Five keys to safer food training	0	1	0	0	1

"Food safety. Five keys of safety, they are quite happy as far as that is concerned. Food covered, refrigerated, temperature control. Temperature control [is] very important for them, absolutely important". [Environmental Health Official]

"Training in this regard, we don't really [give training] but we try and get the hawkers through the five keys to safer food initiative. I know in Khayelitsha they have a nice thing going with the hawkers, they actually get them in from time to time, and actually train them and things like that. But it is not actually a pre-requisite for us". [Environmental Health Official]

Document review

In Table 6.6, the 13 regulations and bylaws and the source from which these were extracted that directly or indirectly affect SF vendors in the Western Cape Province is shown. The most of these regulations are laws of the Republic of South Africa, while a smaller number are City of Cape Town bylaws, and as such affects only those vendors trading within the Cape Town metropole and not necessarily those in surrounding areas.

Table 6.6: Regulations and bylaws deemed applicable for street vending

Regulations	Key aspect	Source
National		
The Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 (R962)	To control the sale and manufacturing of foodstuffs	https://www.capetown.gov.za/en/CityHealth/Documentation/Documents/Reg_Regulations_Gov_Gen_hygiene_Food_Premises.pdf
The Health Act 63 of 1977	Nutritional intervention/environmental conditions that constitute a health hazard	https://www.capetown.gov.za/en/CityHealth/Documents/Legislation/Act%20-%20National%20Health%20Act%20-%2061%20of%202003.pdf
The International Health Regulations Act 28 of 1974	To apply international health regulations	http://www.gov.za/sites/www.gov.za/files/Act%2028%20of%201974.pdf
The Liquor Products Act 60 of 1989	To provide for control over the sale and production for sale of certain alcoholic products	https://www.westerncape.gov.za/text/2003/liquor_products_act_no60_1989.pdf
The Abattoir Hygiene Act 121 of 1992	Maintenance of proper standards of hygiene in slaughtering of animals for human consumption	http://www.enviroleg.co.za/acts/Abattoir%20Hygiene/Abattoir%20Hygiene%20Act.pdf
The Agricultural Product Standards Act 119 of 1990	To provide control over the sale of agricultural products	http://www.nda.agric.za/doaDev/sideMenu/foodSafety/doc/Act%20119.pdf
The Animal Diseases Act 35 of 1984	To provide control of animal diseases and parasites	
The Business license act 71 of 1991	Laws regarding the licensing and carrying on of businesses/ Hawkers license	https://www.capetown.gov.za/en/CityHealth/Documents/Legislation/Act%20-%20Businesses%20Act%20-%2071%20of%201991.pdf
Local government		
City of Cape Town informal trading by-law 2009	City is responsible for "trading bylaws"/"markets"/"street trading"/"beaches" To promote social and economic development	https://www.capetown.gov.za/en/ByLaws/Promulgated%20bylaws/Informal%20Trading%20By-law.pdf
City of Cape Town: Integrated Waste Management Amendment By-law 2010	Waste management Littering/dumping/spillage	http://www.capetown.gov.za/en/ByLaws/Draft%20bylaws/Integrated_Waste_Management_Bylaw_13-JAN-2010_final_draft_Eng.pdf
City of Cape Town: By-law relating to community fire safety 2002	Fire hazards/fire safety equipment	https://www.capetown.gov.za/en/ByLaws/Promulgated%20bylaws/Community%20Fire%20Safety%20By-law.pdf
City of Cape Town: Traffic bylaw 2011	To control nuisances emanating from the operation of public transportation (vendors operating at transport interchanges, possible nuisance)	https://www.capetown.gov.za/en/ByLaws/Promulgated%20bylaws/Traffic%20%20By-law%202011.pdf
Regulatory Guidelines		
City of Cape Town: Guidelines for conducting a food vending business (hawking in meals 2000)	Stipulates requirements for running a street food vending business	http://web.capetown.gov.za/eDocuments/General_-_Operating_an_Informal_Food_Vending_Business_-_Guidelines_105200503949_245.pdf

6.4 Discussion

From the findings presented it is clear that SF vending should be guided by the national legislature as well as by provincial bylaws. Key-informants did, however, raise the challenges of seasonal and mobile trade making it hard to manage street vending, thus not being able to ensure that all vendors adhere to said bylaws and regulations.

Bhowmik (2005) proposed that to assist with the management of SF vending, municipalities should join forces with the police, the municipalities as the regulation formulators, and the police as the enforcers. In a study conducted in Calcutta, vendors shared the desire to adhere to regulations, even though they were unaware of stipulated food regulations and had no training in food and nutrition. The vendors appreciated the fact that in order for the SF sector to be acknowledged and licensed, they would have to comply with the specific regulations and guidelines as well as be open to inspection and food sampling (Chakravarty & Canet, 1996).

The requirement of a business plan was still encouraged by the government officials who were interviewed, although applying for licenses, etc., was not required as part of the plan. In a study conducted in Dhaka City, the vendors identified business operation and lack of business knowledge as key barriers to running a profitable business (Muzaffar *et al*., 2009). This lack of business knowledge could possibly contribute to the lack of financial assistance that is available to SF vendors. Vendors are usually denied any financial assistance from official/legal institutions, and thus have to depend solely on their social network for financial support if required (Bhowmik, 2005).

Environmental health and food and nutrition also received a lot of attention in the discussions with government officials as well as the need for vendor and consumer education and training. A study in Nairobi, also recognised a lack of training in food preparation and

hygiene practices, and recommended the institution of SF centres, with adequate facilities, training of SF vendors on hygiene along with setting up a code of conduct for the SF trade (Muinde & Kuria, 2005). However, in our study it was said that vendors did not utilise the facilities made available to them by the government. The reasons for this was not explored, but the location of the facilities could be a possible reason for them not being utilised.

In the discussions with government officials, the concept of a food-vending cart was explored as a plausible way to make some basic facilities available to the SF vendor.

6.5 Conclusion and recommendations

As Winarno and Allain (n.d.) said, there are volumes of literature that echoes the fact that the SF trade contributes significantly to the economies of the various countries, as is the case in South Africa (Mosupye & von Holy, 1999; Martins, 2006), however, the SF trade is merely tolerated and not supported. And this needs to be changed.

The SF-vending business as an informal employment sector has grown significantly in South Africa (von Holy & Makhoane, 2006; Martins, 2006; Charman & Petersen, 2013). This has been fuelled by the fact that the formal sector cannot grow fast enough to cater for all the nations' employment requirements (Martins, 2006; Stats SA, Census 2011). In a recent survey conducted on the informal economy of the Western Cape where over 1800 informal businesses were interviewed, it was shown that 40% trade in food and drinks, with most businesses (46%) making less than R1000 profit per month (Charman & Petersen, 2013). Evidence also suggests that most African street traders are 'survivalist' (subsistence) traders (International Labour Organization, 2003). Willemse (2011) echoes this by stating that street trading encapsulates a survival or coping strategy for the poor to escape hunger by generating a small income. In addition to the street trading being a source of income, it also contributes

significantly to the diet of numerous people living in developing countries, including South Africa (Steyn *et al*., 2013).

Street-food vendors, therefore, need to be supported and encouraged and not side-lined. The gaps in knowledge and practices need to be filled. To make the existing SF trade a more lucrative and profitable business for the vendor and the state.

Thus, it is recommended that a model with tools be developed to assist the SF-vending trade. The following are four possible components stemming from the research presented in this Chapter.

1. Basic business guidelines that includes information on permits and licensing could go a long way in making street vendors aware of the legal requirements of their business. Making them legally compliant and thus enabling them to be a 'better' candidate for financial assistance. A help-line run by the City of Cape Town could be a source of assistance to vendors who are starting up.
2. Basic guidelines in food and nutrition could assist vendors in appreciating the concept of having healthier items for sale. This could also contribute to their personal nutritional status. The FBDG should be made available to all vendors.
3. A food-vending cart with basic facilities, can possibly address the issue of government setting up huge facilities that might not be utilised by vendors in its totality. This may be something that the City of Cape Town could introduce with a pay-back scheme for eligible vendors.
4. The Five Keys to Safer Foods, already being used to make street vendors aware of hygiene practices when applying for their COA, has been identified and should be promoted more robustly. Training opportunities and simple education materials should be made available by the health authorities to assist in this regard.

Chapter 7

The development of street-food vending model

7.1 Introduction

The overall aim of this thesis is the development of a sustainable SFVM that encompasses good business practices with the sale of nutritious foods which are safe to eat. An evidence-based approach, i.e. 'systematically collected proof' (Niessen *et al*., 2000), was used to inform the development of this proposed model.

In Chapter 2, the literature presented indicated that SF vending as a business is becoming increasingly popular in developing countries and that this informal sector contributes significantly to the economy of the country. The SF-vending business is easy to enter; little capital and only basic facilities are required, no special skills or specified level of education is required, making SF vending an attractive alternative for job seekers (Winarno & Allain, n.d.; Martins, 2006, Steyn *et al*., 2013). At the epicentre of this business lies the vendor, the driver of this business. In order for us to understand and improve the SF vending business as a whole it was important that we understand the vendor, his/her business operation and his/her environment.

Thus, in Chapter 4 we presented the findings from the SF vendor survey to establish their current operational practices. The main findings of this Chapter indicated that SF vendors in Cape Town and surrounding areas are only making a minimal income. Furthermore, the types of food items sold by vendors, their nutrition knowledge as well as their hygiene practices were not ideal were revealed.

In Chapter 5, we presented the findings from the SF-consumer survey indicating that people consume SF frequently, and that they spend a significant amount of their income on these and that they are open to buying healthier options should they be available for purchase. Thus,

one could assume that should healthy SF be available at a reasonable price, SF consumers would access these.

In Chapter 6, we presented data obtained during individual interviews and focus group discussions with government officials pertaining to the SF environment in Cape Town. The key finding in this Chapter points out that the SF-vending business should be guided by the national legislature as well as by provincial bylaws.

The current Chapter will be presented in three parts. The first step being the integration of the survey findings and key informant data. Step two assessed the relevance of the integrated data and the resultant themes and evaluated the acceptability and practicability of the various components recognised in the previous phases of this study as it would fit into the proposed model by conducting focus groups discussions with SF vendors.

Step three comprised the development of the SF vending model.

The aim of this Chapter is thus to integrate the data obtained from objectives 1-4 (presented in the previous three chapters) to make recommendations for a sustainable SFVM.

7.2 Methodology

Step one – comprised the data integration of the mixed methodologies used in the previous chapters.

Step two – comprised a participatory action component

As the main focus of this part of the research study was to assess the proposed SFVM; focus groups were conducted with SF vendors to evaluate the acceptability and practicalities of the proposed model.

Data collection took place from September 2015 to 17 November 2015. Four focus group discussions took place at the Human Sciences Research Council in Cape Town and one took

place at a community centre in Mfuleni. Focus groups consisted out of 5-9 participants, with a total of 28, 20 females and eight males. All focus groups were conducted in English by the researcher herself who is fluent in English, as this was the language medium most suited to groups of mixed languages. A Xhosa co-facilitator was available when any translations were required for better expression by the participants. Focus groups were conducted face-to-face and audio-recorded.

The vendors also completed a short socio-demographic questionnaire.

A semi-structured focus group schedule (Appendix 5), was used as a guide to steer the discussion. The interview schedule was checked by senior members of the project team and revised before data collection commenced. Table 7.1 display the format of the focus groups.

Table 7.1: Format of the focus group discussions

Vendors Focus Group Format	
1. Power Point presentation – themes	A power point presentation of the main findings and integrated themes was presented and discussed with the vendors. Vendors were reluctant to break up into groups and felt it would be better to remain in the large group for discussion and deliberation.
2. **Power Point presentation – various components and elements**	Various themes points/tips were displayed on a power point presentation for easy reference, as the various guidelines were discussed. The participants were all given printed copies of the suggested guidelines/booklets to review and discuss.
3. Comments/critiques/concerns	Vendors were asked to discuss their opinions and concerns about the resulting components and guidelines, i.e. business, food/nutrition, hygiene, and the proposed vending cart

Data analysis

The four vendor focus group discussions were not transcribed. However, they were listened to a number of times before coding commenced. A pre-determined coding list was used to categorise information into relevance, acceptability, practicability, perceived challenges and suggested changes to the proposed SFVM. Process described in Chapter 3. Table 7.2 displays dependability checks followed.

Table 7.2: Steps taken to ensure dependability of data

Triangulation	This study was designed as a mixed–method study and thus inherently covers triangulation
Rigour	Being able to speak English fluently was the only eligibility criteria.
Reflexivity	It is important to note to the reader of this section that the focus groups took on the form of a workshop. Some aspects were new or just not thought about by vendors, so a lot of information exchange took place. Vendors left workshops empowered with certain bits of information for example, licensing and permit information. I think this exchange did not take away from the process but made it stronger in recognising the gaps in vendors' knowledge and being able to empower them with information, and being able to direct them to the support available to them.

Step Three – comprised the development of the SFVM. This was a qualitative process.

7.3 Results

7.3.1 Step One: Data integration

Data Integration

In this study, two cross-sectional, quantitative surveys were conducted to obtain a general understanding of the SF-vending operations from the perspectives of the SF vendor as well as from the SF consumer. Qualitative methodology was used to understand and explore the perceptions and opinions of key role players in the SF-vending business. The information derived from the mixed-data collection methods, assisted the researcher in developing a clear

understanding of the key elements and its relevance to the SF-vending operation in order to develop a suitable multi-level SFVM that would prove to be sustainable over time (Figure 7.1, Table 7.3).

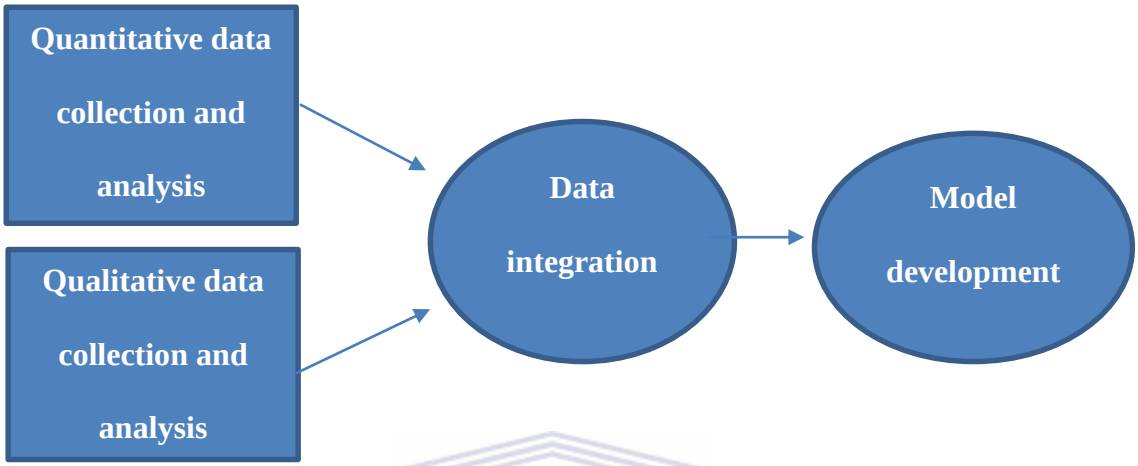


Figure 7.1: Mixed-method data integration

Table 7.3: Key themes from surveys and key informant interviews and focus groups in order to develop a street food vending model

Theme	Survey data	Key informant data
	Business/operational issues	
Regulations, bylaws [Licensing & permits]	• 63% of vendors had no form of licensing	• Business license "hawkers meal trading licence promulgated under the Business License Act (1991) at a cost of R10" • Certificate of acceptability "R962, that is the main one, that is the Bible" "…the certificate of acceptability (COA) is a regulation and has been promulgated under the food stuffs act" • Permit "40% of the municipal area you don't need a location permit"

Business operations	• Long hours/days worked (87% vendors work 6 days p/w) • Little profit made (67% made less R1 000 p/w) • 28% did not keep an inventory • Stock purchases: only 29% of vendors bought wholesale & only 21% bought straight from fruit & veg markets • 70% of vendors stored their stock at home • 60% of vendors store cash in their pocket • 22% of vendors called for financial assistance • 9% vendors would appreciate business guidelines	• Business guidelines "The simplest of logs and the simplest of business plans, where do I buy my things and things like that. What do I do to keep it good? What remains of the stock that is left over tonight?" "We have a unit within economic development called business support and we refer people to do it through that and then throughout the municipal area there are organizations which the city funds we can provide that and that helps you develop your business plan, your business case, looks at various financial options so those models are available" "Irrespective of the design, the issue in my area is storage. I have a situation now where a trader stores her goods in a shop…" • Vendor training "I think I mentioned it right at the beginning your consumer education you've got to really look at because as the one thing is the vendor but also the vendor will turn if there is no profit"
Food and nutrition		
Unhealthy food items for sale	• 46% sold packaged snacks (potato chips, chocolates etc.) • 21% sweetened beverages	• Food, nutrition and health "A lot of the items that are sold by the street food vendors are unfortunately not very healthy items and it is not going to change on its own"
Cooked food	• 28% of vendors had cooked food for sale • 72% of consumers purchase cooked food	"So they would sell anything from *koeksisters* [doughnuts] to sweets to toffee apples to vetkoek [deep fried bread] to what…and for many of those kids parents don't give them they don't put in food for lunch so they would get money"
Poor nutrition knowledge	• 15% of vendors had an acceptable nutrition knowledge • 12% of consumers had an acceptable nutrition knowledge	• Vendor training "To me the approach would be two fold one is to educate the trader absolutely but one needs to also educate the community…"
Intention to purchase healthier foods	• 96% of consumers indicated a willingness to purchase healthier food items should it be available.	

Hygiene and safety		
Hygiene practices	• 80% of vendors handled money and food without washing their hands in-between. • 87% of vendors selling cooked food had a poor cooked food handling score	• Hygiene standards [5 keys to safer foods] "We use five keys that is one of the things that is everybody in the city we adopt world organization five keys that is what we preach". "Actually interesting to note; the five safer food was developed for Africa and the re-, for every region they sort of took certain things under consideration. So this is really something that has been researched for SA. This particular one that we use". • Vendor training "Training in this regard we don't really but we try and get the hawkers through the five keys to safer food initiative. I know in Khayelitsha they have a nice thing going with the hawkers, they actually get them in from time to time, and actually train them and things like that. But it is not actually a pre-requisite for us".
Vending cart (to attempt bridging the gap between the lack of facilities)		
Lack of basic facilities	• 69% of vendors mentioned the lack of basic facilities such as water and electricity • 16% had access to electricity or gas • 11% had access to a stove • 8% had access to cold storage	• Cart requirements "Irrespective of the design, the issue in my area is storage. I have a situation now where a trader stores her goods in a shop…" "I think the main thing is that gas thing and stuff like a cooling facility, the most important ones are usually your gas or whatever your preparation things that you use and then your storage facilities. Your cool bags or cool facility, and something to wash hands. I think that is the main aspects of the preparation thing, that cold chain stuff that cooling system and your cleaning system".

7.3.2 Step Two: Relevance, acceptability and practicability of the integrated themes as these would fit into the proposed model/tools

Socio-demographics of participating vendors

A total of 28 (Table 7.4) SF vendors took part in the focus group discussions. There were more female (78.6%) than male (21.4%) vendors in these groups. Two of the focus groups consisted of only female vendors. Four group discussions with between five and nine participants were held. None of the participants that partook in the focus group discussions had participated in the vendor survey of 2013.

Table 7.4: Socio-demographic profile of street-food vendors who participated in focus group discussions

Characteristics	n	%
Sex		
Males	6	21.4
Females	22	78.6
Age group (years)		
18 – 24	2	7.1
25 – 34	5	17.9
35 – 44	9	32.1
45 – 54	11	39.3
55 – 64	1	3.6
Nationality		
South African	28	100
Race		
Black African	27	96.4
Coloured	1	3.6
Location		
CPT Upper Deck	14	50
Mfuleni	14	50
Marital Status		
Single	12	42.9
Married	12	42.9
Separated	1	3.6
Divorced	1	3.6
Widowed	2	7.1
Highest level of Education		
Primary school	3	10.7
Some high school	16	57.1
Matric	8	28.6
Diploma	1	3.6
Years of trade		
Less than a year	3	10.7
2–5 years	8	28.6
6–12 years	9	32.1
13–26 years	8	28.6
Reason for starting business		
Family business	4	14.3
Unemployed, needed an income	16	57.1
Wanted to start own business	5	17.9
Total	28	100

Perceptions of the vendors on the themes and their components to be included in the street food vending model

All participants in the four focus group discussions agreed to the relevance, acceptability, and practicality of including the components, Business and operational issues, Food and nutrition, Hygiene and safety, and Basic facilities, in a SFVM, as identified in the previous step. In the following section, the perceptions of vendors on the components of the four main themes, as reflected during the group discussions are presented and discussed.

Business and operational issues

Table 7.5 presents some of the reflections and ideas that vendors shared concerning the business-related themes and components proposed for the SFVM.

Table 7.5: Vendors' perceptions of the proposed business and operation's component of a street-food vending model

Theme	Component	Supporting quote
Business/ operational issues	Regulations, bylaws [Licensing & permits]	"I believe the department did come and ask for this er food license, but the time they give us the shop, they never told us you have to have before you sell. I don't know how we are going to get those certificates now".
		"They actually came to us and asked for food license. When you give someone a kiosk and a key you supposed to give food license. But they never did that, so what are they taking us for? They think that we are stupid, we are not stupid".
	Business plan/guidelines (marketing)	"Basically when I started out I didn't do thorough research of what needed to be done…I don't really know the ins and out".
		"Just do thorough research don't just go in before you know what the challenges is and when does the business pick up. Like she said some days are better".
		"Make it nice, can you do it yourself? A menu maybe, or an umbrella, everything must just look attractive".
		"I give then a smile when they come to my place. I keep my place clean and become talkative so that they can come familiar".
	Business operations (stock/inventory and storage)	"We do not have money to stock up a lot of stuff. And we do not even have space".
		"Cos I can't buy more stuff. Maybe I buy a hamper of vegetables and business is not good then the potatoes rot. And that is a loss. So it is better to buy everyday".

	"If we do have the money then we buy in bulk, because it is better for all of us. But that is only if there is money".
	"You know what I like, I did not think of what you tell us, to take our money together, you know"
	"Log books…yes…books".
	"Today business is good, tomorrow it's bad, so how do you count R120?"
Financial/and other support available to vendors	"Must you be registered?"
	"Do you have to pay back the financial support?"
	"So is there some financial support? If I want to start a business and have no money?"
	"But I think a lot of us do need training when it comes to consisting of how to go about your business. Even your money, how to because some of us make money, tomorrow you must give it out again. You must buy the same stuff, and so it goes on and so it goes on..."

The inclusion of licensing and certificate of acceptability seem to be important aspects to include in a business and operational component of the SFVM, as most participants were not in possession of any form of licensing and were keen to know where to go, the process involved, and the waiting period. Vendors commented on the fact that inspectors do come around and ask for a food license, but do not tell them how to go about the process of applying. In a study in Cameroon, which attributed to the lack of certification of SF vendors on the nonexistence of a proper regulatory policy, suggested that amidst the fast-growing SF sector, it is of great importance for the urban council to make the SF vendors an essential part of local plans "to encourage a competitive modern urban delivery system" (Acho-Chi, 2002:137).

The group discussions also show that business guidelines are considered important by the vendors and that they liked the idea of doing research before starting a business. As can be noted in Table 7.3 in the previous section, 57% of the vendors that participated in the

discussions started their business because they were unemployed and needed a means of income. So they did not give much consideration to the facts and challenges involved in SF vending, they simply seized the opportunity. However, in retrospect they recognized that research beforehand might have been very helpful, particularly in terms of location, safety and foot traffic.

Another element that sparked key interest for vendors was the financial considerations. One vendor felt strongly that one should save money before starting a business, saying: “If I can just say to save, because there is nowhere to go for financial support”. Everyone was keen to know whether there really is financial support available to vendors and what the process involved.

In terms of buying foodstuff wholesale, there were things that the proposed guidelines did not consider. Such as that vendors do not have money to buy wholesale, as their income varies. Storage is an issue. Also spoilage that occurs should a vendor buy in bulk and then the business going through a quiet period. Vendors were, however, very open to the idea of starting a vendor-purchasing club, putting money together, buying wholesale and saving in this manner. Having never considered something like this before.

In terms of attracting clientele, most vendors rely on rapport with their clients. Also regarding general look and feel of the business operation, being clean, welcoming and attractive.

The participating vendors, although they kept logbooks, they did not strictly adhere to these. As they were of the opinion if the business is not doing well there is no need to keep a log.

The comments and reflections above, attests to the importance of a business component in a model that wishes to facilitate the SF-vending operations. This component should consider guidelines in terms of laws and regulation, basic market research, financial implications and available support, other operational issues such as stock purchasing, storage, etc.

Food and nutrition

The discussion on the nutrition theme and components invited some scepticism from vendors as is reflected in the quotations in Table 7.6.

Table 7.6: Vendors' perceptions of the proposed food and nutrition component of a street-food vending model

Theme	Components	Supporting quote
Food and nutrition	Unhealthy foods (Fat, salt)	"But then you get your customer also that like their fatty food and say give me that extra fat or whatever".
		"We have all kinds of vegetables like your salad, your cucumber and your lettuce, we put all these things"
		"I go through mayonnaise like it is hot chips because people love mayonnaise"
		"I don't think people will like it, I am sorry to say but we have been in this food, we know what people like already, they do not like healthy foods, do not even talk to them about healthy foods"
		"At least my customers they are very health conscious so, they'll always tell me don't put in salt or…"
	Cooked food	"Yes it is possible to cater for different kind of people"
		"So maybe starting to use this pamphlet [booklet] you gave us today, there will be a change. With your support as well. Coming to visit us and checking, what we have promised you".
		"If we can have something we could use for instance to cook, for instance to cook with less salt"
	Poor nutrition knowledge (portion size)	"Ja we also think about healthy, but our customers they normally see the size, how big is your plate".
		"If you try to put less food, you get a fight"
		"You might cook healthy food, but it might be small for them"
	Intention to purchase healthier foods	"Come to think of it a lot of people know this, you get a lot of, at least my customers they are very health conscious so, they'll always tell me don't put in salt or…"
		"Because there are some of the people there, yes they say they don't want fat, they don't want this. And healthy food is good".

Vendors were of the opinion that SF consumers would stay clear of anything healthy. However, on the other hand, most vendors also said that they do in fact have consumers that do not want fatty and/or salty foods. Which reflects two types of consumers; those who are conscious of what they consume and those who are either not conscious thereof, or do not consider this important.

Vendors were open to try healthier ways of preparing foods and engaging in the tips provided. But also indicating that they might need some support in cooking more healthily.

The findings above indicate an awareness of health, food and nutrition among the vendors and 'some' consumers. However, a big gap or fear exists as to having healthier food options for sale.

Portion size is another great obstacle identified, as consumers want value for their money and the vendors want to retain their clientele. So a strategy to bridge the nutrition gap would be required to not only improve nutrition knowledge of vendors and consumers, but also to create enabling environments and making healthier choices possible.

Hygiene and safety

A few comments around the hygiene components are reflected in Table 7.7.

Table 7.7: Vendors' perceptions of the proposed hygiene and safety component of a street-food vending model

Theme	Component	Supporting quotes
Hygiene and safety	Hygiene practices (5 keys of safety)	"I worked at Pick and Pay before I joined my mother, it is called the golden book, so that is why I know about it."
		"CPUT. It was a workshop." [was not a vendor then]
		"There in my work place. In the container I am renting"
	Training	"No training, I thought today this was the training."
		"They brought a drum and showed how to wash hands and clean."
		"But we don't even have anything, we don't even have…"
		"No she does not give us anything."

Most vendors were not familiar with the Five Keys to Safer Foods, which was identified as an integral part of environmental health by the environmental health officials, as mentioned in the previous Chapter. Only three vendors had seen these before; one at her previous workplace, one has this in the container that she is renting, which was in the container when she started renting, and the third vendor learnt about these at a workshop presented by Cape Peninsula University of Technology. Only two vendors recalled receiving training with regards to hygiene, in 2008.

The reflections above clearly indicate a gap in hygiene knowledge and training, which would be the key in improving hygiene practices, which were identified as not ideal in Chapter 4. Since the 5 Keys to Safer Food was identified as the guideline, specifically developed for South Africa, and is endorsed by the DoH, they should be made readily available to SF vendors. Training should also be provided periodically.

Basic facilities

A vending cart to bridge the gap in the lack of basic facilities was a proposal which emanated from the research findings. A recommendation by a study conducted in Kumba, Cameroon, suggested the introduction of suitable modern preservation technologies, e.g. affordable refrigeration and heating units which would enable the storage and reheating of leftover foods, correspondingly. As food losses, owing to low demand and/or poor quality, were found to be a common occurrence. Furthermore, with reliable safety and storage facilities, the mobile SF vendors would be able to better their incomes. (Acho-Chi, 2002).

In Table 7.8, comments and critiques on this component is presented.

Table 7.8: Vendors' perceptions of the basic facilities component of a street-food vending model

Theme	Component	Supporting quotes
Basic facilities	Vending cart (as a bridge the gap between the lack of facilities)	"I don't think it will work for me. I think this will work for someone that is just starting". "It can work. It can make a difference". "When we can see it practically. At least if we can see it we can comment (willingness to pay or it)". "I think it can help us. Sometimes we have football at the back, I can go there to make special food". "Depends on the payment terms. It would be a good idea to buy, but we would have to know the payment terms". "A problem I see most people especially those starting a business, we always have is that of transportation, so if you have to take that now with, it is going to be a problem as well. And more especially the business, who is going to see to it, and you are going to have to pay that person". "To keep it in storage". "I see you have fresh water and refuse, the problem with those things where it lies now, they look at you, while you serving food you have to clean up some other stuff, then you have to throw it somewhere else. But it depends now, winter time you can survive, but in summer time you will find it is quite a lot of flies now. And the things are here and there are no drainages as well. This will keep it maybe for 7, maybe 6 hours. So that might just be the challenges you come in and that may also effect the business on its own. Lots of flies, stuff like that and... They will ask you quite a lot of things because of the drainages and stuff like that. So it will be easier, but maybe not easier, because where are you going to dump your stuff, then this standing water that you use to clean, where at the end of the day will you dump it".

Vendors thought that the cart could be an asset for someone who is starting out, not necessarily for someone who is already operating with a container. Or they saw it as an addition to their container. When it came to financing, they were very wary. They first wanted to see the final product as well as wanting to be informed about the terms of payment. Vendors also had some concerns around the vending cart pertaining to the storage and its transportation as well as to the refuse container on the cart attracting flies.

This proposed component would require further exploration and piloting in the field, before additional recommendations can be made.

This second step in the process of developing, proved to be extremely useful. Vendors agreed and received all the components well. They could identify what would work for them, and they could reflect on what would have helped them when they initiated their vending operation. Thus, validating the concepts identified in the previous chapters, as these would feed into the SFVM.

7.3.3 Step Three: Developing the street-food vending model

Model development

Figures 7.2 – 7.3 depict the process that was followed in developing the SFVM within the socio-ecological theoretical framework.

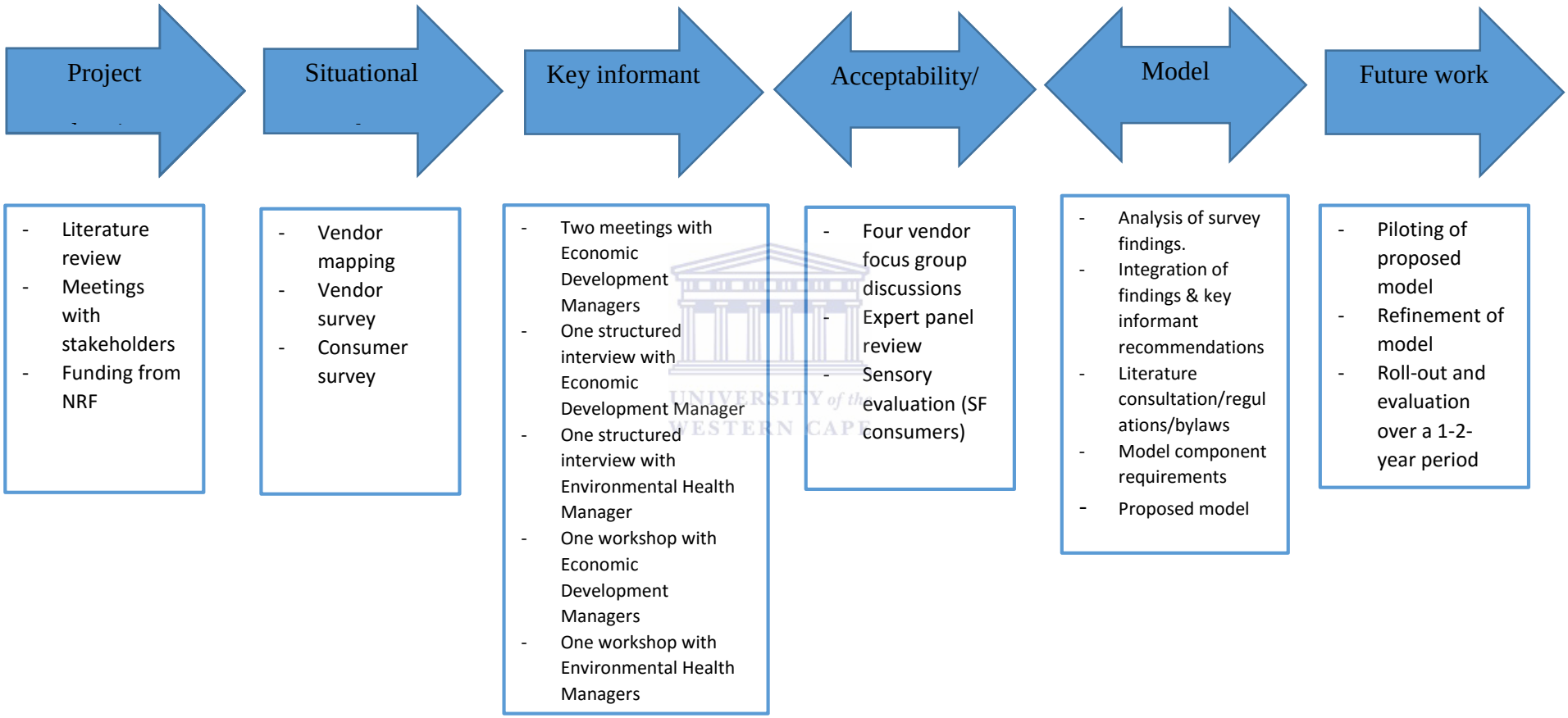


Figure 7.2: How the various data sources fed into the street-food vending model development

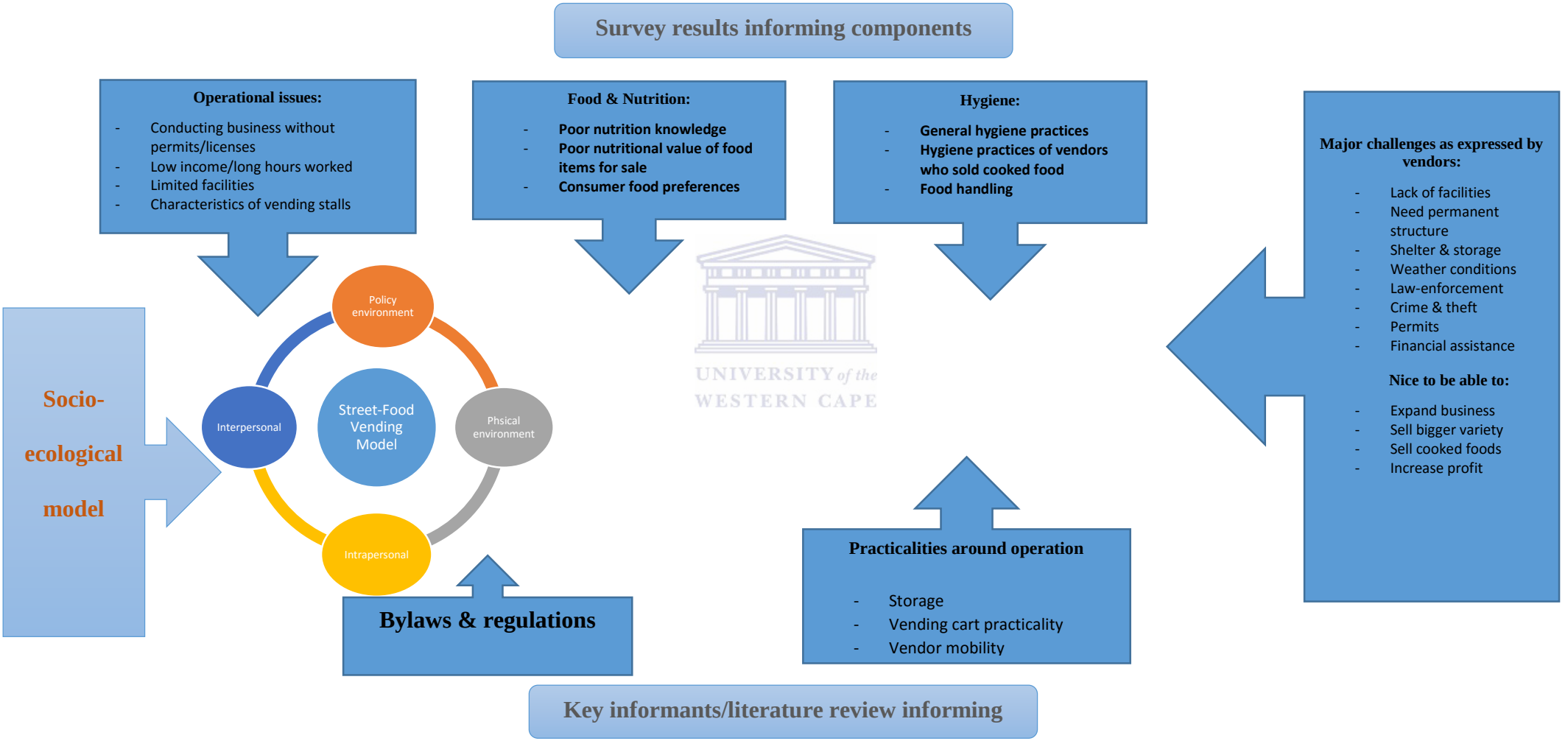
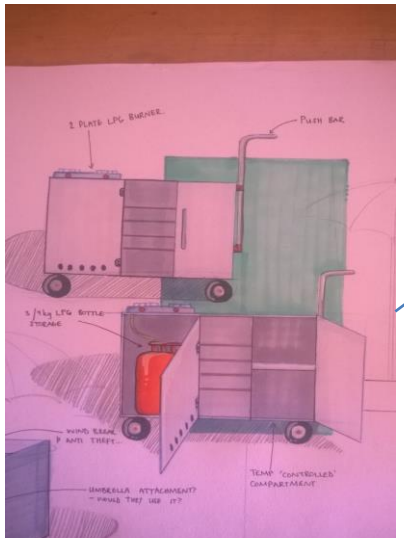
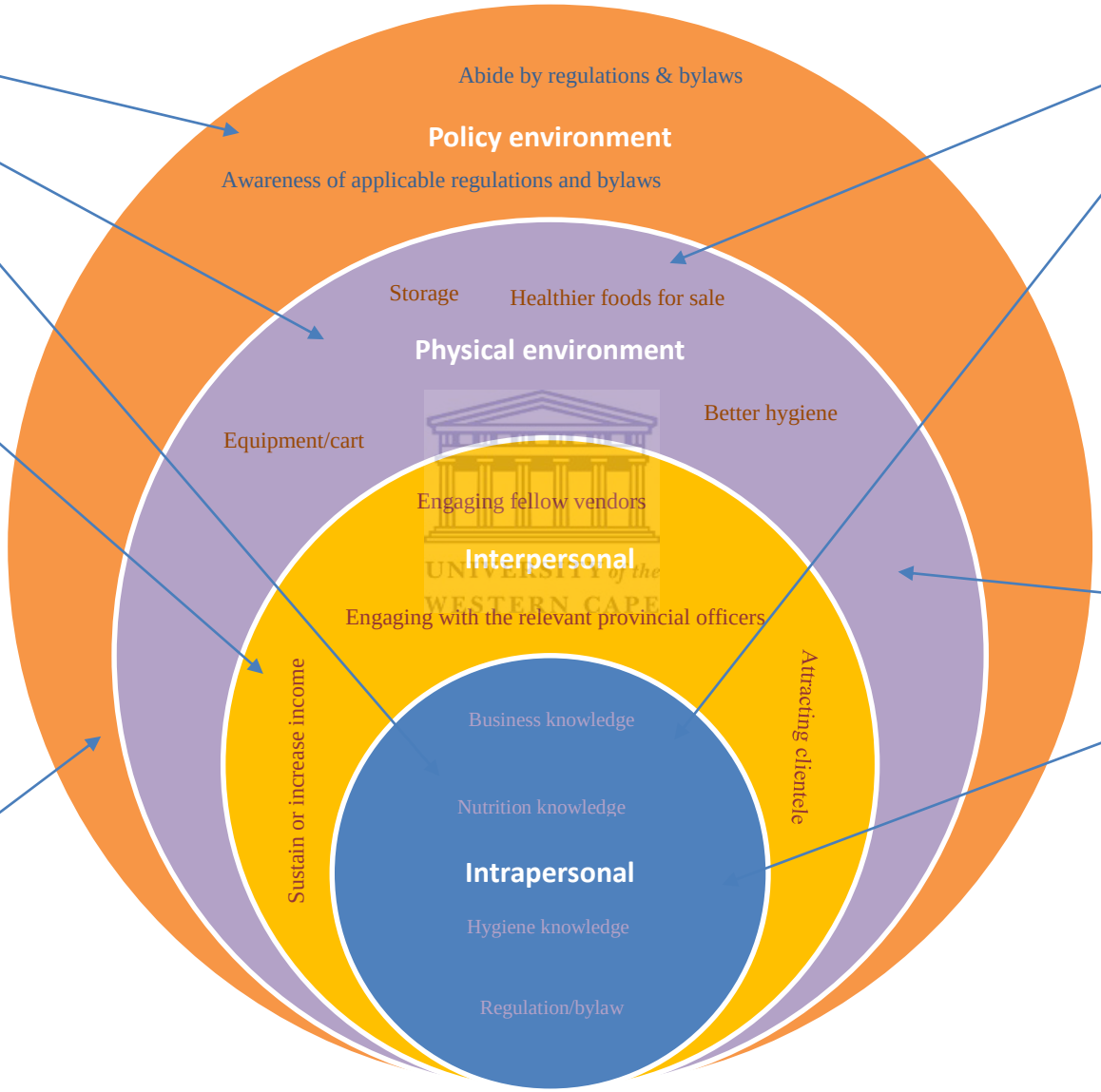


Figure 7.3: How the data sources informed the street-food vending model components

Business guidelines

- Do research
- Start-up finance
- Choose the type/s of foods to sell
- Contact the department of economic c development to find out what laws apply to street vendors
- Obtain required license/certificate for operating
- Vending cart/unit/stand
- Get a storage area for your inventory and your cart
- Buy wholesale
- Attracting your clientele
- Promote your business
- Keep log books





Food & Nutrition guidelines

- The South African food-based dietary guidelines
- The meaning behind a meal
- Meal times
- Portion Sizes
- Healthy sandwich Ideas
- Healthier South African popular dishes (from the Cooking from the Heart Recipe Book)

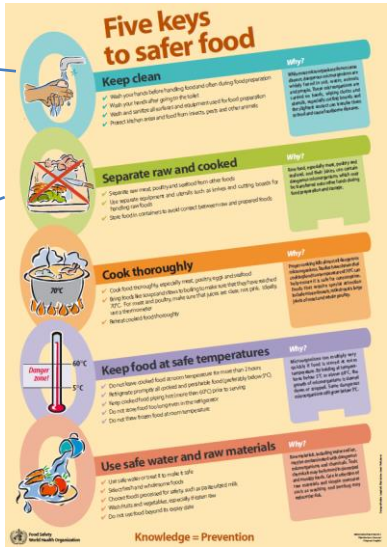


Figure 7.4: The proposed street-food vending model
[and proposed tools]

The street-food vending model components

From the findings of the previous chapters and the integration of data in Table 7.1, the components of the proposed model can be clearly divided into four areas, i.e. a business component, a food and nutrition component, a hygiene component, and a vending cart (Figure 7.4). These four areas in turn, impact on various areas of the socio-ecological framework, i.e. intrapersonal/individual, interpersonal, the physical environment/community as well as the policy environment. Sustaining any public health effort requires not only addressing the individual and their practices, but key is also the context [environmental and policy etc.] in which one is required to live, work and exercise choice (Story *et al*, 2008). Table 7.9 illustrates the various elements to be addressed in each level to enable a sustainable, profitable SF vending business which offer healthier food items for sale.

Table 7.9 Elements to addressed on each socio-ecological level

Component	Socio-ecological levels			
	Intrapersonal	**Interpersonal**	**Physical Environment**	**Policy Environment**
Business	Business & operational knowledge/awareness	Engaging with relevant government officials & fellow vendors Attracting & maintaining clientele		Regulation & bylaw awareness Adhering to rules and regulations
Food/Nutrition	Food and Nutrition knowledge/awareness	Attracting & maintaining clientele	Healthier foods for sale	
Hygiene	Hygiene knowledge/awareness	Attracting & maintaining clientele	Better hygiene practices	
Vending Cart		Attracting & maintaining clientele	Basic facilities available	

Below follows a description of the elements each component could encompass.

Business guidelines

The findings of the previous chapters necessitate basic operational guidelines that will ensure good (legal) practice. The data showed that the vast majority of vendors practiced without any form of licensing or permit. Most worked long hours, up to seven days a week, but still made less than R1 000 per week. Most vendors kept their money in their pockets. Not all vendors made use of keeping a log book or inventory. Instead of buying at the wholesalers, such as the fruit and vegetable market, vendors made use of supermarkets.

Thus, it is proposed that the business operation guidelines consist of the following 12 concise messages (please see appendix 8, for full proposed booklet. This booklet, although geared at a potential vendor looking to start a food-vending business, will also be useful to an existing vendor.

1. **Do research**

   Vendors should research not only the type of business they want to start, but also consider location on the basis of foot traffic.

2. **Start-up finance**

   Vendors should consider financial implications. Whether they have money saved, or will have to take out a loan. If a loan is the only option, they need to consider from whom and what the interest rates would be.

   A vendor might also consider contacting the City of Cape Town that would be able to assist them in gaining access to service providers and financial institutions geared at small, medium and micro-sized enterprises. [021 400 5379]

3. Choose the type of food to sell

A host of items can be sold as street foods. The best for vendors is to cater for the area they will be trading in. For example, if one trades near a construction site, pap, meat and stews will sell well.

4. Contact the Department of Economic Development to find out what laws apply to street vendors

Street-food vending as a business will have many restrictions, especially if the vendor is trading in a central business district (CBD) area. Many localities which form part of the City's informal trading plan will stipulate the size of the cart or size of the trading bay. Stipulations with regard to how close to the buildings or streets vendors are allowed to operate, etc. Vendors (in Cape Town and surrounds) should call 021 400 5379 for general enquiries and they will be directed to the specific district office for district-specific information.

5. Obtain required license/certificate for operating

Depending on the types of food the vendor decides to sell s/he might need a (location) permit from the Department of Economic Development as well as a business license and a certificate of acceptability from the Department of Environmental Health. The vendor can call 021 400 5379 for general enquiries; that will put the vendor in touch with the District Office for district specific information.

6. Vending cart/unit/stand

A vendor should consider the type of stand or cart s/he would require. Whether to buy or lease a mobile unit from a supplier, or to build their own stand. This depends on what the vendor is able to afford. If selling cooked food, the vendor will need a unit with refrigeration or cooling system as well as a stove or heating equipment to ensure the optimal/safe temperature of the food they serve.

7. Get a storage area for your inventory and your cart

Many localities do not allow street-cart vendors to leave their mobile units on public streets or sidewalks when not in use. If the vendor does not have a parking/storage space, then consider renting one from a local business office, commercial parking garage or storage facility. Even if allowed to keep the cart in the trading space overnight, it will not be practical to store an inventory there too --- odds are that one will come back to work to find that everything has been taken. Vendors may decide to store their inventory at their home in a clean, dry area that is free of pets, or in a commercial storage facility. If selling food items, it should be ensured that state rules are followed regarding where one is allowed to store ingredients. The vendor may need to rent a food locker or space in a commercial kitchen.

8. Buy wholesale

Vendors should strongly consider purchasing wholesale merchandise from distributors and manufacturers in their niche. Conduct an Internet search for wholesale distributors if there aren't enough suppliers in the area. Vendors selling food, should try to buy as many local ingredients as possible to save money on shipping costs. Vendors should also consider joining or establishing a purchasing 'club' [a group of trusted vendors] to purchase together, thus buying bigger and saving more.

9. Attracting your clientele

Vendors should keep their cart/stand neat and tidy at all times. They should organize their merchandise logically, while making the items appear as attractive as possible. Most people who buy, will do so on impulse, not because they planned to go to a specific street cart/stand. If the items are arranged sloppily, it is less likely that people walking by will stop to look at anything, much less make a purchase. Being friendly and maintaining optimal personal hygiene will also work in their favour.

10. Promote your business

Vendors should promote their street-cart vendor business. They can make use of traditional media, such as newspaper and radio ads, but people generally don't go looking for street vendors to shop. However, some people will become regular customers through personal rapport. To stay connected with them, use social media and social networks to let them know about new products and offerings, and what days and hours you're open for business. Loyalty with regulars can be built by offering special discounts to them via social networks.

11. Keep log books

Vendors should keep track of their spending and income, so that they know whether their business is profitable or not. One must always keep up to date so that the business can grow. Vendors should take cognizance of what is selling well and what is not, so that the necessary changes can be made.

12. Keep your money safe

Vendors should **e**xplore the best methods to keep their money safe in their business places.

Business guidelines put together from the following sources:

1. Gaines, M. *How to start a street cart vendor business*. http://smallbusiness.chron.com/start-street-cart-vendor-business-12678.html
2. Service Co-ordinator, Business Areas Management, Economic Development, City of Cape Town
3. Co-ordinator: Food Control, Environmental Health, City Health, City of Cape Town
4. Manager: Business Support and Skills Development, Economic Development, City of Cape Town

Food and nutrition guidelines

The findings from the previous chapters indicate that most vendors sell packaged snacks and sweetened beverages and that most consumers indicated purchasing these. The survey results also showed that vendors and consumers had poor nutrition knowledge. The vast majority of SF consumers also indicated that they purchased cooked food (a better option) which is

encouraging and possibly, as previously discussed in Chapter 3, an avenue to be explored for offering healthier food options. Basic food and nutrition guidelines can empower the vendors by giving them knowledge and thus enabling them to make better decisions concerning foods for sale and also foods available in their home.

The following six areas are proposed as basic food and nutrition guidelines for vendors (Appendix 9, for full proposed booklet):

1. The South African food-based dietary guidelines (FBDG)

The FBDG (Table 7.9) are specifically designed "short, positive, science-based messages that aim to change the eating behaviour of the general population towards more optimal diets that meet energy and nutrient requirements, while simultaneously helping to protect against the development of non-communicable diseases" (Vorster *et al*., 2013). The FBDG would thus serve as a resource to which SF vendors can refer.

Table 7.10: Revised general food-based dietary guidelines for South Africans, 2012

· Enjoy a variety of foods
· Be active!
· Make starchy foods part of most meals
· Eat plenty of vegetables and fruit every day
· Eat dry beans, split peas, lentils and soya regularly
· Have milk, *maas* or yoghurt every day
· Fish, chicken, lean meat or eggs can be eaten daily
· Drink lots of clean, safe water
· Use fats sparingly. Choose vegetable oils, rather than hard fats
· Use sugar and foods and drinks high in sugar sparingly
· Use salt and food high in salt sparingly

(Vorster *et al*., 2013).

2. The meaning behind a meal

Generally it is appreciated that we need to be nourished to stay alive, however, this is not something we consider daily, so it is important to remind vendors why we should eat healthily. "Food plays an important part of our lives. Our bodies need food to fulfil several

functions, and which provides energy for daily activities and protects the body against diseases. We eat because our bodies need nutrients - the vitamins and minerals in fruit and vegetables - which are necessary for stimulating growth and maintaining life. There are also essential nutrients like carbohydrates, fats, and proteins which are needed daily. Problems arise when these form the bulk of someone‘s diet.” (https://theconversation.com/proflies/thandi-puoane-167627/articles).

> “To satisfy hunger, larger portions of unhealthy food are often consumed. This invariably leads to obesity which in turn puts people at risk of developing diseases such as diabetes, hypertension and some cancers” (https://theconversation.com/proflies/thandi-puoane-167627/articles).

3. Meal times

Although a SF vendor will sell his/her product throughout the day, it is important for them to appreciate the concept of meal times. “Regular mealtimes (breakfast, lunch and supper) are important as this helps to control blood glucose levels. During the day, we are often so busy that it is easy to forget about lunch. Skipping meals can lead to ‘out-of-control’ hunger, which can lead to overeating. When you're very hungry, it is easy to forget about good nutrition!

Lunch should not be a big plate of food, especially if the main meal is at supper time” (HealthKick: Planning to Live Healthy – A guide for school staff, n.d.).

4. **Portion sizes**

The portion sizes of cooked meals are frequently very large and have enough energy to sustain an individual for an entire day (Mchiza *et al*., 2014). Here the nutrition society’s message “Eat Less – Choose Your Portion with Caution” will be encouraged

(http://www.nutritionsociety.co.za/index.php./useful-information/11-useful-information/42-national-nutrition-week-2013-eat-less-choose-your-portion-with caution).

5. Healthy sandwich ideas

People usually think eating healthily is expensive, as did the key informants in this study. However, a simple healthy sandwich can be nutritious and affordable.

Tips:

- ✓ Always choose whole wheat or brown unrefined breads!!!
- ✓ Always use soft margarines endorsed by the Heart and Stroke Foundation e.g. Flora or Canola fat spreads.
- ✓ Always choose a healthy protein, i.e. chicken breast meat, tuna, egg or hard cheeses.
- ✓ You can make sandwiches healthier and prettier by adding fresh vegetables, like lettuce, tomato and cucumber!!!

6. **Healthier South African popular recipes**

"The recipes in this book were selected from family favourites contributed by people all over South Africa. These have been **adapted** to follow the guidelines of the Heart and Stroke Foundation South Africa. Remember that healthy eating is important for the **whole family** and not only for the person affected by a lifestyle disease.

Teach your **children** to eat healthily from a young age to protect them from chronic diseases later in life. Healthy food doesn't have to be expensive or bland and boring.

We show you how to use as little fat, oil, salt and sugar as possible and rather use herbs, lemon juice, salt-free spices and other seasonings to prepare **delicious** food. We want to encourage you and your family to **gradually** make changes to the way you eat and cook. This will make a huge difference to your health." Taken from the Heart and Stroke Foundation's Cooking from the Heart Recipe Book.

The hygiene component

From the findings in Chapter 3 it is clear that the hygiene practices of SF vendors are not optimal. From the interviews with key informants it was found that the Department of Environmental Health makes use of the "Five Keys to Safer Food" (Appendix 7) which was developed by the WHO, specifically for South Africa. Therefore, it would not be necessary to develop or search for other hygiene guidelines. During the document review phase a guideline for conducting a food-vending business (hawking in meals, Appendix 10) were obtained, which can also be used as is.

1. **Five Keys to Safer Foods**
   - Keep clean
   - Separate raw and cooked food
   - Cook thoroughly
   - Keep food at safe temperatures
   - Use safe water and raw materials

   (WHO, 2006).

2. **Guidelines for Conducting a Food Vending Business (Hawking in Meals)**
   - A "hawking in meals" trade license and "certificate of acceptability" must be obtained from your local Environmental Health office.
   - Suitable containers for the storage of clean and waste water are required (25l).
   - All working surfaces must be of a smooth, washable, and impervious material.
   - Clean aprons or overalls must be worn.
   - Braai-tongs or food handling utensils must be used.
   - Cooked or raw meat displayed must be covered.
   - The name and address of the hawker must be displayed.
   - A basin, liquid hand soap and clean towels (disposable) for hand washing are required at the stall.
   - A refuse container for the storage of refuge must be available.
   - A cooler box with ice or ice blocks for the storage of raw meat and other perishable products must be used, and the temperature is to be maintained below 10 degrees. Celsius.

- A suitable place for the storage and washing of equipment must be provided.
- A floor or ground cover to prevent the soiling of the ground surface.
- Only gas or electric equipment may be used for cooking.
- Squeeze bottle containers for sauces.
- An umbrella or shelter for shade and coverage of the cooking area.
  (City of Cape Town, n.d.).

The proposed street-food vending cart

The vendor survey highlighted the lack of facilities available to SF vendors. The key-informants acknowledge this lack of facilities, but highlighted the fact that when high-cost facilities are built these are not utilized by the vendors for whom intended. So perhaps a mobile cart which adheres to the basic requirements, as stipulated by the key informants (especially in terms of size and applicable bylaws) as well as the guidelines for conducting a food-vending business should inform the design of a SF-vending cart.

The cart specifications

1. The overall size of the unit shall be 1 200 mm in length x 900 mm wide, with an overall height of 1 100 mm when in storage. When deployed, the unit shall be 1 800 mm in length.
2. The working surface shall have a height of 950 mm with 150 mm splash-back. All working surfaces shall be stainless steel, in a brushed finish.
3. The body shall be manufactured of galvanised mild steel. The external surfaces shall be painted in the colour of choice.
4. The unit shall be on a galvanised mild steel chassis, with four (4) solid wheels, 200 mm in diameter. The chassis shall have a fold-away draw-bar for pulling and steering.

5. The unit shall have a 400 mm x 340 mm x 150 mm deep stainless steel basin, allowing the grey water to drain into a 25 L removable container. A 25 L fresh water container with tap shall be supplied with the unit.
6. A two-plate (2) gas burner with regulator and 9 kg cylinder will be housed in the unit.
7. An insulated compartment shall be provided to control the temperature by means of 'ice-bricks.'
8. The construction of the unit shall be so that no 'fat-traps' or crevices will hinder proper cleaning.
9. The construction of the unit shall take all safety regulations into consideration.
10. Provision shall be made to attach a canvas gazebo.

(A quotation for constructing the vending cart has been obtained from Benchmark Doors Cape, Registration no: 2000/02061/23 for R18 758.65 for a single trolley, see Appendix 11).

The resources outlined above, i.e. business guidelines, nutrition guidelines, hygiene guidelines and a proposed cart can either be offered to the vendors as a package/toolkit, with or without training. Both existing and new vendors could access the entire toolkit or access parts thereof as required.

7.4 Discussion

In this Chapter, the development process of an evidence-based/well informed SFVM has been presented. The model essentially consists of four components, i.e. business, food and nutrition, hygiene as well as a proposed cart [to address the lack of basic facilities].

This model was built using a socio-ecological framework, whereby each component of the model feeds into various levels of the socio-ecological model, i.e. on the intrapersonal or individual level by improving vendors' business or operational knowledge, making them

aware of applicable regulations and bylaws as well as improving food and nutrition and hygiene knowledge. On an interpersonal level, the vendor would be enabled to engage with the relevant provincial/municipal officer, engage with fellow vendors, attract and maintain clientele and sustain and improve income. The SFVM would indirectly improve the vendors' physical environment by maintaining better hygiene practices, offering healthier food items for sale, and having basic facilities in the form of a vending cart. The SFVM would have an impact on the policy environment as vendors become aware of regulations and bylaws and operate legally.

In the second step of this Chapter, findings from focus group discussions with regard to the relevance, acceptability and practicability of the proposed model were presented. Overall vendors felt that the four themes and the related components of the model and the proposed elements were of great value to potential vendors and to them as existing vendors, as there are tips in the elements [proposed guides] they have never considered. In this step, key considerations of PAR were captured, as can be noted from the quotation by Gaventa, (1988:19 in Collins 1999): "Participatory research attempts to break down the distinction between the researchers and the researched, the subjects and objects of knowledge production by the participation of the people-for-themselves in the process of gaining and creating knowledge, but simultaneously as education and development of consciousness, and the mobilization for action."

In the next Chapter some recommendations follow on how to take this proposed SFVM forward.

Chapter 8

Summary and Recommendations

8.1 Introduction

In this Chapter, a summary is given of the overall research study, deviations from the original protocol are noted, limitations and strengths are highlighted and finally recommendations are made based on the findings of this study.

8.2 Summary

The overall aim of this study was the development of a SFVM that considers nutrition, safety, business and operational aspects of street-food vending. This ties in with the overall goal of the Global Strategy on Diet, Physical Activity and Health, which is to "promote and protect health by guiding the development of an enabling environment for sustainable actions at individual, community, national and global levels that, when taken together, will lead to reduced disease and death rates related to unhealthy diet and physical inactivity" (WHO, 2004: 3).

As a trade, SF vending has been established for centuries and is considered an integral part of the historical and cultural heritage of numerous cities worldwide (WIEGO, 2013; Bromley, 2000). Similar to many other countries, SF have gained popularity for various reasons in South Africa. They are usually inexpensive, socially and culturally appropriate, and available at convenient places for travellers and workers. Examples are, nearby factories, offices, schools, universities, and transit points, such as bus terminals, and market places. (Dawson & Canet, 1991; Majunga *et al*., 2011; Steyn *et al*. 2013).

The SF-vending business as an informal employment sector has grown significantly in South Africa (Charman & Petersen, 2013; von Holy & Makhoane, 2006; Martins, 2006). This has been fuelled by the fact that the formal sector cannot grow fast enough to cater for all the

nations' employment requirements (Martins, 2006; Stats SA, Census 2011). Literature shows that numerous illiterate and unemployed individuals, often women, find street vending an easy means to earn money, with little monetary investment necessary (Martins, 2006; Steyn *et al*., 2013). However, to the best knowledge there is no existing SFVM in Cape Town or South Africa that encompasses good business practices with the sale of nutritious foods which are safe to eat. Thus, this research study aimed to bridge that gap.

This was a cross-sectional study which utilised a mixed method approach, as the research explored real-life contextual understandings, multi-level perspective as well as cultural influences.

This study was conducted in three Phases. The first Phase comprised a situational analysis of SF vendors and consumers during which 831vendors and 1 121 SF consumers completed an interview-administered questionnaire. An observation schedule was also completed at the interviewed vendor stalls. The vendor survey concluded that SF vendors in the Cape Town and surrounding areas work long hours, up to seven days a week, and only make a minimal income. The types of food items sold by vendors, their nutrition knowledge as well as their hygiene practices were not ideal. Findings also indicated that vendors struggle because of the lack of basic facilities and services, thus operating in a non-conducive (disenabling) environment. Bhowmik (2005) reported that vendors often do not make much profit and as a result they tend to move from one place to another in the hope of finding better markets and increasing profits. Pertaining to nutritional value of food, however, the cooked foods sold as reflected in the literature are culturally-based dishes and not considered that unhealthy (Winarno & Allain, n.d.; Rheinlander *et al*., 2008; Becquey & Martin-Prevel, 2010; Nago *et al*., 2010; Namugumya & Muyanja, 2012; Privitera & Nesci, 2015). However, the reviewed literature did not make reference to packaged snacks, such as chips/crisps and sweets, which were popular items sold by the vendors who partook in this survey. Findings from Ghana

showed that the settings where food vending is normally practiced are scarcely resourced with low environmental and sanitary standards posing a major threat to food safety (Rheinlander *et al*., 2008).

The main findings in the consumer survey indicated that people consume SF frequently (2–3 times per week). They spend a significant amount of their income on SF, and they are open to buying healthier options should these be available for purchasing. Thus, one could assume that should healthy SF be available at a reasonable price, SF consumers would access these. Consumers' nutrition knowledge, however, was not ideal. Again these results echo the findings from earlier studies which reported that in developing countries, households which fall into the lower-income category spend up to 50–70% of household earnings on SF (Dawson & Canet (1991). Furthermore, consumers of street food hail from various socio-economic classes, and benefit from cheap, culturally appropriate, often nutritious meals (Wilnarno & Allain, no date; Steyn et al. 2013). Chakravarty and Canet, (1996) concluded that SF could possibly be the most affordable method of finding a nutritionally well-balanced meal time option outside of the home environment. However, they added that the consumer should be educated and capable of choosing a healthy meal.

Phase 2 of this study comprised qualitative methodology, whereby key informants from the Departments of Environmental Health and Economic Development were interviewed and participated in focus group discussions. These two departments were recognised as the only two governmental/municipal departments directly involved in supporting and servicing SF vending. The key finding in this Chapter is that the SF-vending business should be guided by the national legislature as well as by provincial bylaws. Also, government officials strongly recognised the need for vendor and consumer education. For vendors, nutrition and hygiene as well as awareness of regulations for SF vending were emphasised, while health, food and nutrition education were considered important for consumers specifically.

In a study conducted in Calcutta, vendors shared the desire to adhere to regulations, even though they were unaware of stipulated food regulations and had no training in food and nutrition. The vendors appreciated the fact that in order for the SF sector to be acknowledged and licensed they would have to comply with the specific regulations and guidelines as well as be open to inspection and food sampling (Chakravarty & Canet, 1996).

A study in Nairobi also recognised a lack of training in food preparation and hygiene practices and thus recommended the institution of SF centres with adequate facilities, training of SF vendors on hygiene as well as setting up a code of conduct for the SF trade (Muinde & Kuria, 2005).

A document review was employed as an additional method in Phase 2 to source applicable national regulations and provincial bylaws pertaining to street vending.

The third Phase entailed three steps and employed interpretative qualitative methods. Step one entailed integrating the survey findings with the key informant interviews and focus group discussions to establish themes to take forward into the next steps in the development of the SFVM.

The three distinct participant categories allowed the research objectives to be explored from various perspectives. Themes from qualitative data echoed the findings of the survey data, such as the aspects pertaining to the business operation of the SF vendors, challenges faced by vendors as well as nutrition and hygiene. Discrepancies were also recognised in the data between key informants and vendors.

Key informants felt that certification and licensing are relatively simple and that support is available to vendors. However, survey results showed most vendors were unlicensed and without any form of certification, and it was noted in their challenges as something they find difficult and with which they would need assistance.

The vendors who participated in the focus group discussions also felt that the information and support available regarding licensing/certification and finance would be welcome and is necessary. So it would appear as if there is a communication gap regarding services and support offered by the municipal offices and relating departments, as vendors don't seem to be aware of these services and support.

In Step 2, the relevance of the integrated themes were assessed and the acceptability and practicability of the various components recognised in the previous phases of this study evaluated. These would fit into the proposed model by conducting focus groups discussions with SF vendors. The components being Business (laws/regulations as operational aspects), Food/Nutrition (including health), Hygiene (environmental and personal hygiene and safety), and the proposed Vendor Cart (to address the need for basic facilities such as power (gas), cooling and water as well as to promote hygiene and safety).

This step in PAR recognises the importance of involving those who are intended to be the beneficiaries of the research, enabling a profound sense of ownership, which would potentially promote the sustainability of the proposed SFVM. This step proved to be extremely valuable, as vendors were keen in affirming issues in the business theme such as finance and certification and knowing how to make their businesses better and compliant with legislation and regulations.

They also appeared to be open to considering healthier food options in their business operations, but they were also scared to try new foods as this would affect their incomes negatively should the healthier foods not sell. Because their businesses are so volatile this is a valid fear.

The last step, Step 3, comprised the development of the SFVM. During this Phase the data from the previous phases were integrated within a socio-ecological framework to develop the

proposed SFVM. The socio-ecological model represents a comprehensive approach to designing, implementing and evaluating interventions which target multiple influences on behaviour (Elder, 2007).

The proposed SFVM thus aim to address, 1) Intrapersonal/individual factors, i.e. knowledge, attitudes, practices, of both consumers and vendors as well as business skills of vendors, 2) interpersonal processes and primary groups: formal and informal social networks, 3) community/physical environment factors, i.e. storage and facilities, and 4) public policy, i.e. the policy (the street-food vending policy by local government).

The components of the proposed model is divided into four areas, i.e. a business component, a food and nutrition component, a hygiene component and a vending cart. These four areas, in turn, impact on various areas of the socio-ecological framework, i.e. intrapersonal/individual, interpersonal, the physical environment/community as well as the policy environment as displayed in Chapter 7, Figure 7.4. A proposed tool has been drafted for each component, which would need further development, research and evaluation (Appendices 8-11).

8.3 Deviations, limitations, strengths and new contributions to public health

Deviations

The original title and aim contained the word, business, i.e. *Street-Food Vending Business Model*. The researcher was advised and agreed with her supervisors that the word, business, should be removed from the title as this brings a skewed focus on business and takes away from the totality of the model that would comprise various components.

The original protocol stated that the developed model would be implemented (Phase 3) and evaluated (Phase 4). However, the researcher was advised to take the implementation and

evaluation of the model forward into post-doctoral research, because of the depth and extensiveness, the time consumption and budget of the research presented in this thesis. (Else the current thesis may become too large and unfocused. An additional year or two might be added to the research/thesis time as well).

Limitations

1. All data collection instruments were only in English, however, fieldworkers and researcher are bi- or multi-lingual and could translate if required.
2. Random sampling could not be applied in the surveys, however, the large sample sizes counters this somewhat.

Strengths

1. The fact that this was a mixed-methodology study, enabled a broader contextual appreciation. It promoted understanding the vending operation from the ground (the vendor) as well as from the user (the consumer) and from a regulatory point of view (government/municipal officials).
2. The primary researcher (PhD student) was actively involved in all stages of the data collection, data entering and analysis.
3. For both surveys the sample was larger than required.

New contributions to public health

This research study has developed a SFVM that identified key elements within a socio-ecological framework which could improve the SF vending business in general. To the best knowledge of the researcher no such model, specific to SF has been developed before. The application of this model could reduce public nuisances [applying sound business practices/abiding by the laws and regulations of the country and province, by improving the business and operational knowledge and creating awareness among vendors]; reduce public risk of food poisoning and other food borne diseases [maintaining optimal hygiene practices,

by improving the hygiene knowledge and creating awareness among vendors]. Furthermore the model could potentially improve the nutritional status of SF consumers [vendors offering healthier food items for sale]. This SFVM could also improve the financial status of existing SF vendors and the model could be used as an entrepreneurship tool to attract potential SF vendors and could thus reduce the unemployment rate.

This SFVM has the potential to have a big impact on public health and thus the recommendations below are suggested.

8.4 Recommendations

The Global Strategy on Diet, Physical Activity and Health emphasis that governments should have a primary steering and stewardship role in initiating and developing strategies and making certain these are implemented and monitored to ascertain their impact in the long term (WHO, 2004). The Global Strategy on Diet, Physical Activity and Health also focuses on community involvement and creating enabling environments (WHO, 2004). The two aforementioned strategies will be the guiding principles for the recommendations that follow below.

1. Basic business guidelines that include information on permits and licensing could go a long way in making street vendors aware of the legal requirements of their business. Making them legally compliant and thus enabling them to be a ‘better’ candidate for financial assistance. A help-line run by the City of Cape Town could be a source of assistance to vendors who are starting up. The Global Strategy on Diet, Physical Activity and Health stipulates that governments should provide accurate and balanced information (WHO, 2004). In addition to this, government also provide sufficient services to guide and support SF vendors.
2. Basic guidelines in food and nutrition could assist vendors in appreciating the concept of having healthier items for sale. These could also contribute to their personal nutritional

status. The FBDG should be made available to all vendors. Strategies should also be developed to provide consumers with information to enable them to make healthy food choices should these be available or if not to put in a request. The Nutrition Directorate of the Department of Health could make the FBDGs more available to the citizens of South Africa.

3. The Five Keys to Safer Foods, identified as already being used to make street vendors aware of hygienic practices when applying for their COA, should be promoted more robustly. Training opportunities and simple education materials should be made available by the health authorities to assist in this regard.
4. A food-vending cart with basic facilities, can possibly address the issue of government setting up huge facilities that might not be utilized by vendors in its totality. This may be something that the City of Cape Town could introduce with a pay-back scheme for eligible vendors.
5. This research study has developed a set of proposed tools that should be further developed, implemented and evaluated in the Cape Town area where the original research took place. Should this prove to be effective, it should be piloted and adapted to be suited to other cities in South Africa.
6. It is of importance that the SF trade is viewed as an opportunity for entrepreneurship and not only as a last resort, or a survivalist trade should be emphasised. Street-food trading has a great potential as can be seen by the food trucks that are becoming popular. Perhaps SF trading can be considered a stepping stone in achieving greater success. This would require a paradigm shift from government, financing agencies as well as the traders. Methods to improve business to excel into bigger or new opportunities should be explored.

There's a food revolution underway – and it's happening on the street! As wonderful as fine-dining is, larney restaurants are no longer the bar. Some of the most exciting and innovative food is being served out of trailers, carts and vintage vans in and around Cape Town. (http://insideguide.co.za/best-food-trucks-cape-town/)

8.5 Conclusions

In the literature regarding SF, hygiene considerations are often the most important issues at hand, while the nutritional aspect of foods, the business operation and the guiding legislation are often overlooked. The literature readily acknowledges the contribution that the SF trade has on the economy, but fails to explore how one could go about improving the trade, and growing the vendors' knowledge and skills.

This research study thus embarked on developing a SFVM that would entail nutrition, hygiene and safety, and business and operational aspects of street-food vending. This was done within a socio-ecological framework, which considers an individual as part of a greater whole. Important elements such as the individual's physical environment, the policy environment and also basics such as the individual's knowledge and 'support' environment are considered.

This proposed SFVM will hopefully be taken forward, piloted, and adapted as needed to improve the SF-vending trade. Eventually it is endeavoured to not only make the SF trade more lucrative, the vendor more knowledgeable and aware, but also to make the product sold a healthier one. In turn, this should improve the overall nutrition and health of consumers who frequently purchase SF. Ultimately, this SFVM should indirectly lighten the NCD bill of the country.

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List of Appendices

Appendix 1: SF brochure

This research project has been independently initiated by individuals with interests in nutrition, healthy lifestyles and empowerment of the poor. It has not been commissioned by any government agency, company or interest group.

THE MAIN PURPOSE OF THE PROJECT IS:

- To understand street food nutrition
- To research how to improve street food conditions
- To empower street food vendors in their businesses

The project team understands that it is only by empowering street food vendors with good information, business options, infrastructure and support that vendors in turn will be able to better meet the needs of their customers.

This is why the project is studying vendors and their customers and the main project findings will be presented to vendors at a place convenient to them for their final say before wider sharing.

Street vendors should be offered the support they need and should remain secure in their work.

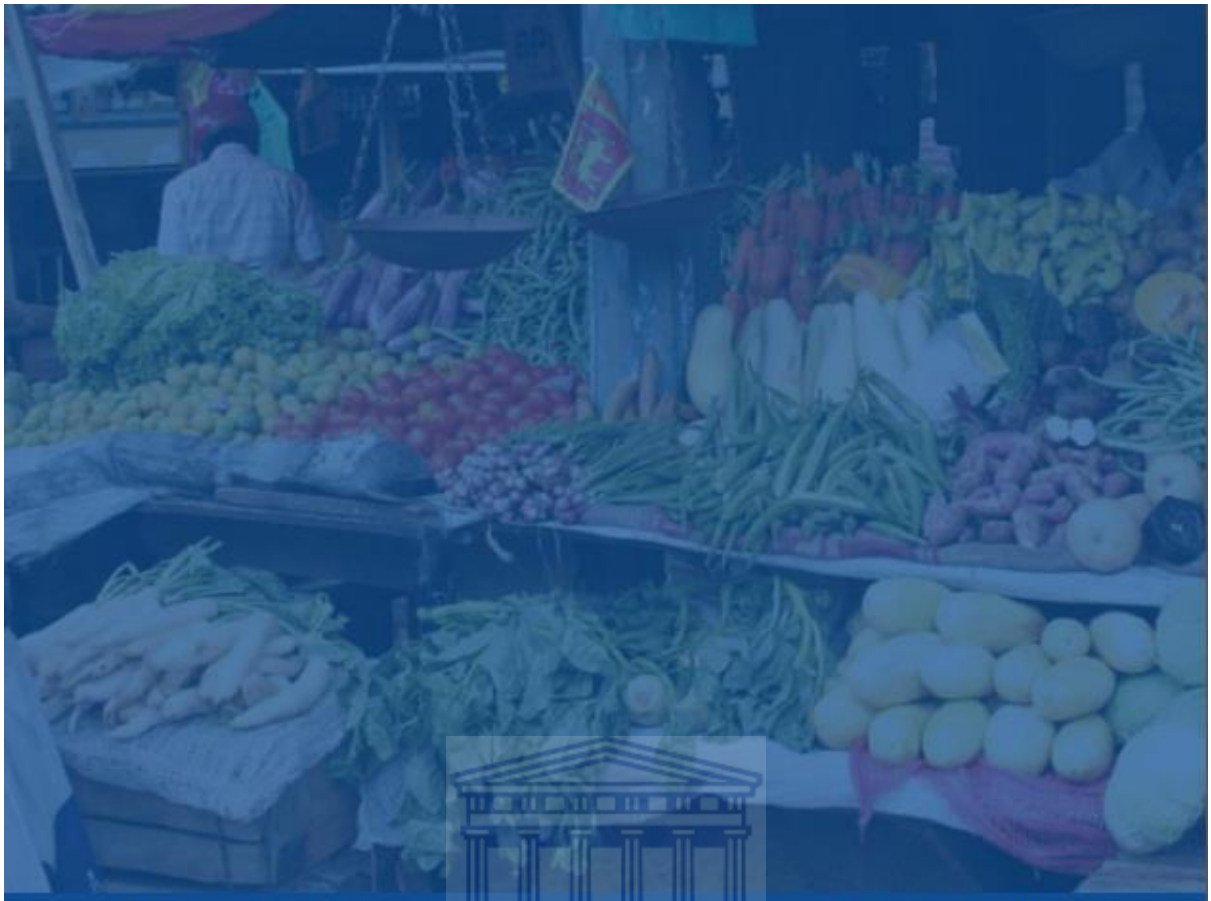
Street food suppliers are hugely important to society – worldwide over 2.5 billion people eat street food every day ! Street food is cheap and easy to get but malnutrition remains widespread in SA .

This project offers a research partnership with Street food vendors because they have a

critical role in society - with good information and proper support many can be empowered and uplifted.

The project will only try change in the conditions of street food vendors if the vendors themselves agree wand want this, and will seek to learn from the global street vendor community.

This project is here to help achieve **A BETTER LIFE FOR ALL** street food vendors and their customers!



[1] A small amount esearch and development funding has been obtained from the National Research Foundation

[2] FAO

[3] Bradshaw D, Groenewald P, Laubscher R, Nannan N, Nojilana B, Norman R, Pieterse D, Schneider M. Initial Burden of Disease Estimates for South Africa, 2000. Cape Town: South African Medical Research Council, 2003. http://www.mrc.ac.za/bod/bod.htm

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HSRC

Cape Peninsula University of Technology

THE HEART AND STROKE FOUNDATION SOUTH AFRICA

Appendix 2: Vendor questionnaire

STREET FOOD SURVEY

QUESTIONNAIRE FOR VENDORS

ID/study number
Location:
Date:
Time:
Interviewer:

Sections A to F should be asked by the interviewer. (Tick in appropriate box)

Section G and H should be completed by the vendors

<u>Section A</u>: Socio-demographic information

1. Gender (**Do not ask but tick**)	a. Male 1	b. Female 2	
2. How old are you?	a. Less than 18 years	1	
	b. 18 – 24 years	2	
	c. 25 – 34 years	3	
	d. 35 – 44 years	4	
	e. 45 – 54 years	5	
	f. 55 - 64 years	6	
	g. 65 – 74 years	7	
	h. More than 75 years	8	
3. What is your marital status?	a. Single	1	
	b. Married	2	
	c. Living with partner	3	
	d. Separated	4	
	e. Divorced	5	
	f. Widowed	6	
4. What is your country of origin?	a. South African	1	
	b. Other (*specify*)	2	
5. If respondent is South African, indicate race **(Do not ask but tick)**	a. Black African	1	
	b. Coloured	2	
	c. Indian/Asian	3	
	d. White	4	
	e. Not South African	5	
	f. Other (*specify*)	6	

6. What is your highest level of education?	a. Primary school	1	
	b. Some high school	2	
	c. Matric	3	
	d. Diploma	4	
	e. Degree	5	
	f. No schooling	6	

Section B. Operational information

1. Which days of the week do you work at the stall?	a. Monday	Yes 1	No 2
	b. Tuesday	Yes 1	No 2
	c. Wednesday	Yes 1	No 2
	d. Thursday	Yes 1	No 2
	e. Friday	Yes 1	No 2
	f. Saturday	Yes 1	No 2
	g. Sunday	Yes 1	No 2

2. When is your stall open?	Weekdays:… to…… = hrs	1	
	Saturdays:……to…… = hrs	2	
	Sundays:…… to…… = hrs	3	

3. Are you	a. The full owner of the stall?	1	
	b. A part owner of the stall?	2	
	c. Not the owner of the stall?	3	

4. What is your average income from the stall per week?	Give in Rand…….	R

5. How much mark-up do you add to the stock you buy?	Give in %	%

6. Where do you buy supplies for the stall?	…… ……		
7. How do you get to the place/s where you buy supplies?	a. Bus	1	
	b. Train	2	
	c. Taxi	3	
	d. Car	4	
	e. Walk	5	
	f. Supplies are delivered	6	

8. How far away is the place where you buy your stock? If distance not known, please indicate time in minutes spent travelling e.g. 5 min walk/10 min drive etc.	……Km …….. ……..

9. Where do you keep your stock?	a. Home	1	
	b. Stall	2	
	c. Storeroom	3	
	d. Other specify……..	4	

10. Do you employ anyone else at the stall?	a. None	1	
	b. One	2	

	c. Two	3	
	d. More than 2	4	

11. Do you decide what to sell in the stall?	a. Yes 1	b. No 2	

12. How is money stored?	a. In a till	1	
	b. In a box/pouch	2	
	c. In vendors pocket	3	
	d. Other……	4	

13. Is there an inventory of stock?	a. Yes 1	b. No 2	

Section C. Food items sold

1. Do you sell the same items all year round at the stall?	a. Yes 1	b. No 2	

2. If no, which items change?	……	1	
	……	2	
	……	3	

3. Do you sell cooked foods?	Yes 1	No 2	

If no skip to Q 5

(i) If yes, please list cooked items:	……	1
	……	2
	……	3
	……	4
	……	5
	……	6

(ii) If yes, where do you cook them?	a. At the site	1	
	b. Home	2	
	c. Other, specifiy: ……	3	

(iii) Who cooks the cooked food?	a. Self	1	
	b. Spouse	2	
	c. Other, specifiy: ……	3	

(iv) How do you keep cooked food warm at your stall?	……	1	
	……	2	
	……	3	
	……	4	
	……	5	

4. If you have leftovers of prepared food at the end of the day what do you do with it?	a. Throw it away b. Take home to eat c. Sell the next day	6	

5. List all other items you sell at your stall? **(List only food items)**	……	1
	……	2
	……	3
	……	4
	……	5
	……	6
	……	7
	……	8
	……	9
	……	10
	……	11
	……	12
	……	13
	……	14
	……	15
	……	16
	……	17

Section D. Facilities available

1. Does your on-site stall have access to	a. Water?	Yes 1	No 2
	b. Electricity?	Yes 1	No 2
	c. Gas?	Yes 1	No 2
	d. Stove?	Yes 1	No 2
	e. Fridge?	Yes 1	No 2
	f. Freezer? (for food storage!)	Yes 1	No 2
	g. Rubbish disposal?	Yes 1	No 2

2. Do you have facilities for hand washing at your stall?	a. Yes 1	b. No 2	
(i) If yes, what facility is there for washing hands? **(Indicate by using time i.e. 1 min walk etc.)** **If no, skip to Q3**	a. Sink and tap	1	
	b. Basin with water	2	
	c. Other (specify) ……	3	

3. Where are the nearest toilet facilities?	……..……	1	
	……..……	2	
	……..……	3	
4. Is there a hand washing area at the toilet?	a. Yes 1	b. No 2	
5. Do you have a fire extinguisher?	a. Yes 1	b. No 2	

Section E. Open-ended questions

1. If there was one thing you could change about your vending operation, what would it be?

……

……

……

2. Do you have any problems running your vending operation? Describe these.

……

……

……

3. Is there anything the municipality can do to help improve your business?

……

……

……

……

Section F: Certification

1. Do you have a certificate of acceptability to sell street food from the DOH?	a. Yes 1	b. No 2	c. Not needed 3	
2. If yes, when did you receive this?	Month:		Year:	
3. Do you have a permit or concession letter or a lease to sell street food?	a. Permit		1	
	b. Concession letter		2	
	c. Lease		3	
	d. None		4	
4. If you could choose an area to trade in, which one would it be?	…… …… …… ……			
5. How safe is the area where you trade?	a. Very safe		1	
	b. Safe most of the time		2	
	c. Dangerous at times		3	
	d. Often dangerous		4	
	e. Very dangerous		5	

Section G: Knowledge Questions

Instructions for completion of this section: Please answer all the questions. Circle the letter a, b, c or d to indicate your answer. Only one letter may be circled as your answer.

Instructions for completion of this section: Please answer all the questions. Circle the letter a, b, c or d to indicate your answer. Only one letter may be circled as your answer.

Fruits and vegetables		Response
1. Which vegetable will help with good eyesight?	a. Butternut	1
	b. Cabbage	2
	c. Lettuce	3
	d. Cucumber	4
		Response
2. Which fruit will help the body fight colds?	a. Apple	1
	b. Mango	2
	c. Naartjie	3
	d. Peach	4
		Response
3. Which vegetable has the **most** fibre (roughage)	a. Cabbage	1
	b. Cauliflower	2
	c. Green beans	3
	d. Lettuce	4
Fats and Oils		Response
4. Which potato has the **least** fat?	a. Mashed potato	1
	b. Fried potato	2
	c. Boiled potato	3
	d. Roast potato	4
		Response
5. Which food has the **most** fat?	a. Atjar	1
	b. Mayonnaise	2
	c. Mustard	3
	d. Chakalaka	4
Starchy foods		Response
6. Why are starchy foods important to eat?	a. Easy to digest	1
	b. Builds muscles	2
	c. Source of energy	3
	d. Fights diseases	4
		Response
7. When will starchy foods make one gain weight?	a. When eaten with meat	1
	b. When eaten in large amounts	2
	c. When eaten in the mornings	3
	d. When eaten with vegetables	4
Meat and milk		Response
8. How often should oily fish like pilchards and tuna be eaten?	a. Every day	1
	b. Once a week	2
	c. Twice a week	3
	d. Twice a month	4
		Response
9. Which food is **better** for a healthy heart?	a. Fried chicken	1
	b. Grilled fish	2
	c. Roast beef	3
	d. Boiled sheep brains	4

Legumes and nuts		Response
10. Which food has fibre (roughage)?	a. Eggs	1
	b. Nuts	2
	c. Fish	3
	d. Chicken	4
		Response
11. Why can legumes like dried beans and lentils be eaten instead of meat?	a. They have protein	1
	b. They have vitamins	2
	c. They have fat	3
	d. They have fibre (roughage)	4
Sugar		Response
12. Which food does **not** have added sugar?	a. Canned apricot	1
	b. Apricot jam	2
	c. Apricot juice	3
	d. Fresh apricot	4
		Response
13. Which health problem can be caused by drinking sugary cool drinks every day?	a. Heart disease	1
	b. Tuberculosis (TB)	2
	c. Liver disease	3
	d. Weight gain	4
Salt		Response
14. Which health problem can one get from too much salt?	a. High blood pressure	1
	b. Liver failure	2
	c. Lung disease	3
	d. High blood sugar	4
		Response
15. Which has the **leas**t salt?	a. Braai salt	1
	b. Stock cube	2
	c. Soup powder	3
	d. Dried herbs	4

<u>Section H</u>: Nutrition attitudes

Instructions for completion of this section: Tick (✓) the appropriate box for each statement to indicate whether you strongly disagree, disagree, neither agree nor disagree, agree or strongly agree with the following statements. Only one tick may be made for a statement.

	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Fruits and vegetables					
1. Fruit and vegetables should be eaten every day.	1	2	3	4	5
2. Fruit and vegetables protect against illnesses.	1	2	3	4	5
3. The number of fruit and vegetables eaten every day is important.	1	2	3	4	5
4. It is **not** necessary to eat fruit and vegetables everyday.	1	2	3	4	5
5. Fruit and vegetables will **not** add to good health.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Fats and oils					
6. I look at the fat content of the food I eat.	1	2	3	4	5
7. For good health I eat less fatty food.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Starchy foods					
8. Starchy foods should be eaten with meals.	1	2	3	4	5
9. Starchy food is **healthier** if it has fibre (roughage).	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Legumes and nuts					
10. Legumes like dried beans and lentils can replace meat in the diet.	1	2	3	4	5
11. Soy mince is almost as healthy as meat.	1	2	3	4	5
12. It is important to eat legumes like dried beans and lentils often.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Sugar					
13. Sugar is **unhealthy** when you eat a lot of it.	1	2	3	4	5
14. Sugar is **okay** if you use little.	1	2	3	4	5
15. We do **not** need added sugar to be healthy.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Salt					
16. We should **not** eat a lot of salty food.	1	2	3	4	5
17. I worry about the amount of salt in food.	1	2	3	4	5
18. Food can taste good with only a little salt added.	1	2	3	4	5
19. Food only tastes good if a lot of salt is added.	1	2	3	4	5
20. I enjoy salty food.	1	2	3	4	5
21.	1	2	3	4	5

Thank you for participating in this study and completing this questionnaire.

Observational Checklist Street-Food Vendors

SECTION A: General			*Office use*
ID/study number			
1. Location:			
2. Date:	D D M M Y Y		
3. Time:			
4. Interviewer:			
5. Does vendor serve **cooked** food like pap, vetkoek, soup, meat?	Yes 1	No 2	
6. Does the vendor serve **baked** foods like scones and muffins?	Yes 1	No 2	
7. Does the vendor sell **ready to eat** foods like biscuits, crisps?	Yes 1	No 2	
8. Does the vendor sell **beverages** (drinks cold and hot drinks)?	Yes 1	No 2	
9. **Food sold by vendors:**			
Porridge and beef/chicken	Yes 1	No 2	
Rice and beef/chicken	Yes 1	No 2	
White bread sandwiches	Yes 1	No 2	
Brown bread sandwiches	Yes 1	No 2	
Vetkoek(plain)	Yes 1	No 2	
Vetkoek with protein filling	Yes 1	No 2	
Gatsby	Yes 1	No 2	
Kota	Yes 1	No 2	
Vegetables	Yes 1	No 2	
Salad	Yes 1	No 2	
Fruit	Yes 1	No 2	
Rice	Yes 1	No 2	
Porridge	Yes 1	No 2	
Chicken	Yes 1	No 2	
Beef	Yes 1	No 2	
Mogudo/mutton	Yes 1	No 2	
Fish	Yes 1	No 2	
Hotdogs	Yes 1	No 2	
Burgers	Yes 1	No 2	
Soup	Yes 1	No 2	
Hot chips	Yes 1	No 2	
Biscuits/cakes/muffins	Yes 1	No 2	
Sweets	Yes 1	No 2	
Chocolates	Yes 1	No 2	
Chips/crisps	Yes 1	No 2	
Tea/coffee	Yes 1	No 2	
Soft drinks	Yes 1	No 2	
Juices	Yes 1	No 2	
Water	Yes 1	No 2	

Other:	Yes 1	No 2	

SECTION B: The vendor's site

Office use

1. What does the street-food vendor site look like?

Does it have a roof cover?	Yes 1	No 2	
Does it have walls?	Yes 1	No 2	
Does it have a counter?	Yes 1	No 2	
Is it a caravan?	Yes 1	No 2	
Is food placed on the pavement?	Yes 1	No 2	
Is it a kiosk with sides & roof?	Yes 1	No 2	
Is it a shipping container?	Yes 1	No 2	
Is it a temporary stall packed up after use?	Yes 1	No 2	
Other: Specify details			

SECTION C: Hygiene status of vendors and site

Office use

1. Hygiene status of vendors:

Short, clean nails?	Yes 1	No 2	
Hands free of sores?	Yes 1	No 2	
Smoking while working with food?	Yes 1	No 2	
Jewellery/bangles on hands?	Yes 1	No 2	
Handling money without washing hands in-between?	Yes 1	No 2	
Vendor appears to have a cold/runny nose?	Yes 1	No 2	
Other:			

2. Protective clothing worn by vendor:

Full	Yes 1	No 2	
Half apron?	Yes 1	No 2	
Overall?	Yes1	No 2	
Hair-covering?	Yes1	No 2	
Gloves?	Yes 1	No 2	
3. Does apron/overall appear to be clean?	Yes 1	No 2	
4. Is there a basin or tap for washing hands?	Yes1	No 2	
5. Is there soap for washing hands?	Yes 1	No 2	
6. Is there any antiseptic solution for washing?	Yes 1	No 2	
7. Is there a cloth for drying hands?	Yes 1	No 2	
8. Is there a clean washing cloth/sponge for washing utensils/food?	Yes1	No 2	
9. Is there a clean drying cloth for utensils/food?	Yes 1	No 2	

10. Any other comments about hygiene?.....

.....

The next questions are **ONLY if the vendor prepares food at the stall**			
11. Surface on which food is prepared?			
Plastic	Yes 1	No 2	
Wood	Yes 1	No	
Metal	Yes 1	No	
Cement	Yes 1	No	
Cardboard/newspaper	Yes 1	No	
Glass	Yes 1	No	
Cloth	Yes 1	No	
The next questions are **ONLY if the vendor prepares food at the stall (**CONT**)**			
12. Does the vendor use separate utensils for cooked and raw food?	Yes 1	No 2	
13. Does there appear to be adequate take away containers?	Yes 1	No 2	
14. Does there appear to be adequate cutlery?	Yes 1	No 2	
15. Does the cutlery appear to be clean?	Yes 1	No 2	
16. Does the vendor use his hands?	Yes 1	No 2	
17. Does the vendor use gloves?	Yes 1	No 2	
18. Does the vendor use cutlery to pick up food?	Yes 1	No 2	
19. Is cooked food kept covered?	Yes1	No 2	
20. Is cooked food kept warm?	Yes1	No 2	
21. If yes, how?			

Appendix 3: Consumer questionnaire

STREET FOOD SURVEY

QUESTIONNAIRE FOR CONSUMERS

SECTION A: Socio-demographic information

ID/study number								
Location:								
Date:								
Time:								
Interviewer:								

1. Gender (Do not ask but tick)	a. Male	1
	b. Female	2

2. Age in years	a. 13-17	1
	b. 18 - 24	2
	c. 25 - 34	3
	d. 35 - 44	4
	e. 45 – 54	5
	f. 55 - 64	6
	g. 65 +	7

3. Marital status	a. Single	1
	b. Married	2
	c. Living as married	3
	d. Separated	4
	e. Divorced	5
	f. Widowed	6

4. What is your country of origin?	a. South African	1
	b. Other (*specify*) ……	2
5. If respondent is South African, indicate race	a. Black African	1
(Do not ask but tick)	b. Coloured	2
	c. Indian/Asian	3
	d. White	4
	e. Other (*specify*)	5
6. Employment status	a. Unemployed,	1
	b. Full time employed,	2
	c. Part time employed,	3
	d. Scholar / student / training,	4
	e. Self-employed	5
	f. Other (specify) ……..	6

7. Level of monthly income	a. < R3 000,	1
	b. R3 000-R4 000,	2
	c. R4 000-R6 000,	3
	d. > R6 000	4
	e. Student	5
	f. Unemployed	6

8. Highest level education	a. Primary school	1
	b. Some high school	2
	c. Matric	3
	d. Diploma	4
	e. Degree	5
	f. No Schooling	6

9. Main mode of transport	a. Train,	1
	b. Bus,	2
	c. Taxi,	3
	d. Car	4

SECTION B. Purchasing habits

1. How often do you buy food/snack items/drinks from vendors/street sellers?	a. Almost every day;	1
	b. 2 to 3x a week,	2
	c. About once a week;	3
	d. About once or twice a month;	4
	e. Never	5

2. What time of day do you usually buy food/snack items/drinks from vendors/street sellers?	a. Before 10am	1
	b. Between 10am and 12pm	2
	c. Between 12pm and 3pm	3
	d. Between 3pm and 6pm	4
	e. After 6pm	5

3. Where do you usually buy your breakfast/snack/lunch from vendors/street sellers?	a. Near home	1
	b. Near work	2
	c. Near school	3
	d. Near college	4
	e. Other (specify)……..	5

1 2 3

4. About how much money do you spend <u>a week</u> on street food in rands? | | | |

<u>OR</u>

About how much money do you spend <u>a month</u> on street foods in rands? 1 2 3

SECTION C. Consumption Preferences

1. Which types of foods do you buy most often from vendors / street sellers? (Can give more than 1 answer)	a. Fruit,	1
	b. cold drinks,	2
	c. crisps;	3
	d. biscuits;	4
	e. sweets;	5
	f. chocolates;	6
	g. cooked food;	7
	h. peanuts;	8
	i. fruit juice;	9
	j. Other (specify) ……	10

2. If you buy cooked food, what is your favourite cooked street food (**If no, skip to question 5)** (specify)……

3. What does it cost?	a. < R10	1
	b. R10 – R20	2
	c. R20 – R30	3
	d. R30 – R40	4
	e. > R40	5

4. Would you like vendors to sell healthier foods?	a. Yes	1
	b. No	2

5. Which of the following would you be willing to buy from a vendor / street seller? (Can give more than 1 answer)	a. Milk, or milk drinks;	1
	b. yoghurt,	2
	c. yoghurt and muesli;	3
	d. yoghurt and fruit;	4
	e. nuts,	5
	f. fresh fruit juice;	6
	g. fresh vegetable juice ie. carrot juice;	7
	h. salad;	8
	i. fruit;	9
	j. fruit salad;	10
	k. dried fruits;	11
	l. peanuts and raisins;	12
	m. cooked vegetables eg mealie,	13
	n. vegetable skewers;	14
	o. fruit skewers;	15
	p. baked potato;	16
	q. whole wheat sandwich;	17
	r. meat or chicken cooked with vegetables (not fried);	18
	s. veggie burgers;	19
	t. high fibre muffins;	20
	u. pita bread with salad fillings;	21
	v. wraps with healthy fillings	22

6. Do you ever purchase fruit from street food vendors?	a. Yes	1
	b. No	2
7. How often?	a. Every day	1
	b. 2-3 times /week	2
	c. 2-3 times /month	3
	d. Hardly ever/never	4
8. Do you ever purchase vegetables from street food vendors?	a. Yes	
	b. No	
9. How often?	a. Every day	1
	b. 2-3 times /week	2
	c. 2-3 times /month	3
	d. Hardly ever/never	4

Section D: Knowledge Questions

Instructions for completion of this section: Please answer all the questions. Circle the letter a, b, c or d to indicate your answer. Only one letter may be circled as your answer.

Fruits and vegetables		Response
1. Which vegetable will help with good eyesight?	a. Butternut	1
	b. Cabbage	2
	c. Lettuce	3
	d. Cucumber	4
		Response
2. Which fruit will help the body fight colds?	a. Apple	1
	b. Mango	2
	c. Naartjie	3
	d. Peach	4
		Response
3. Which vegetable has the **most** fibre (roughage)	a. Cabbage	1
	b. Cauliflower	2
	c. Green beans	3
	d. Lettuce	4
Fats and Oils		Response
4. Which potato has the **least** fat?	a. Mashed potato	1
	b. Fried potato	2
	c. Boiled potato	3
	d. Roast potato	4
		Response
5. Which food has the **most** fat?	a. Atjar	1
	b. Mayonnaise	2
	c. Mustard	3
	d. Chakalaka	4
Starchy foods		Response
6. Why are starchy foods important to eat?	a. Easy to digest	1
	b. Builds muscles	2
	c. Source of energy	3
	d. Fights diseases	4

		Response
7. When will starchy foods make one gain weight?	a. When eaten with meat	1
	b. When eaten in large amounts	2
	c. When eaten in the mornings	3
	d. When eaten with vegetables	4

Meat and milk

		Response
8. How often should oily fish like pilchards and tuna be eaten?	a. Every day	1
	b. Once a week	2
	c. Twice a week	3
	d. Twice a month	4

		Response
9. Which food is **better** for a healthy heart?	a. Fried chicken	1
	b. Grilled fish	2
	c. Roast beef	3
	d. Boiled sheep brains	4

Legumes and nuts

		Response
10. Which food has fibre (roughage)? [Fibre (roughage) helps with constipation]	a. Eggs	1
	b. Nuts	2
	c. Fish	3
	d. Chicken	4

		Response
11. Why can legumes like dried beans and lentils be eaten instead of meat?	a. They have protein	1
	b. They have vitamins	2
	c. They have fat	3
	d. They have fibre (roughage)	4

Sugar

		Response
12. Which food does **not** have added sugar?	a. Canned apricot	1
	b. Apricot jam	2
	c. Apricot juice	3
	d. Fresh apricot	4

		Response
13. Which health problem can be caused by drinking sugary cool drinks every day?	a. Heart disease	1
	b. Tuberculosis (TB)	2
	c. Liver disease	3
	d. Weight gain	4

Salt

		Response
14. Which health problem can one get from too much salt?	a. High blood pressure	1
	b. Liver failure	2
	c. Lung disease	3
	d. High blood sugar	4

		Response
15. Which has the **leas**t salt?	a. Braai salt	1
	b. Stock cube	2
	c. Soup powder	3
	d. Dried herbs	4

Section E: Nutrition attitudes

Instructions for completion of this section: Tick (✓) the appropriate box for each statement to indicate whether you strongly disagree, disagree, neither agree nor disagree, agree or strongly agree with the following statements. Only one tick may be made for a statement.

	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Fruits and vegetables					
1. Fruit and vegetables should be eaten every day.	1	2	3	4	5
2. Fruit and vegetables protect against illnesses.	1	2	3	4	5
3. The number of fruit and vegetables eaten every day is important.	1	2	3	4	5
4. It is **not** necessary to eat fruit and vegetables everyday.	1	2	3	4	5
5. Fruit and vegetables will **not** add to good health.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Fats and oils					
6. I look at the fat content of the food I eat.	1	2	3	4	5
7. For good health I eat less fatty food.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Starchy foods					
8. Starchy foods should be eaten with meals.	1	2	3	4	5
9. Starchy food is **healthier** if it has fibre (roughage).	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Legumes and nuts					
10. Legumes like dried beans and lentils can replace meat in the diet.	1	2	3	4	5
11. Soy mince is almost as healthy as meat.	1	2	3	4	5
12. It is important to eat legumes like dried beans and lentils often.	1	2	3	4	5
	Strongly Disagree	**Disagree**	**Neither Agree Nor Disagree**	**Agree**	**Strongly Agree**
Sugar					
13. Sugar is **unhealthy** when you eat a lot of it.	1	2	3	4	5
14. Sugar is **okay** if you use little.	1	2	3	4	5
15. We do **not** need added sugar to be healthy.	1	2	3	4	5

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Salt					
16. We should **not** eat a lot of salty food.	1	2	3	4	5
17. I worry about the amount of salt in food.	1	2	3	4	5
18. Food can taste good with only a little salt added.	1	2	3	4	5
19. Food only tastes good if a lot of salt is added.	1	2	3	4	5
20. I enjoy salty food.	1	2	3	4	5

24 Hour Recall

Please list all the foods you ate yesterday

Please describe the foods (meals and snacks and drinks) you ate yesterday during the day and night					
Breakfast	**Mid-morning**	**Lunch**	**Mid afternoon**	**Supper**	**After supper**

Thank You for Completing This Questionnaire

List of Food groups to be completed by the field worker

	Group	Foods	Code
1	Cereals	Corn/maize/samp, rice, wheat, sorghum, porridge, phutu, bread, pasta, breakfast cereals, oats, Mabella, Morvite, fortified cereals	Yes…… 1 No..…… 2
2	White roots and tubers	Potato, white sweet potato	Yes… … 1 No... ...2
3	Yellow/orange vegetables	Carrot, butternut, pumpkin, orange-fleshed sweet potato	Yes…… 1 No... . 2
4	Dark-green leaves	Spinach, imifino, morogo	Yes…....1 No..……2
5	Vegetables other than dark-green leafy and yellow/orange	Beetroot, brinjals, broccoli, brussels sprouts, cabbage, cauliflower, gem squash, green beans, onion, peas, tomato, turnip, thepe	Yes…....1 No …….2
6	Yellow / orange fruits	Apricot, mango, pawpaw, sweet melon, yellow flesh peach, yellow flesh plums, 100% fruit juice made from these	Yes……..1 No …….2
7	Fruit other than yellow / orange fleshed	Apple, avocado, banana, berries, fig, granadilla, grape, grapefruit, guava, lemon, litchi, maroela, melon, orange, naartjie, peach, pear, pineapple, plum, strawberry, watermelon, 100% fruit juice made from these	Yes…....1 No..……2
8	Organ meat (offal)	Liver, kidney, heart, spleen, lungs, chicken giblets, malomogudo (offal), intestines	Yes…....1 No.……2
9	Meat and poultry (flesh meats)	Beef, goat, lamb, mutton, pork, venison, game, chicken, birds, ostrich, insects, mopani worms, chicken head/feet, sheep head	Yes…....1 No.……2
10	Eggs	Any type of egg	Yes…....1 No.……2
11	Fish and seafood	Fresh, frozen fish or canned fish (sardines, pilchards, tuna), dried fish, shellfish	Yes…....1 No.……2
12	Legumes, nuts and seeds	Dried beans, dried peas, lentils, nuts, peanuts, seeds (or foods made from these e.g. peanut butter)	Yes…....1 No.……2
13	Milk and milk products	Milk, sour milk, cheese, yogurt, custard, or any other milk products, or any drinks made with milk eg. cocoa	Yes…....1 No.……2
14	Fats and oils	Oils, fats, margarine or butter added to foods or used for cooking	Yes…....1 No.……2
16	Sugars and sweets	Sugar, sweets, chocolates, cake and sweetened biscuits, honey, jam, sugar sweetened drinks e.g. cold drinks, sugary foods, sweetened condensed milk	Yes……..1 No.... …2
17	Spices and condiments	Spices (salt, pepper, etc), condiments (e.g. chutney, tomato sauce)	Yes…....1 No…..…2
18	Drinks	Coffee, tea	Yes…....1 No...…2
19	Drinks	Alcoholic drinks	Yes……..1 No.....2
20	Drinks	Cold drinks (except diet cold drinks) and sweetened beverages	Yes……..1 No.....…2
21	Snacks	Chips	Yes……..1 No.....…2
22	Spreads	Fish paste, sandwich spread	Yes……..1 No.....…2
23	Other	Anything not listed as part of other food groups	Yes……..1 No.....…2

Appendix 4: Semi-structured interview schedule government officials

Street Food Interview Schedule

Municipal Officers

- Thank you for agreeing to this interview. Your time is most appreciated.

As you know the overall aims of the Street Food Project is to:
i) To evaluate the nutritional contribution of street food to the diet of the population of the Western Cape (urban areas, townships and informal settlements) and **to develop an operational model for selling healthy street foods.**
ii) To understand and evaluate existing models (options) for providing street food which enables people to eat more fruit and vegetables, provides a sustainable income for the vendors, while maintaining optimal food safety.

- I would specifically like to talk to you about the findings of our surveys and how this might feed into the development of SFVM
  - Especially with regards to the licensing and certification and all procedures involved there.
- But first I would like to present to you a list of challenges SF vendors identified during their questionnaire interviews and get your response to it:

  Vendors face an array of challenges on a daily basis, making it very difficult for them to keep their businesses afloat. Vendors were asked three open ended questions in which they were asked to express what they would change about the vending operation, the problems they experienced running their vending operation and if there is anything the municipality could do to help improve their business.

  1. The most vendors (n=573) mentioned the **lack of facilities i.e. access to electricity, water, toilets etc**. as a major challenge in their operation.
  2. The **need for permanent structure** (n=512) and **shelter and storage** (n=180) came through very strong which would address the **challenge vendors face with weather conditions** (n=263) as well as the **problem of building and dismantling of stall** (n=29) daily.
  3. Vendors reported incidents **with law enforcement/securities as a major challenge** (n=186), those trading in or on train stations also reported having issues with Metrorail securities (n=37).

4. **Crime and theft** (n=222) were a big issue vendors had to contend with and expressed **the need for improved security or policing** (n=57).
5. **The need of permits** (n=186) were expressed, along with **some issues surrounding permits** (n=30) were expressed.

❖ **Can I get a few comments and your views about these issues as I mention them?**

1. The existing policies relating to Street Foods…
   - The Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972.
   - The Health Act 63 of 1977.
   - The International Health Regulations Act 28 of 1974
   - The Agricultural Product Standards Act 119 of 1990
   - The Liquor Products Act 60 of 1989
   - The Abattoir Hygiene Act 121 of 1992
   - The Animal Diseases Act 35 of 1984
   - The Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947
   - The Medicines and Related Substances Act 101 of 1965
   - The Standards Act 29 of 1993
   - The Plant Breeders Rights Act 15 of 1976
   - The Agricultural Pest Act 36 of 1983
   - The Trade Metrology Act 77 of 1973 and the Trade Marks Act 62 of 1963 both relate to food labelling.
   - **What are the bylaws of the CCT?** By-laws of local authorities. Many local authorities have food hygiene by-laws which they enforce in addition to the national regulations.

2. A big portion of our vendor sample did not have any form of certification. Please tell me about your application process and its requirements.
   - *How often do applications get turned down?*
   - *What is the waiting period?*
   - *What are the financial implications?*
   - *How long is a license/certificate valid?*
   - *What is the difference between a license and certificate?*
   - *Are there any other forms of permitting/authorising documentation a vendor could have?*
   - *Is there something like a temporary permit? And how does it work?*
   - *What are the key factors in being granted a certificate/license?*

3. Do vendors require a business plan?
   - *If so, what should it entail?*
   - *Is there any institution or organisation vendors can specifically look to for financial assistance?*

4. What are the hygiene requirements for street food vendors specifically?
   - *Water? Electricity requirements?*
   - *Is there any specific guide that you adhere to pertaining to safety?*
   - *Do you provide any training in this regard?*

5. Is there any support available for vendors from the municipality or local/provincial government?
   - *If so, do they know it is available and who to contact?*

6. Does the city have a vision for street food vendors?
   - *If so, what is the vision?*
   - *Would the aims of the SFVBM fit in with this vision?*

7. **TCP project:** What was CPT's involvement? Were any street food vendors reached?
   - Permissions to use their materials?

Appendix 5: Semi-structured interview schedule vendors

SFVBM – Focus Group Schedule

❖ Before workshop starts:

✓ A small socio-demographic form to be filled in!!!

❖ Opening:

Moderator and co-facilitator introduce themselves, institution and the purpose of the group.

Participants introduce themselves, how long they have been in the business, and what motivated them to be in the business. Also, say something about what the love about being a vendor, what they do not like so much of being a vendor.

❖ Power Point or A3 Poster Display of the survey results and integrated themes, as well as identified components.
❖ Discussion re: presentation (vendors to break up in groups or pairs for discussion)
❖ Power Point or A3 Poster Display of the various components and the relating elements

1. Business
   - **Do research**
   - **Start-up finance**
   - **Choose the type/s of foods to sell:**
   - **Contact the department of economic c development to find out what laws apply to street vendors.**
   - **Obtain required license/certificate for operating**
   - **Vending cart/unit/stand**
   - **Get a storage area for your inventory and your cart.**
   - **Buy wholesale (Co-op???)**
   - **Attracting your clientele**
   - **Promote your business**

- **Keep log books**

2. Nutrition
    - Basic nutrition information
    - The importance of a meal
    - Meal times
    - What makes a healthy meal
    - Portion sizes
    - Healthy sandwich ideas
    - Recipes: Salads, soups, stews, bunny chow, fish cakes
3. Hygiene
    - The 5 keys of safety
      Have you ever seen these?

      Have you ever received training on these 5 keys? If so, who from?

4. Cart
    - What are your first thoughts looking at this proposed cart?
    - Practicality?
    - Would you be willing to pay for it? What do you think it should cost?

❖ Discussion re: presentation (vendors to break up in groups or pairs for discussion)
❖ Feedback and discussion in group

❖ After discussions:
    - As a cooked food vendor what is your "normal" routine in prepping and selling your food?
      [Cook at home?

      How do you keep things warm? Or reheat?

      How do you maintain optimal hygiene?]

    - When it comes to purchasing stock, how do you normally go about it?
      [Bulk buying? Buy in clubs i.e. with other vendors? Buy on a day to day basis?]

    - What would your ideal situation be?

Appendix 6: R962

GOVERNMENT NOTICE

DEPARTMENT OF HEALTH

No. R. 962 **23 November 2012**

FOODSTUFFS, COSMETICS AND DISINFECTANTS ACT, 1972 (ACT 54 OF 1972)

REGULATIONS GOVERNING GENERAL HYGIENE REQUIREMENTS FOR FOOD PREMISES AND THE TRANSPORT OF FOOD

The Minister of Health has in terms of section 15(1)(n), where applicable, read with section 15(7)(b), of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972), made the regulations in the Schedule.

SCHEDULE

Definitions

In these regulations any word or expression to which a meaning has been assigned in the Act shall have such meaning and, unless the context otherwise indicates –

"animal" means any member of the animal kingdom;

"available" includes available elsewhere than on the food premises in question;

"best available method" means a method which is practicable and necessary for the protection of food against contamination or spoilage, having due regard to local conditions and circumstances whether at or on food premises or elsewhere, the prevailing extent of established practice and the financial implications thereof;

"certificate of acceptability" means a certificate of acceptability referred to in regulation 3;

"clean" means free of any dirt, impurity, objectionable matter or contamination to the extent that a state of hygiene is attained, and "keep clean" has a similar meaning;

"container" or **"food container"** includes anything in which or with which food is served, stored, displayed, packed, wrapped, kept or transported and with which food is in direct contact;

"contaminate" means the effect exerted by an external agent on food so that it –
(a) does not meet a standard or requirement determined by any law;
(b) does not meet acceptable food hygiene standards or consumer norms or standards; or

(c) is unfit for human consumption;
and **"contamination"** has a corresponding meaning;

"core temperature" means the temperature reading taken in the estimated centre of the food;

"facility" means any apparatus, appliance, equipment, implement, storage space, working surface or object used in connection with the handling of food;

"food" means a foodstuff intended for human consumption as defined in section 1 of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972), excluding food referred to in regulation 14;

"food handler" means a person who in the course of his or her normal routine work on food premises comes into contact with food not intended for his or her personal use;

"food premises" means a building, structure, stall or other similar structure, and includes a caravan, vehicle, stand or place used for or in connection with the handling of food;

"good manufacturing practice" means a method of manufacture or handling or **a** procedure employed, taking into account the principles of hygiene, so that food cannot be contaminated or spoiled during the manufacturing process;

"handle" includes manufacture, process, produce, pack, prepare, keep, offer, store, transport or display for sale or for serving, and "handling" has a corresponding meaning;

"hands" includes the forearm or the part of the arm extending from the wrist to the elbow;

"health hazard" includes any condition, act or omission that may contaminate or spoil food so that consumption of such food is likely to be dangerous or detrimental to health;

"inspector" means a person contemplated in section 10 of the Act

"perishable food" means any foodstuff which on account of its composition, ingredients, moisture content and/or pH value and of its lack of preservatives and suitable packaging is susceptible to an uninhibited increase in microbes thereon or therein if the foodstuff is kept within the temperature spectrum of 4oC to 65oC, and includes the perishable foodstuffs listed in Government Notice No. R.1183 of 1 June 1990, as amended, excluding fruit and vegetables;

"person in charge", with regard to any food premises, means a natural person who is responsible for the food premises and/or the owner of such food premises, as the case may be;

"prepacked food", means food which, before it is presented for sale or for serving, has been packed as contemplated in regulation 7(3);

"ready-to-consume food" means any perishable food which may be consumed without having to undergo any further process of preparation to make it consumable;

"serve" includes the provision of food whether for a consideration or otherwise;

"the Act" means the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);

"thermometer" means an apparatus which can give the temperature readings referred to in these regulations, the combined accuracy of such a thermometer and its temperature-sensitive sensor being approximately 0,5°C;

"these regulations" includes any annexure to these regulations;

"unsound" means unwholesome sick, polluted, infected, contaminated, decayed or spoiled, or unfit for human consumption for any reason whatsoever;

"vehicle" means a train, trolley, wagon, cart, bicycle, sled, truck, boat, ship or aeroplane, and includes any other craft, vehicle or conveyance used in the handling or transport of food;

"water" means water that complies with the requirements set out in SANS 241: Water for domestic supplies.

Application

2. (1) A local authority which does not have the services of an inspector at its disposal for any reason may use the services of an inspector from another health authority or in private practice to exercise or execute the powers or duties of an inspector referred to in these regulations.

(2) No provision of these regulations that is in conflict with regulations made under the Act with regard to the handling or transport of certain foods shall be valid in so far as it so conflicts.

Certificate of acceptability

3. (1) Subject to the provisions of subregulation (2) and regulation 15(5), no person shall handle food or permit food to be handled -
   (a) on food premises in respect of which a valid certificate of acceptability has not been issued or is not in force
   (b) in contravention of any restriction or condition or stipulation contained in such certificate of acceptability.

(2) The provisions of subregulation (1) shall come into effect in the case of food premises existing at the time of publication of these regulations on the first day following a period of one year after the date of promulgation of these regulations.

(3) The person in charge of any food premises wishing to obtain a certificate of acceptability in respect of such food premises shall apply therefor in writing to the local authority in whose area of jurisdiction the food premises are situated on a form containing at least the particulars that are substantially the same as those contained in the form in Annexure A to these regulations.

(4) Upon receipt of an application referred to in subregulation (3), the local authority shall without delay refer the application to an inspector for consideration.

(5) An inspector may, in considering such an application, request such further information as he or she may deem necessary or expedient from the applicant or from any other person.

(6) If an inspector, after having carried out an inspection, is satisfied that the food premises concerned, having due regard to existing conditions of the adjacent land and facilities, subject to the provisions of regulations 4(2) and 15 –

(a) do in all respects comply with the provisions of regulations 5 and 6, a local authority shall issue a certificate of acceptability in the name of the person in charge on a form that is substantially the same as the form in Annexure B of these regulations; or

(b) do not in all respects comply with the provisions of regulations 5 and 6, a local authority may, subject to the provisions of regulation 4(2), grant an extension for a maximum of six months to enable the person in charge so to change or equip the food premises that they comply with the provisions in question: Provided that during the said period of extension the provisions of subregulation (1) shall not apply to the person concerned.

(7) A certificate of acceptability shall be displayed in a conspicuous place for the information of the public on the food premises in respect of which it was issued or a copy thereof shall immediately be made available on request where the display thereof is impractical.

(8) If the person in charge of food premises is replaced by another person, such person shall inform the local authority in writing of such replacement within 30 days after the date thereof and the local authority shall subject to the provisions of regulation 4(2), issue a new certificate of acceptability in the name of the new person in charge.

(9) A certificate of acceptability –

(a) shall not be transferable from one person to another person and from one food premises to another food premises;

(b) shall be valid only in respect of the nature of handling set out in the application for a certificate of acceptability;

(c) may at any time be endorsed by a local authority by –

(i) the addition of any further restriction that may be necessary to

prevent a health hazard; and

(ii) the removal of any restriction with regard to the category or type of food or the method of handling;

(d) shall expire temporarily for the period during which a prohibition under regulation 4(2) is in effect

(e) shall expire permanently if a prohibition referred to in regulation 4(2) is not removed within a stipulated period which shall not exceed six months from the date on which a notice was issued in terms of regulation 4(2);

(f) shall expire permanently if the provisions of subregulation (8) are not complied with.

(10) No person may make any unauthorised changes or additions to or forge a certificate of acceptability.

(11) Subject to the provisions of sub-regulation 3(8), sub-regulation 3(9) and sub-regulation 4(2), where applicable, a certificate of acceptability issued prior to the commencement of these regulations in terms of the regulations published in Government Notice No. R. 918 of 30 July 1999 shall be deemed a certificate of acceptability issued in terms of these regulations.

Prohibition on the handling and transportation of food

4. (1) No person shall handle food in a manner contrary to the provisions of these regulations.

(2) If an inspector following an inspection of food premises or a facility is of the opinion –

(a) that such food premises or facility –

(i) are or is in such a condition or used in such a manner; or

(ii) do or does not comply with these regulations to the extent;

(b) that a particular activity with regard to the handling of food takes place in such a manner; or

(c) that such circumstances exist with regard to the food premises or facility or any other activity, that they or it constitute a health hazard and that the continued use of the food premises or facility or the activity should be prohibited, the local authority may summarily prohibit the use of the food premises or facility for the handling of food or any of the activities that relate to the handling of food, by serving a written order on the person in charge or, if he or she is not available, his or her representative informing such person of the prohibition.

(3) A notice referred to in subregulation (2) shall contain at least the following particulars:

(a) The reason(s) for the prohibition;
(b) a statement that the prohibition will in writing be removed by a local authority as soon as the reason(s) for the prohibition has (have) been removed and provided the inspector is satisfied that the reason(s) for the prohibition is (are) not likely to recur.

(4) (a) A prohibition shall come into operation from the time at and the date on which a notice is served under subregulation (2).
(b) No person shall perform any act that is contrary to such prohibition.

(5) An inspector shall, within 72 working days hours of receiving a request for the removal of a prohibition, carry out an investigation of the food premises, facility, activity or circumstance which gave rise to the prohibition and the local authority shall upon completion of such investigation in writing inform the person on whom the prohibition notice was served or, if he or she is not available, any other person representing such person that the prohibition has been removed or remains, as the case may be.

(6) A local authority may levy an inspection fee equivalent to the expenses incurred by the local authority for carrying out the inspection on the person in charge for each investigation carried out by an inspector in terms of subregulation (5).

Standards and requirements for food premises

5. (1) Subject to regulation 15 no person shall handle food elsewhere than on food premises that meet the requirements of this regulation and regulation 6.

(2) Food premises shall be of such location, design, construction and finish and shall be so equipped, in such condition and so appointed that they can be used at all times for the purpose for which they were designed, equipped and appointed –
(a) without creating a health hazard; and
(b) in such manner that food –
(i) can be handled hygienically on the food premises or with the equipment thereon; and
(ii) can be effectively protected by the best available method against contamination or spoilage by poisonous or offensive gases, vapours, odours, smoke, soot deposits, dust, moisture, insects or other vectors, or by any other physical, chemical or biological contamination or pollution or by any other agent whatsoever.

(3) For the purposes of subregulation (2) food premises shall meet the following requirements;
(a) All interior surfaces of walls, sides or ceilings, or of roofs without ceilings, and the surfaces of floors, or any other similar horizontal or vertical surfaces that form part of or enclose the food-handling area

shall-

(i) have no open joints or open seams and shall be made of smooth, rust-free, non-toxic, cleanable and non-absorbent material that is dust-proof and water-resistant: Provided that in a food-serving or storage area -

(aa) facebrick;

(bb) similar wails the joints of which are formed properly or are so formed and finished that they are easy to clean; or

(cc) decorative wall or ceiling finishes which are easy to clean,

may be used;

(ii) be of such a nature that they cannot contaminate or contribute to the contamination of food.

(b) Each room of food premises shall be -

(i) ventilated effectively by means of -

(aa) natural ventilation through openings or openable sections which are directly connected to the outside air and so positioned in the external walls and/or roof that effective cross-ventilation is possible: Provided that such openings shall have a surface area equal to at least 5% of the floor area of the room concerned; or

(bb) artificial ventilation that complies with the requirements of the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977),

whichever of the two methods will facilitate the addition of adequate fresh air to and the effective removal of polluted or stale air from the food-handling area to the extent that air contaminants that could contaminate food, and that gas, vapours, steam and warm air that may arise during the handling of food are effectively removed, and that the emergence of any unhygienic or unhealthy condition in the food-handling area is prevented;

(ii) illuminated by means of -

(aa) unobstructed transparent surfaces in the external walls and/or roof which admit daylight, with an area equal to at least 10% of the floor area in the room concerned; or

(bb) artificial illumination which complies with the requirements of the National Building Regulations and the Building Standards Act, 1977, and which permits an illumination strength equal to at least 200 lux to fall on all food-handling surfaces in the room concerned.

(c) Food premises shall -

(i) have a wash-up facility with hot and cold water for the cleaning of facilities;

(ii) be rodentproof in accordance with the best available method:

Provided that this requirement shall not apply in respect of food premises on which no food is handled or kept after the trading hours of the premises;

(iii) be provided with effective means of preventing the access of flies or other insects to an area where food is handled;

(iv) have a waste-water disposal system approved by the local authority.

(d) The following shall be available in respect of food premises:

(i) The number of latrines, urinal stalls and hand washbasins specified in Annexure C to these regulations for the use of workers on the food premises and for use by persons to whom food is served for consumption on the food premises: Provided that separate sanitary facilities for workers and clients shall not be required: Provided further that where persons of only one sex or no more than ten persons work on food premises, separate sanitary facilities shall not be required for workers of different sexes;

(ii) hand-washing facilities which shall be provided with cold and/or hot water for the washing of hands by workers on the food premises and by persons to whom food is served for consumption on the food premises, together with a supply of soap (or other cleaning agents) and clean disposable hand-drying material or other hand-cleaning facilities or hand-drying equipment for the cleansing and drying of hands by such workers and persons;

(iii) liquidproof, easy-to-clean refuse containers with close-fitting lids suitable for the hygienic storage of refuse pending its removal from the food-handling area;

(iv) storage space for the hygienic storage of food, facilities and equipment and a suitable separate area for the hygienic storage of refuse containers on the food premises;

(v) a separate changing area with storage facilities for clothes;

(vi) an adequate supply of water.

(e) No room in which food is handled shall have a direct connection with any area -

(i) in which gas, fumes, dust, soot deposits, offensive odours or any other impurity is present or may arise in such a manner that food in the food-handling room could be contaminated or spoilt;

(ii) in which an act is performed in any manner or where any condition exists that could contaminate or spoil food in the foodhandling area;

(f) A room in which food is handled may be connected to a room in which a latrine or urinal is situated -

(i) only via a properly ventilated lobby: Provided that all relevant interconnecting doors shall cover the whole area of their apertures: Provided further that they shall be equipped with

durable self-closing devices; or

(ii) without such a lobby between them: Provided that the connecting aperture shall have a self-closing door as contemplated in item **(i)**: Provided further that the latrine or urinal room shall be equipped with effective mechanical extraction ventilation to the outside air to render the atmosphere inside such room under a negative pressure in relation to the atmosphere in the food-handling room.

Standards and requirements for facilities on food premises

6. (1) The surface of any table, counter or working surface on which unwrapped food is handled and any equipment, utensil or basin or any other surface which comes into direct contact with food shall be made of smooth, rust-proof, non-toxic and non-absorbent material that is free of open joints or seams: Provided that wooden chopping blocks, cutting boards and utensils shall not be prohibited providing such items are kept in such a condition that dirt does not accumulate thereon or therein.

(2) No surface referred to in subregulation (1) and no crockery, cutlery, utensils, basins or any other such facilities shall be used for the handling of food if they are not clean or if they are chipped, split or cracked.

(3) Any utensil or item which is suitable for single use only -

(a) shall be stored in a dust-free container until used; and

(c) shall not be used more than used.

(4) A surface referred to in subregulation (1) and a facility referred to in subregulation (2) shall be -

(a) cleaned and washed before food come into direct contact with it for the first time during each work shift; and

(b) cleaned and washed, as and when necessary, during and/or immediately after the handling of food, so that contamination of the food that comes into contact with any such surface or facility is prevented, and any such surface or facility shall, before food comes into direct contact therewith, contain -

(i) no more than 100 viable micro-organisms per cm2 upon analysis, conducted in accordance with acknowledged scientific micro-biological methods of investigation, of a sample taken in accordance with the swab technique prescribed by SABS Standard Test Method 763: Efficacy of Cleaning Plant, Equipment and Utensils: Swab Technique; and

(ii) no remains of cleaning materials or disinfectants which may pollute the food.

(5) (a) Every chilling and freezer facility used for the storage , display or transport of perishable food shall be provided with a thermometer which at all times shall reflect the degree of chilling of the refrigeration area of such facility and which shall be in such a condition and positioned so that an accurate reading may be taken unhampered.

(b) Every heating apparatus or facility used for the storage, display or transport or heated perishable food shall be provided with a thermometer which at all times shall reflect the degree of heating of the heating area concerned and which shall be in such a condition and positioned so that an accurate reading may be taken unhampered.

Standards and requirements for food containers

7. (1) No person shall sell canned or hermetically sealed food in a container which -

(a) bulges at the flat or round sides or ends or one side of which bulges when the other side is pressed;

(b) is in any way blown or from which gas escapes when it is opened or punctured, unless

(i) the container contains an aerated drink; or

(ii) gas has been used as a preservative;

(c) is so rusted or damaged that it is liable to contaminate or spoil the food or that it leaks or has become unsealed;

(d) had a leak which was resealed.

(2) A container shall be clean and free from any toxic substance, ingredient or any other substance liable to contaminate or spoil the food in the container.

(3) Repacked food, depending on the type of food, shall be packed in a dustproof and liquidproof container that protects the product therein against contamination under normal handling conditions and shall be so packed or sealed that the food cannot be removed from its container without the stopper or lid or similar seal being removed or without the wrapping, container or seal being damaged.

(4) Perishable food, excluding the products referred to in regulation 14 and products that are not prepacked, except food for consumption as meals on food premises, shall, when served to the consumer, be packed in a container that protects the food therein against contamination.

Standards and requirements for the display, storage and temperature of food

8. (1) Food that is displayed or stored shall not be in direct contact with a floor or any ground surface.

(2) Any shelf or display case used for displaying or storing food or any container

shall be kept clean and free from dust or any other impurity.

(3) Non-prepacked, ready-to-consume food, including food served as meals and displayed in an open container, shall be protected in accordance with the best available method against droplet contamination or contamination by insects or dust.

(4) (a) Subject to subregulation (5) all food specified in Annexure D to these regulations shall, excluding the time taken by the food to cool down or to be heated to the required temperature in accordance with good manufacturing practice, during the storage, transport or display thereof be kept at a core temperature not exceeding the core temperature specified in column 3 of Annexure D opposite the relevant category of food, and no food shall be sold if, in the case of frozen or chilled food products, the core temperature thereof is higher that the required core temperature or the surface temperature thereof is more than 2oC higher than the required core temperature, and, in the case of heated food products, the core temperature thereof is lower than the required core temperature or the surface temperature thereof is more than 2oC lower than the required core temperature.

(b) The provisions of paragraph (a) shall not apply to -

(i) any perishable food that will be sold directly to a consumer within one hour of being processed or prepared or that will be consumed on the food premises within one hour of being processed or prepared;

(ii) venison, for a period not exceeding eight hours after the animal concerned has been killed: Provided that the surface temperature thereof shall not exceed 25oC;

(iii) unprocessed raw fish, molluscs or crustaceans or raw meat or edible offal or the carcasses of cattle, sheep, goats, pigs, horses, mules, donkeys, rabbits or ostriches while being transported for a period not exceeding one hour during delivery: Provided that the surface temperature thereof shall not exceed 25oC.

(iv) any food exposed to higher temperatures than those referred to in this regulation during a maturation period or as part of a manufacturing process: Provided that exposure to such higher temperatures shall be in accordance with good manufacturing practice.

(5) Any food that is marketed as a frozen product and has thawed but the surface temperature of which has not exceeded 7oC may be refrozen: Provided that such refrozen product shall be handled in accordance with good manufacturing practice.

(6) The code of practice for measuring the temperature of food set out in Annexure E to these regulations shall, in so far as it is applicable, be applied to measuring the temperature of food.

Standards and requirements for protective clothing

9. (1) No person shall be allowed to handle food without wearing suitable protective clothing as specified in subregulation (2).

(2) The protective clothing, including head covering and footwear, of any person handling food that is not packed so that the food cannot be contaminated shall
(a) be clean and neat when such person begins to handle the food;
(b) at all times during the handling of the food be in such a clean condition and of such design and material that it cannot contaminate the food;
(c) be so designed that the food cannot come into direct contact with any part of the body, excluding the hands.

Duties of a person in charge of food premises

10. A person in charge of food premises shall ensure that -
(a) effective measures are taken to eliminate flies, other insects, rodents or vermin on the food premises;
(b) any person working on the food premises is adequately trained in food hygiene by an inspector or any other suitable person:
(c) refuse is removed from the food premises or from any room or area in which food is handled as often as is necessary and whenever an inspector requires it to be done;
(d) refuse is stored or disposed of in such a manner that it does not create a nuisance; (e) refuse bins are -
(i) cleaned regularly; and
(ii) disinfected whenever necessary and whenever an inspector requires it to be done;
(f) waste water on the food premises is disposed of to the satisfaction of the local authority;
(g) the food premises and any land used in connection with the handling of food and all facilities, freight compartments of vehicles and containers are kept clean and free from any unnecessary materials, goods or items that do not form an integral part of the operation and that have a negative effect on the general hygiene of the food premises;
(h) no person handling non-prepacked food wears any jewellery or adornment that may come into contact with the food, unless it is suitably covered;
(i) no animal, subject to the provisions of any law, is kept or permitted in any room or area where food is handled, except that -
(i) a guide dog accompanying a blind person may be permitted in the sales or serving area of the food premises;
(ii) fish, molluscs or crustaceans may be kept alive until prepared for consumption;

(iii) a live animal may be killed in a separate room before the carcass is handled, subject to regulation i2(4);

(j) no condition, act or omission that may contaminate any food arises or is performed or permitted on the food premises;

(k) the provisions of these regulations are complied with;

(l) all persons under his or her control who handle food at all times meet the standards and requirements and execute the duties prescribed by regulations 9 and 11, respectively;

(m) a room or area in which food is handled shall not be used for -

(i) sleeping purposes;

(ii) washing, cleaning or ironing of clothing or similar laundry;

(iii) any other purpose or in any manner that may contaminate the food therein or thereon;

(n) no food handler touches ready-to-consume non-prepacked food with his **or** her bare hands, unless it is unavoidable for preparation purposes, in which **case** such food shall be handled in accordance with good manufacturing practice;

(o) the reporting of diseases and conditions contemplated in regulation 11(2)(b) are properly recorded and kept for perusal by an inspector.

Duties of a food handler

11. (1) Food, a facility or a container shall not be handled by any person –

(a) whose fingernails, hands or clothes are not clean;

(b) who has not washed his or her hands thoroughly with soap and water or cleaned them in another effective manner -

(i) immediately prior to the commencement of each work shift;

(ii) at the beginning of the day's work or after a rest period;

(iii) after every visit to a latrine or urinal;

(iv) every time he or she has blown his or her nose or after his or her hands have been in contact with perspiration or with his or her hair, nose or mouth;

(v) after handling a handkerchief, money or a refuse container or refuse;

(vi) after handling raw vegetables, fruit, eggs, meat or fish and before handling ready-to-use food;

(vii) after he or she has smoked or on return to the food premises; or

(viii) after his or her hands have become contaminated for any other reason.

(2) Food, a facility or a container shall not be handled by any person -

(a) who has on his or her body a suppurating abscess or a sore or a cut or abrasion, unless such abscess, sore, cut or abrasion is covered with a moistureproof dressing which is firmly secured to prevent contamination

of the food;

(b) who is or who is suspected of suffering from or being a carrier of a disease or condition in its contagious stage that can be transmitted by food, unless any such person immediately reports the disease or condition to the person in charge and a certificate by a medical practitioner stating that such person is fit to handle food is submitted;

(c) whose hands or clothing are not clean.

(3) No person shall -

(a) spit in an area where food is handled or on any facility;

(b) smoke or use tobacco in any other manner while he or she is handling non-prepacked food or while he or she is in an area where such food is handled;

(c) handle non-prepacked food in a manner that brings it into contact with any exposed part of his or her body, excluding his or her hands;

(d) lick his or her fingers when he or she is handling non-prepacked food or material for the wrapping of food;

(e) cough or sneeze over non-prepacked food or food containers or facilities;

(f) spit on whetstones or bring meat skewers, labels, equipment, or any other object used in the handling of food or any part of his or her hands into contact with his or her mouth, or inflate sausage casings, bags or other wrappings by mouth or in any other manner that may contaminate the food;

(g) walk, stand, sit or lie on food or on non-hermetically sealed containers containing food or on containers or on food-processing surfaces or other facilities;

(h) use a hand washbasin for the cleaning of his or her hands and simultaneously for the cleaning of facilities; or

(i) while he or she is handling food, perform any act other than those referred to above which could contaminate or spoil food.

Standards and requirements for the handling of meat

12. (1) (a) No person shall on food premises handle meat derived from an animal slaughtered in contravention of the Meat Safety Act, 2000 (Act No.40 of 2000).

(b) No person shall on food premises handle the meat of an animal exempted from the provisions of the Meat Safety Act, 2000 (Act No.40 of 2000), unless a notice that is clearly visible and legible and that contains the following information or information to that effect, in letters at least 18 mm high, is displayed at the food premises: "The meat sold on these premises has been exempted from inspection in terms of Meat Safety Act, 2000 (Act No.40 of 2000).

(2) Meat on a carcass shall not be handled on food premises, unless -

(a) the carcass has been properly bled;
(b) the abdominal viscera were removed within 30 minutes after the killing of the animal in such a manner that neither the stomach and intestinal content nor any other matter polluted or spoiled the meat; and
(c) the thoracic viscera were removed within three hours after the killing of the animal.

(3) Unskinned carcasses shall not be so handled that the skin thereof comes into contact with other food on food premises or that the meat of such carcasses is contaminated or spoiled.

(4) Subject to Meat Safety Act, 2000 (Act No.40 of 2000) no animal shall be killed, bled, eviscerated, skinned or dressed on food premises other than in a room used specifically and exclusively for that purpose in accordance with good manufacturing practice: Provided that no further handling or processing of any such carcass shall take place in that room.

Standards and requirements for the transport of food

13. (1) No person shall transport food including the products referred to in regulation 14 on or in any part of a vehicle -
(a) unless that part is clean and has been cleaned to such an extent that chemical, physical or microbiological contamination of the food is prevented;
(b) together with -
(i) contaminated food or waste food;
(ii) poison or any harmful substance;
(iii) a live animal; or
(iv) any object that may contaminate or spoil the food.

(2) Subject to subregulations (1) and (4), the freight compartment of a vehicle that is used for the transportation of food that is not packed or wrapped in liquidproof and dustproof sealed containers -
(a) shall have an interior surface made of an easy-to-clean and smooth, rustfree, non-toxic and non-absorbent material without open joints or seams and, before food is loaded into such freight compartment, no square centimetre of the said surface shall upon analysis as referred to in regulation 6(4) contain more than 100 viable micro-organisms;
(b) shall be dustproof;
(c) shall not be used simultaneously for the transport of any person or any other item that may contaminate the food.

(3) Notwithstanding any provisions to the contrary contained in this regulation, no non-prepacked food shall be -
(a) transported in such a manner that it comes into contact with the floor of a

vehicle or the floor covering thereof or a surface thereof that can be walked on or with anything else that could pollute the food; or

(b) transported or carried in such a manner that the food could be spoiled or contaminated in any way.

(4) Subregulations (2) and (3) (a) shall not apply to the transport of venison, fish, molluscs or crustaceans between the food premises and the place where the animals are hunted or the place where the fish, molluscs or crustaceans are caught or harvested: Provided that such transport shall be by the best available method and within a suitable time limit for transport as required by circumstances.

(5) No person shall transport food in bulk and semi-packed food in contravention of the provisions of the *Codex Code of Hygienic Practice for the Transport of Food in Bulk and Semi-Packed Food* (CAC.RCP 47-2001).

Provisions concerning unprocessed products

14. Notwithstanding any provisions to the contrary contained in these regulations, an inspector shall, if he or she is of the opinion that conditions prevail that constitute a health hazard with regard to the packing, storage, display, sale or transport of fresh, raw and unprocessed fruit and vegetables and unprocessed maize, wheat, rye, unshelled peanuts, sugar cane, sunflower seed or other unprocessed agricultural crops, or with regard to the handling of food referred to in regulation 15(5)(a) -

(a) subject to regulations made in terms of section 15 of the Act relating to inspections and investigations in respect of the handling of food, order that any condition that led to or could lead to such or any other health hazard be corrected or that any provision of these regulations be complied with; or

(b) prohibit the continued use of the facility or food premises for the packing, storage, display, sale or transport of any of the said products, and the provisions of regulation 4(2) to (5) shall *mutatis mutandis* apply to such prohibition.

14A. No person shall handle bottled/packaged drinking water (other than natural mineral water) in contravention of the provisions of the *Codex Code of Hygienic Practice for Bottled/Packaged Drinking Waters (Other then Natural Mineral Waters)*(CAC/RCP 48-2001)

Exemptions, additional requirements and reservations

15. (1) A person in charge of food premises may, subject to regulation 3(1)(a), apply to the local authority concerned for exemption from any of the provisions of these regulations, excluding exemption from the issuing of a certificate of acceptability.

(2) Upon receipt of an application referred to in subregulation (1) a local authority shall refer the application to an inspector without delay, and exemption shall not be granted unless the inspector has submitted a report to the local authority to the effect that he or she is satisfied that -

(a) the provision from which exemption is requested imposes unreasonable requirements in the case in question; and

(b) the granting of such exemption does not or will not result in conditions that constitute a health hazard.

(3) An exemption referred to in this regulation -

(a) shall be subject to the conditions listed by the local authority in the certificate of acceptability or notice of exemption, as the case may be; and

(b) shall be withdrawn by the local authority on the grounds of an inspection report and a recommendation by an inspector to the effect that he or she is of the opinion that such exemption will result in conditions that constitute a health hazard.

(4) Subject to regulation 3(6)(a) a local authority may, on the grounds of an inspection report and recommendations from an inspector, set additional requirements to be met on any food premises where, despite compliance with any provision contained in these regulations, a health hazard exists which is not provided for in these regulations, which additional requirements shall, subject to the principles of the best available method and good manufacturing practice, be limited to the minimum necessary to remove the health hazard in question.

(5) (a) Subject to the principles of the best available method and good manufacturing practice, the provisions of regulations 3(1) and 5 shall not apply in respect of the killing, bleeding or evisceration of an animal after the hunting thereof or of fish, molluscs or crustaceans after the catching or harvesting thereof.

(b) The provisions of regulation 3(1) shall not apply to -

(i) a private residence where food is handled for the purpose of making it available without compensation to a church, educational or amateur sports organisation or any registered welfare or fund-raising organisation for sale: Provided that the person in charge of any such organisation who receives such food shall keep a record of the type of food and the address of the private residence where the food was handled for a period of at least 30 days after receipt of the food; and

(ii) any vehicle used by the person in charge of food premises, for which a certificate of acceptability exists, to transport, display or serve prepacked food deriving from such food premises, but shall apply in respect of a vehicle used for the transport of perishable food on behalf of another person.

(c) These regulations shall not apply to a private household which handles food for consumption by such household or, without compensation, by any other person.

Offences

16. Any person who contravenes a provision of these regulations or allows such a contravention to take place shall be guilty of an offence.

Commencement

17. These regulations will come into effect on the date of publication in the Government Gazette.

DR A MOTSOALEDI, MP
MINISTER OF HEALTH

ANNEXURE A
[Regulation 3(3)]

APPLICATION FORM OF A CERTIFICATE OF ACCEPTABILITY FOR FOOD PREMISES

A. PERSON IN CHARGE

Surname and first names of person in whose name the certificate of acceptability must be issued:.....	I.D. Number.....

ADDRESS	Postal address:	
	Residential address:	
Tel. No.:		Business | Residential
B. PARTICULARS FOR FOOD PREMISES		
Name of food premises (if any)....		
Erf No.(if applicable).....		
Type of food premises (e.g building, vehicle, stall).....		

Location address or address where the food premises can be inspected

If the following are not situated on the food premises, note the address or describe the location thereof:

	Erf No.	Address
a) Sanitary (latrine) facilities		
b) Cleaning facilities (wash-basins for facilities)		

c) Hand-washing facilities _____
d) Storage facilities for food/facilities _____
e) Preparation premises _____

C. FOOD CATEGORY

List and describe the food items or the nature or type of food involved

D. NATURE OF HANDLING

List and describe what your activities will entail (e.g preparation or packing and processing)

E. STAFF

	Men	Women
Number of persons employed or to be employed……		

F. PARTICULARS OF EXEMPTION BEING APPLIED FOR
[Regulation 15(1)]

G. PARTICULARS OF APPLICANT

Name……

Capacity (e.g. owner, managing director, secretary, manager)

Postal address

Tel no……..

Date if application……

Signature…….

ANNEXURE B
[Regulation 3(6)(a)]

CERTIFICATE OF ACCEPTABILITY FOR FOOD PREMISES
This certificate is not transferable from premises to premises

A. ISSUING LOCAL AUTHORITY:.....
CERTIFICATE No.:.....

NAME.....		Tel No.	OFFICIAL DATE STAMP	

B. FOOD PREMISE

Name (if any).....	
Address: (Location or trading area, erf. N. or vehicle registration No.):	
Address where food is processed:	

C. PERSON IN CHARGE

Name:	

I.D. NUMBER.....

D. CERTIFICATION AND RESTRICTION

It is hereby certified that the above-mentioned food premises comply with the provisions of regulations 5 and 6 made by Government Notice No. .... of .... 2012 in respect of the handling of food in the manner specified.

Restrictions, conditions or stipulations in terms of regulation 3(1)(b)

E. SIGNATURE OF INSPECTOR		DATE
Name of inspector		
Official designation		

F. ENDORSEMENTS/EXEMPTIONS In terms of regulation 15	DATE	SIGNATURE OF INSPECTOR

ANNEXURE C
[Regulation 5(3)(d)(i)]

SANITARY CONVENIENCES

Population: The number of staff members and the maximum number of customers for whom provision is made to consume food on any premises at any one time	**Number of sanitary conveniences to be installed in relation to the population as given in the first column**				
	Men			**Women**	
For a population up to	**Latrines**	**Urinal stalls***	**Hand washbasins**	**Latrines**	**Hand washbasins**
10	1	1	1	1	1
20	1	2	2	2	2
40	2	3	2	3	3
60	3	3	2	4	4
80	4	4	3	6	5
100	4	4	3	8	6
120	5	5	4	9	7
140	5	5	4	10	8
180	5	6	5	11	8
	Add 1 latrine, 1 hand washbasin and 1 urinal for every 70 persons in excess of 180 persons			Add 1 latrine and 1 hand washbasin for every 35 persons in excess of 180 persons	

ANNEXURE D
[Regulation 8(4)]

FOOD TEMPERATURES

Column 1 **Category**	**Column 2** **Type of food**	**Column 3** **Required core temperature of food products that are stored, transported or displayed for sale**
Frozen products……..	Ice cream and sorbet, excluding sorbet which is used for soft serve purposes	-18°C
	Any other food which is marketed as a frozen product	-12°C
Chilled products	Raw unpreserved fish, mollusks, crustaceans, edible offal, poultry meat and milk	+4°C
	Any other perishable food that must be kept chilled to prevent spoilage	+7°C
Heated products	Any perishable food not kept frozen or chilled	>/+65°C

ANEXURE E
[Regulation 8(6)]

CODE OF PRACTICE FOR MEASURING TEMPERATURES OF FOOD

1. Informing the person in charge or person responsible

The inspector shall inform the person in charge, or a person supervising the operation if the person in charge is not available, that he or she wishes to measure the temperatures of the food concerned and shall explain to him or her all the procedures contained in this code.

2. Precautionary measures

(1) All procedures shall be carried out as far as is practicable in a manner that is aseptic and free from chemical pollutants.

(2) In the case of prepacked food, and if it is necessary, the inspector shall remove the packaging in such a manner that the minimum and only the most reasonable essential damage is caused, or the person in charge or the person supervising the operation shall remove the packaging at his or her own risk.

(3) The temperature of food shall as far as is practicable be measured without removing the food from a chilling, freezing or heating facility.

3. Measurement of temperature

Prepacked food

(1) If the food is prepacked, the estimated temperature of the food may be measured by placing or at least one minute the stem of a thermometer (hereinafter referred to as the "stem") between two or more food packages or, in the case of a single food package, on the outer surface of the package.

(2) If the temperature reading is not in compliance with the core temperatures specified in Annexure D to these regulations or if the inspector has any doubts regarding the temperature of the food inside the package, the surface of core temperature of the food may be measured to determine the actual temperature.

Core temperature

(3) If the food product is frozen a hole shall be drilled in the food up to the estimated core of the food product with a sterilised stainless steel bit with an external measurement of about 4mm. The sterilised stem shall be inserted into the hole up to the estimated center of the product and a reading shall be taken after two minutes. In the case of a heated, chilled or unchilled product, the sterilised stem

shall be inserted up to the estimated core of the food product and a reading shall be taken after one minute.

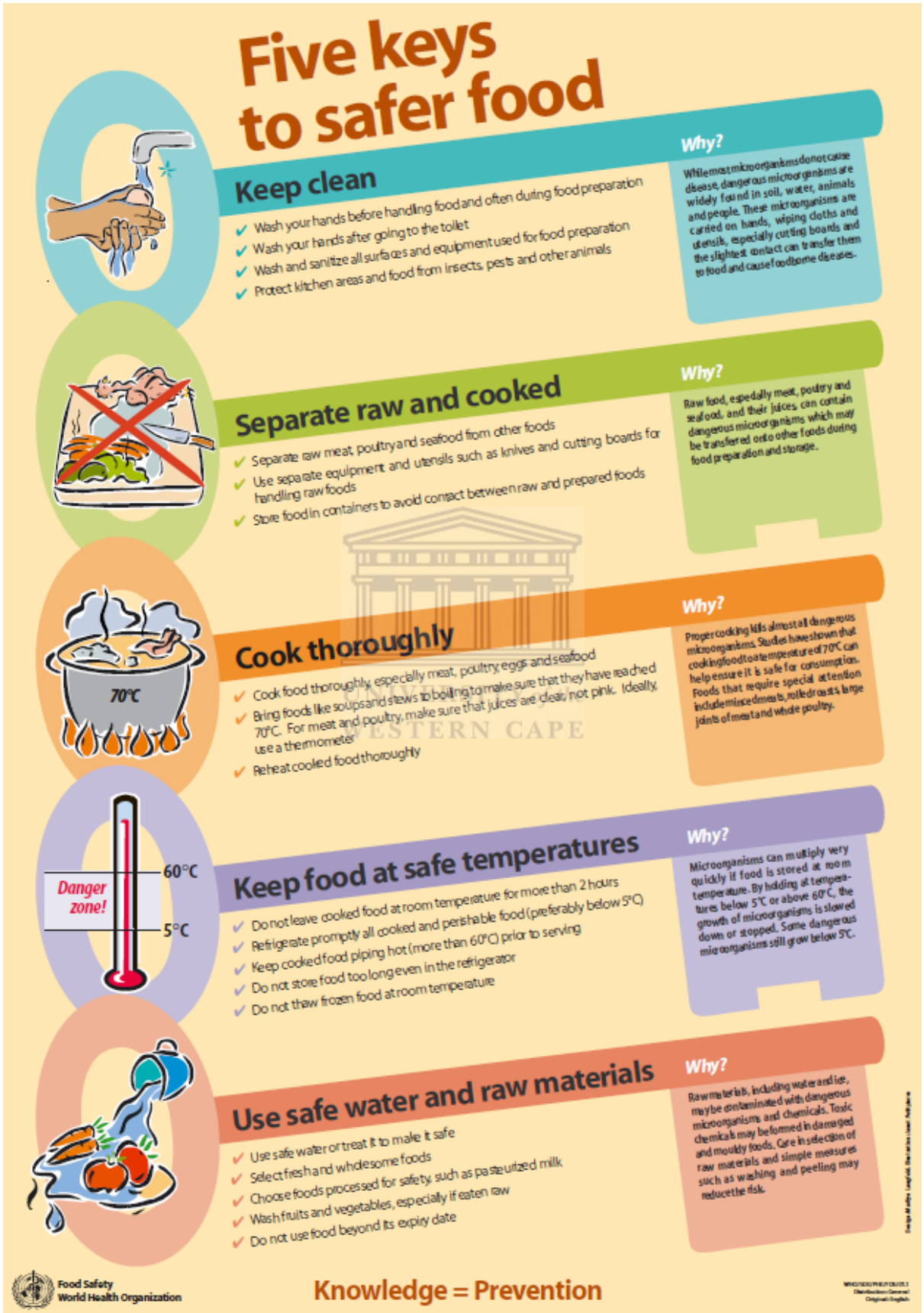
Surface temperature

(4) The surface temperature shall be measured by placing the sterilised stem directly on the surface of the food for at least one minute or, in the case of liquid, in the liquid for at least one minute, and the reading shall be taken immediately thereafter.

4. Presumption in respect of representative temperature reading

The food temperature determined in accordance with this code of practice shall be regarded as being representative of the temperature of all food in the freezing, chilling or heating facility concerned if the inspector is satisfied that such food is in the same condition or has the same characteristics as the food the temperature of which was taken.

Appendix 7: "Five Keys to Safer Food"



Appendix 8: Business guidelines

STREET FOOD PROJECT

BUSINESS GUIDELINES

BUSINESS COMPONENT OF STREET FOOD VENDING MODEL

HOW TO START A STREET FOOD VENDOR BUSINESS

1. **Do research:**
   Assess the feasibility of a street vending business in your area:
   i.e. The number of people walking by your cart each day will be key to whether you can become profitable. Street vendors tend to do well in large cities and major metropolitan areas simply because there are more potential customers and areas with substantial foot traffic.

2. **Start-up finance**
   Do you have money saved up, or will you have to make a loan? If you have to make a loan, from whom? Do check the interest rates, will it be affordable for you to repay? You might also consider contacting the City at 021 400 5379, and they will be able to put you in touch with Service Providers and Financial Institutions specifically directed towards Small, Medium and Micro-sized Enterprises. (See box 1)

3. **Choose the type/s of foods to sell:**
   Street food vendors can sell a wide variety of items, from hot dogs and coffee to stews and pap, but it's best to cater to the area you live/work in before choosing a niche. For instance, if near a school sell foods that will appeal to children e.g. sandwiches. If you near a construction area pap, meat and stews will sell well.

4. **Contact the department of economic c development to find out what laws apply to street vendors.**
   You may be surprised to find out that your business will have many restrictions, especially if you live in a large metropolitan area. Many localities stipulate how close to buildings a street cart can be, have advertising guidelines, rules about the size of street carts and restrict how many vendors can be in any one area at a time. You can call 021 400 5379 for general enquiries; they will be able to put you in touch with your District Office for District specific information.

5. **Obtain required license/certificate for operating**
   Depending on the types of food you sell you might need both a (location) permit from the department of economic development as well as a business license as well as a certificate of acceptability from the department of environmental health. You can call 021 400 5379 for general enquiries; they will be able to put you in touch with your District Office for District specific information.

6. **Vending cart/unit/stand**
   Buy or lease a mobile unit from a supplier. Or build your own stand. Depending on what you can afford. If selling cooked food you are going to need a unit with refrigeration as well as a heat the food they serve.

7. **Get a storage area for your inventory and your cart.**
   Many localities do not allow street cart vendors to leave their mobile units on public streets or sidewalks when they're not in use. If you don't have a parking space, consider renting one from a local business office, commercial parking garage or storage facility. Even if you're allowed to keep your cart in your space overnight, it would not be logical to store your inventory there too --- odds are you will come back to work to find that everything has been taken. You may be able to store your inventory at home in a clean, dry area that is free of pets or in a commercial storage facility. If you're selling food items, ensure you follow state rules regarding where you're allowed to store ingredients; you may need to rent a food locker or space in a commercial kitchen.

8. **Buy wholesale**
   Purchase wholesale merchandise from brands, distributors and manufacturers in your niche. Conduct an Internet search for wholesale distributors if there aren't enough suppliers in your area. If your street cart will sell food, try to buy as many local ingredients as possible to save money on shipping costs.

   Also try and join a "club" [a group of trusted vendors] that purchases together, thus buying bigger and saving more!

9. **Attracting your clientele**
   Organize your merchandise logically, while making the items appear as attractive as possible. Mostpeople who buy from you will do so on impulse, not because they planned to go to your street cart. If the items you sell are arranged sloppily, it is less likely that people walking by will stop to look at anything, much less make a purchase.

10. **Promote your business**
    Promote your street cart vendor business. You can make use of traditional media, such as newspaper and radio ads, but people generally don't go looking for street vendors to shop. However, some people will become regular customers of yours. To stay connected with them, use social media and social networks to let them know about new products and offerings, and what days and hours you're open for business. You can build loyalty with regulars by offering special discounts to them via social networks.

11. **Keep log books**
    Keep track of your spending and income, so that you know whether your business is profitable or not! So that you can grow your business from strength to strength. Take not of what is selling well and what is not! So you can make changes if necessary!

12. **Keep your money safe**
    Explore the best methods of keeping your money safe.

Box 1: Vendors whom contact the Economic Development Department's Business Support and Skills Development Department will be linked with Business Support Organisations and financiers i.e.

1. **Anglo American's Zimele Enterprise Development Initiative Sebenza fund provides financial and non-financial support to viable SME's.**

   For more information visit http://www.angloamerican.co.za/sustainabledevelopment/ anglo-zimele.aspx or contact the local Business Hub on 021 371 0168.

2. **Small Enterprise Finance Agency (SEFA) – provide finance from R50 000 to R5m for the development of sustainable survivalist, micro, small and medium enterprises.**
   For more information visit www.sefa.org.za or contact the Western Cape Branch on 021 425 6774.

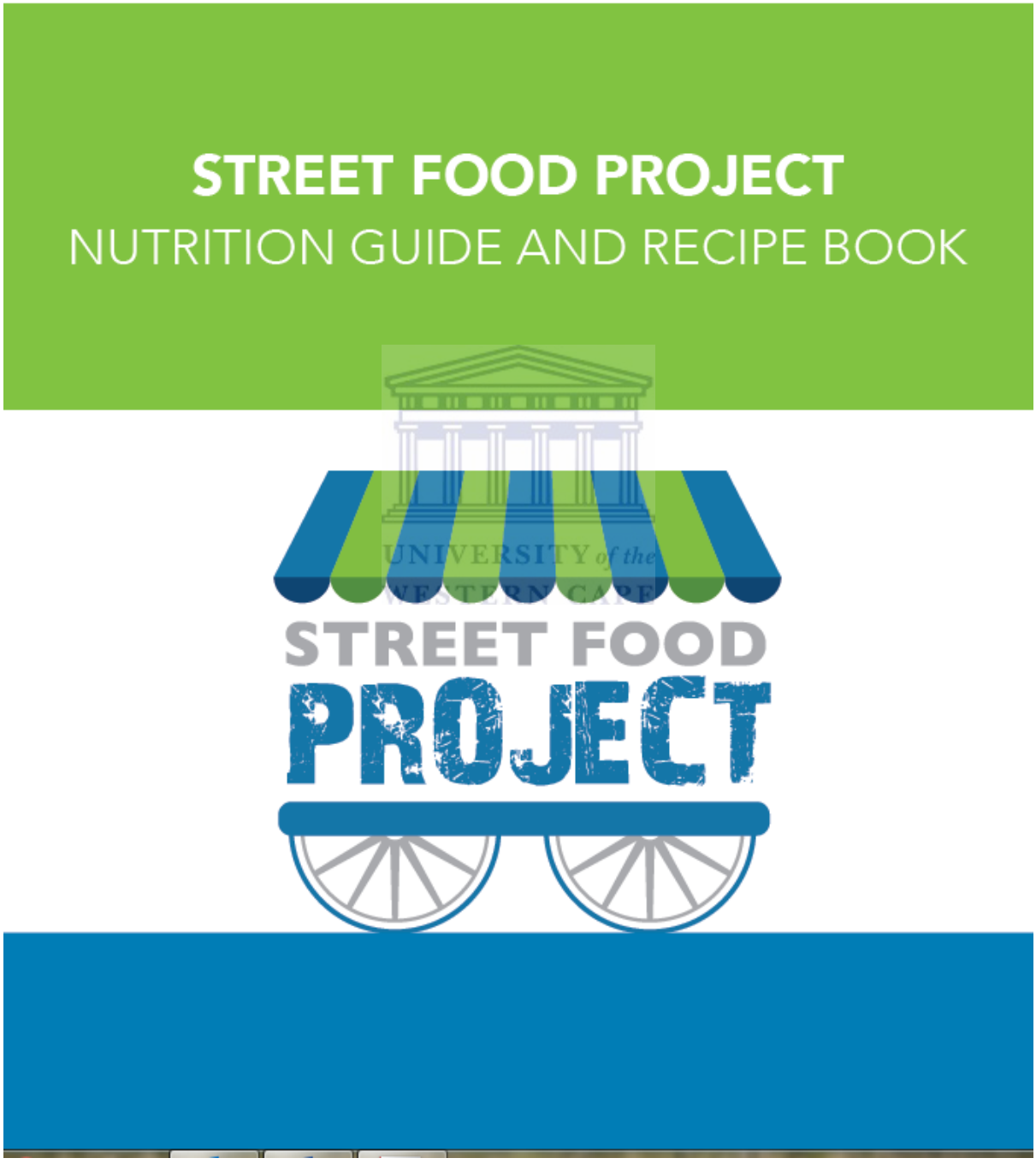
3. **The Masisizane Fund ('Masisizane') is an Old Mutual SMME Development Financing Initiative that was established in 2007 with the mandate to contribute to job creation, reduce inequality, promote economic growth and support, develop and promote entrepreneurship, while attracting investment to SMMEs.**

   The Masisizane Fund offers a range of financing and support including contract financing of up to 36 months between R150 000 and R10m.

   For further information contact 021 509 1925 or http://www.oldmutual.co.za/aboutus/transformation/masisizane.aspx.

Adapted from: http://smallbusiness.chron.com/start-street-cart-vendor-business-12678.html

Appendix 9: Nutrition guidelines



IMPORTANT NUTRITION INFORMATION

WE NEED TO EAT DIFFERENT TYPES OF FOODS TO PROVIDE OUR BODIES WITH ALL THE REQUIRED NUTRIENTS. THE SOUTH AFRICAN FOOD-BASED DIETARY GUIDELINES GIVE THE FOLLOWING ADVICE.

Make starchy foods the basis of most meals	Starchy foods that are high in fibre are digested slowly, making it easier for the body to control blood glucose levels. High fibre foods include high bran cereals or porridge, brown or wholegrain breads, rice, pasta, samp and phutu.
Eat dry beans, peas, lentils and soya regularly	These foods are good sources of protein that are high in fibre and low in fat. They can be added to meat dishes to increase the volume of the meal. Soak them overnight to shorten cooking time.
Chicken, fish, meat, milk or eggs can be eaten daily	Lean meat; skinless chicken; low-fat milk or maas; fresh, frozen or tinned fish; and eggs can be eaten every day. However, if your cholesterol is high you should restrict your egg intake!
Eat plenty of vegetables and fruit every day	Eat a variety of fruit and vegetables in season since they are readily available and are usually more economical (preferably with the skins on). Three pieces of fruit can be eaten daily (each the size of a tennis ball), and spread throughout the day. Frozen vegetables are also good. Don't overcook vegetables, as they will lose their vitamins. Use as little water as possible for cooking, and what is left, can be used for soups. Canned fruit, dried fruit and fruit rolls can be eaten in small amounts.
Eat fats sparingly	There are two types of fats found in food: visible fats and hidden fats.

Visible fats	Hidden Fats
Cooking oil	Full cream milk/maas/yogurt
Ghee	Coffee creamer
Butter	Ice-cream
Margarine	Potato crisps and hot chips
Chicken skin	Pastries, chocolate and cream filled biscuits
Fat on meat/chicken	Sweets
	Pies and samoosas
	Processed meats (sausage, polony)
	Fried foods

Use salt sparingly	Too much salt increases the risk of developing hypertension. Hidden salt is found in soups, gravy powders, stock cubes and seasonings. To use less salt but still add flavour to food, you can use herbs, curry powder, ginger, garlic, onions, peppers and tomatoes. Some foods are naturally high in salt, such as biltong, pickled fish, salted nuts, chips and popcorn. These can still be part of a healthy diet if eaten in small amounts and not often.

Use food and drinks containing sugar sparingly	Sweet foods are digested very easily, which causes blood glucose levels to rise rapidly. Therefore, you should only eat them in small amounts and not very often. If you do eat them, do so as part of a meal and not as a snack on their own.
Drink lots of clean safe water	Drink at least six to eight glasses of water a day. You can also drink diet or sugar-free drinks in moderation. Fresh fruit juice and sweetened juice are a concentrated source of sugar, so dilute these with water before drinking them. Drink sugar-free tea and coffee in moderation.
If you drink alcohol, drink sensibly	We recommend having at least two days free of alcohol each week. All alcohol is high in calories and some drinks are high in sugar, e.g. sweet sherry, port and liqueurs. Sugar-free or diet mixers should be used with spirits. You should not exceed these daily amounts: two small cans of ordinary beer, lager or cider; or two glasses of dry wine/dry sherry; or two 25 ml spirit measures. Try to avoid sweet wine, sweet sherry, liqueurs and homemade beer. Alcohol lowers blood glucose, and so you should never drink alcohol on an empty stomach.
Be active and control your weight	Some form of exercise three to four times a week for 10-20 minutes at a time is recommended. Ways in which you can include exercise into your daily life are walking up and down stairs instead of taking lifts; walking to the shops instead of taking a car, bus or taxi, or getting off the taxi/bus a few stops before your destination; and doing 50-100 skips with a skipping rope.

THE MEANING BEHIND A MEAL

Food plays an important part of our lives. Our bodies need food to fulfil several functions. It provides energy for daily activities and protects the body against diseases.

We eat because our bodies need nutrients - the vitamins and minerals in fruit and vegetables - which are necessary for stimulating growth and maintaining life. There are also essential nutrients like carbohydrates, fats, and proteins which are needed daily. Problems arise when these form the bulk of someone's diet.

To satisfy hunger, larger portions of unhealthy food are often consumed. This invariably leads to obesity which in turn puts people at risk of developing diseases such as diabetes, hypertension and some cancers.

MEAL TIMES

Regular mealtimes (breakfast, lunch and supper) are important as this helps to control blood glucose levels. During the day, we are often so busy that it is easy to forget about lunch. Skipping meals can lead to 'out-of-control' hunger, which can lead to overeating. When you're very hungry, it is easy to forget about good nutrition!

Lunch should not be a big plate of food, especially if the main meal is at supper time. Lunch often consists of a sandwich, but to be nutritious, the lunchtime meal should meet the following requirements:

Components of a healthy lunch	
Starch	The starch component should have a lot of fibre and a low GI. Examples include whole wheat or brown bread for sandwiches, or whole wheat rusks or provitas as a change.
Fat	The fat content should be as low as possible, so spread a thin layer of low-fat margarine and avoid mayonnaise, which generally has a high fat content. Also, do not include high fat items such as sausages, polony, fried eggs and cheese.
Protein	Healthy protein options include tuna in water, pilchards, low-fat cottage cheese, white skinless chicken meat, boiled eggs, and fish paste.
Fruit and vegetales	Your lunch is not nutritionally complete without a fruit and a vegetable. Try to eat fruit that is in season. Examples of ways that you can include vegetables are small tomatoes, cucumber or carrot sticks, lettuce, and avocados, which contain a lot of fat but of a type that is good for you.
Snacks	The most difficult things to select for a packed lunch are snacks. However, healthy ones include low-fat yoghurt to provide you with calcium and protein, and peanuts and raisins are always popular as are a variety of dried fruits and nuts. Another popular option is muesli, which you can make yourself or buy from the local shop. Eaten dry, it quickly fills you up while providing fibre and protein. One more item to consider is pure fruit juice instead of sweetened drinks. However, pure fruit juice is very concentrated and high in kilojoules, so rather choose fresh fruit.

PORTION SIZES

"EAT LESS – CHOOSE YOUR PORTION WITH CAUTION"

FACTS

- Overweight and obesity are affecting the majority of South Africans, especially adult women and preschool children. This is putting South Africans at risk for chronic diseases, such as heart disease and strokes, diabetes and some cancers.
- Some of the main reasons why people become overweight or obese are because they are:
  a. Eating large amounts of food (food portions);
  b. Eating high-energy foods that are high in sugar, fat and salt;
  c. Not eating a variety of food from the different food groups.
  d. Not engaging in regular physical activity

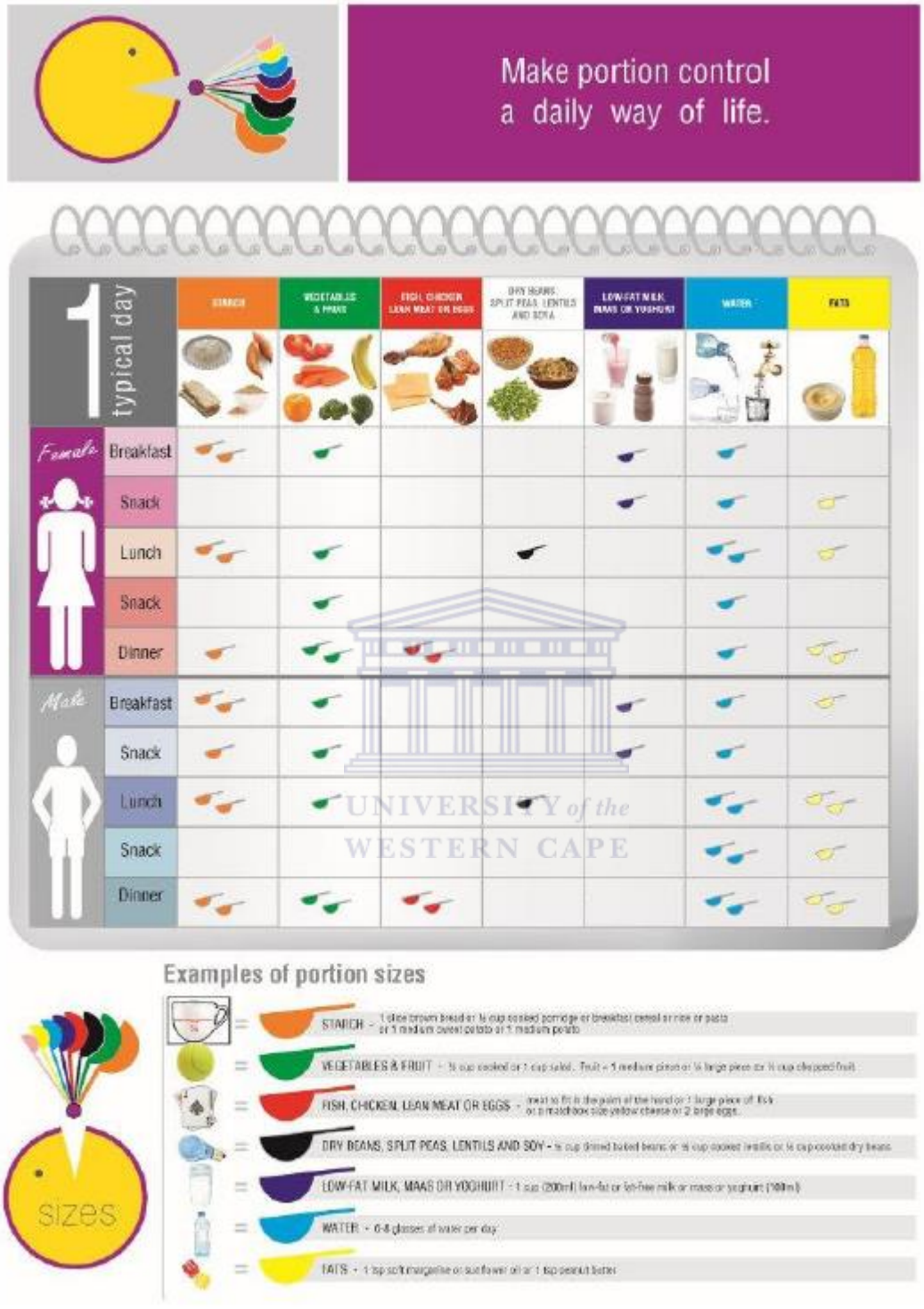
MESSAGES ABOUT CONTROLLING PORTION SIZES

- Eat a variety of food at each meal, in other words include foods from two or preferably more food groups at each meal:

- Meals should not be high in sugar, fat or salt. Achieve this by not adding extra fat, sugar or salt to your food when cooking or by not buying ready-to-prepare or ready-to-eat meals.
- Serve the correct portions of food onto individual plates, instead of putting serving dishes on the table. This will avoid being tempted by second or more helpings.
- Use smaller plates, bowls, and serving utensils. Plates with a darker-coloured rim can also help to eat smaller portions, since one will tend to only serve food on the lighter-coloured portion of the plate.
- Use a smaller glass to limit the amount of drinks or beverages consumed at a time. Drink lots of clean, safe water.
- Keeping excess food out of reach may discourage unintentional overeating. If you don't buy it you won't be tempted to eat it.
- Be aware that your body may only experience feeling "full" sometime after eating your meal. Therefore, eat slowly, chew properly and pay attention to your body's internal cues to avoid overeating. Do not eat in from of the TV as this may lead to being distracted and not paying attention to signals of becoming "full" thereby leading to overeating.

- Stick to regular meal and evenly-spaced snack times and do not skip meals. This means having small meals (i.e. breakfast, lunch and supper) every day with small healthy snacks in-between if necessary. Vegetable sticks or fruit and low fat of fat free yoghurt or milk are good examples of healthy snacks. Don't eat too late at night or just before you go to bed.
- Encourage children to take a lunch box and healthy snacks such as fruit and yoghurt to school and to avoid buying meals and snacks that are high in sugar, fat and salt.
- Many restaurants serve more food than is appropriate for one person. Control the amount of food that ends up on your plate by sharing a meal with a friend or asking the waiter to put half the meal in a "doggie bag" or "take away container". Alternatively order a salad and a starter as your main meal.
- When ordering meals from restaurants, order a small or regular portion size instead of a large portion and have salad or vegetable(s) to complete your meal.
- Limit the intake of deep-fried foods and rather choose foods that are steamed, grilled or baked.
- Limit the intake of sugar-sweetened beverages (like fizzy drinks and sweetened juices) and replace with unflavoured water, milk, or maas.
- Choose healthier low fat, low salt snack options eg. air popped corn. When eating or snacking in front of the TV, put a small amount in a bowl or container and leave the rest of the package in the kitchen.
- Snack foods that are bought in bulk should be portioned into individual-sized bags. Store large containers out of sight in a storage closet, cabinet, or garage.
- Keeping healthier foods within easy reach means you'll be more likely to eat more of these foods. Place fruit in a large bowl on the counter and serve cut vegetables as the family arrives home from school or work.
- Buy fresh, plain frozen, or canned "no salt added" vegetables, meat, fish or chicken. Rinse canned foods like beans to remove some of the salt (sodium).
- Use herbs, spices, and salt/sodium-free seasoning blends in cooking and at the table instead of salt, canned soups, salad dressings, stock powders/cubes, and remove the salt shaker from the table.
- Choose food products with the Heart Mark as these are lower in fat, saturated fat, cholesterol, sodium (salt), added sugar and are higher in fibre (where applicable).

For further information visit www.nutritionweek.co.za



http://www.nutritionsociety.co.za/index.php/useful-information/11-useful-information/42-national-nutrition-week-2013-eat-less-choose-your-portion-with-caution

HEALTHY SANDWICH IDEAS

PLEASE NOTE! VERY IMPORTANT!

- Always choose whole wheat or brown unrefined breads!!!
- Always use soft margarines endorsed by the Heart and Stroke Foundation e.g. Flora or Canola fat spreads
- Always choose a healthy protein i.e. chicken breast meat, tuna, egg or hard cheeses.
- You can make sandwiches healthier and prettier by adding fresh vegetables, like lettuce, tomato and cucumber!!!

HEALTH FAMILY FAVOURITE RECIPES

These recipes were taken from the Heart and Stroke Foundation's "Cooking from the heart" recipe book.

"The recipes in this book were selected from family favourites contributed by people all over South Africa. These have been adapted to follow the guidelines of the Heart and Stroke Foundation South Africa. Remember that healthy eating is important for the whole family and not only for the person affected by a lifestyle disease.

Teach your children to eat healthily from a young age to protect them from chronic diseases later in life. Healthy food doesn't have to be expensive or bland and boring.

We show you how to use as little fat, oil, salt and sugar as possible and rather use herbs, lemon juice, salt-free spices and other seasonings to prepare delicious food. We want to encourage you and your family to gradually make changes to the way you eat and cook. This will make a huge difference to your health".

AFRICAN SALAD WITH A TWIST

Serves: 6

Recipe from **ELIZABETH MLOMZALE**

Pap is eaten in many South African homes. Each family has their way of enjoying it, with either maas or buttermilk or a tomato-based sauce.

PAP

- 2¼ cups (560 ml) water
- ½ tsp (2,5 ml) salt
- 3 cups (750 ml) coarse mealie meal

CHAKALAKA SAUCE

- 2 tsp (10 ml) sunflower oil
- 1 onion, chopped
- 1 cm piece fresh ginger, chopped
- 1 green pepper, seeds removed and chopped
- 1 tsp (5 ml) curry powder
- 4 tomatoes, chopped
- 2 tsp (10 ml) sugar
- lemon juice and black pepper to taste

OR

- 2 cups (500 ml) low-fat maas or buttermilk

METHOD

1. Place water and salt in a large pot and bring to the boil. Pour mealie meal into the water, but don't stir yet.
2. Simmer for 2 minutes, then stir well with a wooden spoon or fork. Reduce the heat.
3. Cover with a lid and steam over a low heat for 30-40 minutes or until cooked. Stir occasionally to prevent it from burning.
4. Chakalaka: If you enjoy mealie pap with a sauce, prepare this while the pap cooks.
5. Heat oil in a pot and fry onion, ginger and green pepper until soft. Add curry powder, tomatoes and sugar and simmer on a low heat for 20 minutes. Season with lemon juice and pepper.
6. Serve pap warm or at room temperature with the chakalaka sauce or maas as a side dish.

TIP

Umfino (pap with spinach): Place 1 chopped onion or 1 bunch of spring onions, chopped with 1 bunch of spinach and ½ a cabbage, shredded in a large pot. Add some water and simmer for a few minutes. Then add the mealie meal with the 2¼ cups water and cook as above.

COLESLAW WITH APPLE AND YOGHURT

Serves: 6

Recipe from LOUISE BRONKHORST

Coleslaw should be a crunchy, fresh salad. Serve the sauce on the side to keep the veggies and apples crispy.

- 4 cups (4 x 250 ml) cabbage, finely shredded or grated
- 2 carrots, grated
- 1 apple, peeled and grated
- juice of 1 orange
- ½ cup (125 ml) mayonnaise, preferably reduced fat
- ¾ cup (180 ml) plain low-fat yoghurt
- 1 tsp (5 ml) ground cumin
- ½ tsp (2,5 ml) cumin seeds (optional)
- black pepper to taste

METHOD

1. Mix the veggies and apple with the orange juice.
2. Mix the rest of the ingredients together to form the sauce.
3. Serve the coleslaw with the yoghurt sauce on the side. This is a delicious salad with pork or chicken.

TIPS

- Replace carrots with a thick slice of butternut, grated.
- If preferred, you can add ¼ cup each raisins and unsalted peanuts.
- Replace cumin with garam masala for a different flavour.

POTATO SALAD

Serves: 8

Recipe from **ANNA NKOANA**

Potato salad is often covered in mayonnaise. The combination of yoghurt and mayonnaise makes it lower in fat and even yummier.

- 8 medium potatoes in the skin
- 1tsp (5 ml) salt
- pinch of mustard powder
- lemon juice and black pepper to taste
- ½ cup (125 ml) mayonnaise, preferably reduced fat
- ½ cup (125 ml) plain low-fat yoghurt
- 1 tbsp (15 ml) chopped fresh parsley
- ½ red or green pepper, seeds removed and chopped
- ½ onion, finely chopped (see tip)
- 1 hard-boiled egg, peeled and chopped (optional)

METHOD

1. Place potatoes and ½ tsp of the salt in a pot with water. Bring to the boil and cook until tender. Allow to cool, peel and cut in cubes.
2. Mix mustard, the rest of the salt, lemon juice, pepper, mayonnaise, yoghurt and parsley.
3. Mix sauce into potatoes with red pepper and onion.
4. Sprinkle with egg and serve as a side dish.

TIPS

- To soften the strong flavour of raw onion, cover with boiling water and allow to stand for a few minutes. Drain well and use as above.
- If fresh chives are available, add 2 tbsp chopped chives to the sauce.

BUTTERNUT SOUP

Serves: 6

Recipe from **KOMANE RAMOLWETSI**

The spices and apple add delicious flavours to the soup and the potatoes give it a creamy texture.

- 1 large (1 kg) butternut, peeled and chopped
- 2 large potatoes, peeled and chopped
- 2 onions, chopped
- 1 Granny Smith apple, chopped
- 2 tsp (10 ml) ground nutmeg
- 1 tbsp (15 ml) ground cumin
- 7 cups (1,75 litres) boiling water
- ½ cup (125 ml) low-fat or fat-free milk
- lemon juice and black pepper to taste

METHODS

1. Place veggies, apple and spices in a large pot with the water.
2. Bring to the boil, reduce the heat and simmer for 30 minutes or until the veggies are tender.
3. Remove from the heat, blend mixture until smooth or mash with a potato masher.
4. Return mixture to the pot and add milk, lemon juice and pepper.
5. Heat through and serve warm.

TIPS

- This soup freezes well if liquidised. Make double and freeze for another day.
- Cauliflower soup: Replace the butternut with 400 g cauliflower and another 2 potatoes. Cook as above.
- Sweet potato can be used instead of the potatoes. The butternut can also be replaced with sweet potato for a sweet potato soup.

VEGETABLE SOUP WITH MINCE

Serves: 8 - 10

Recipe from **HETTIE LITTLE**

- 1 tbsp (15 ml) sunflower oil
- 250 g lean beef mince
- 1 large onion, chopped
- 1 clove of garlic, finely chopped
- 1 tbsp (15 ml) paprika
- 2 tsp (10 ml) ground coriander
- 1 tbsp (15 ml) dried mixed herbs
- 1 tbsp (15 ml) Worcester sauce
- 2 large tomatoes, peeled and chopped
- 3 potatoes, peeled and cubed
- 4 carrots, grated
- 3 celery stalks with leaves, roughly chopped
- 4 cups (1 litre) Homemade stock (p XX) or water with 2 tbsp dried mixed herbs
- 8 cups (2 litres) water
- ½ x 500 g packet dried soup mix
- 2 tsp (10 ml) sugar
- 2 tsp (10 ml) garam masala
- lemon juice and black pepper to taste

METHODS

1. Heat half the oil in a large pot and fry mince until golden brown. Spoon mince out and drain off any excess fat.
2. Add rest of the oil and fry onion and garlic in the same pot with paprika, coriander and herbs.
3. Add mince and Worcester sauce and simmer for 10 minutes. Add remaining ingredients, except the garam masala, lemon juice and pepper. Stir well.
4. Simmer, with a lid, over a low heat for about 2 hours or until the soup mix is cooked and the soup is thick. Stir every now and then.
5. Add the remaining ingredients and serve warm.

TIPS

- Enjoy left-overs for lunch the next day, or freeze for another meal.
- Pea soup: Replace soup mix with dried split peas.
- Stir in thinly shredded cabbage or spinach at the end of the cooking time

SPICY RED LENTIL AND VEGETABLE SOUP

Serves: 6 - 8

Recipe from DELICIA CZECH

Remember that red lentils cook in 20 minutes, making this a quick soup.

- 1 tbsp (15 ml) sunflower oil
- 2 large onions, chopped
- 2 cm piece fresh ginger, grated
- 1 tbsp (15 ml) ground coriander
- 4 tsp (20 ml) ground cumin
- 2 tsp (10 ml) curry powder or to taste
- 8 cups (2 litres) water
- 1 cup (250 ml) uncooked red lentils
- 3 carrots, coarsely grated
- 2 potatoes, peeled and grated
- 2 tomatoes, peeled and chopped
- 1 tbsp (15 ml) chopped fresh mint
- 1 tbsp (15 ml) chopped fresh parsley or coriander
- ½ tsp (2,5 ml) salt
- lemon juice and black pepper to taste

METHODS

1. Heat oil in a large pot and fry onions, ginger and spices.
2. Add water, lentils, carrots and potatoes.
3. Bring to the boil, reduce the heat and simmer with a lid for 20 minutes or until the lentils are tender.
4. Add tomatoes, herbs and salt and heat through.
5. Season with lemon juice and pepper and remember not to add extra salt at the table.

CHICKEN AND CORN SOUP

Serves: 6 - 8

Recipe from **FAZLIN SANDAN**

This family recipe is a very popular meal with both kids and grown-ups.

- 2 chicken breasts on the bone, skin and all fat removed
- 1 tbsp (15 ml) sunflower oil
- 2 onions, chopped
- 1 clove of garlic, finely chopped
- 2 large potatoes, peeled and chopped
- 1 tsp (5 ml) ground cumin
- 2 tsp (10 ml) ground coriander
- 4 cups (1 litre) water
- 2 tbsp (30 ml) dried mixed herbs
- 1 cup (250 ml) low-fat or fat-free milk
- 1 cup (250 ml) frozen whole kernel corn, rinsed (optional)
- 1 x 410 g tin cream style sweetcorn
- lemon juice and black pepper to taste
- 3 tbsp (45 ml) chopped fresh coriander or parsley

METHODS

1. Cut chicken breasts in half with kitchen scissors or a sharp knife.
2. Heat oil in a large pot and fry chicken, onions and garlic for a few minutes.
3. Add potatoes, cumin, ground coriander, water and dried herbs. Bring to the boil, reduce the heat and simmer for 30 minutes or until the chicken is cooked.
4. Spoon out the chicken. Remove bones and shred meat.
5. Stir chicken, milk, corn and sweetcorn into the soup and heat through.
6. Season with lemon juice and pepper. Stir in fresh herbs and serve.
7. Remember that the tinned sweetcorn contains salt, so don't add salt at the table.

TIP

- Fish soup: Replace the chicken with left-over fish or hake. Stir into soup at step 5.

HEARTY BEAN SOUP

Serves: 8

Recipe from **HILDA WILLIAMS**

The dried beans, lentils and veggies make this a filling soup for winter. Beans and lentils are a healthy source of protein.

- 1 cup (250 ml) dried sugar beans
- 1 tbsp (15 ml) sunflower oil
- 2 carrots, chopped
- 1 onion, chopped
- 1 clove of garlic, finely chopped
- 8 cups (2 litres) Homemade stock (click here)or water with 3 tbsp dried mixed herbs
- 1 tbsp (15 ml) dried mixed herbs
- 1 cup (250 ml) uncooked brown lentils
- 4 tomatoes, chopped
- 1 tbsp (15 ml) tomato paste
- 2 cups (500 ml) thinly sliced cabbage or spinach
- ¼ cup (60 ml) chopped fresh parsley
- 2 tsp (10 ml) sugar
- ½ tsp (2,5 ml) salt
- lemon juice and black pepper to taste

METHODS

1. Soak beans in 1 litre of water overnight. Rinse and drain.
2. Heat oil in a large pot and fry carrots, onion and garlic.
3. Stir in the stock, dried herbs, lentils and beans.
4. Bring to the boil and reduce the heat. Simmer with a lid for 1½-2 hours or until the beans are tender.
5. Add tomatoes, tomato paste and cabbage and simmer for another 15 minutes. Stir in the parsley, sugar and salt.
6. Season with lemon juice and pepper.

TIP

- Only add the tomatoes after the beans are cooked, otherwise they will prevent the beans from soften

BEEF SISHEBO WITH BEANS

Serves: 4 - 6

- 90 g ½ cup (125 ml) dried sugar or white beans
- 8 g 2 tsp (10 ml) sunflower oil
- 500 g stewing meat, fat removed
- 250 g 2 onions, chopped
- 160 g 2 carrots, chopped
- 160 g 1 green pepper, seeds removed and chopped
- 2 cups (500 ml) water
- 1 cinnamon stick (optional)
- 2 tbsp (30 ml) curry powder
- 220 g 2 potatoes, chopped
- 300 g butternut, cubed
- 240 g 2 tomatoes, chopped
- 3 g ½ tsp (2.5 ml) salt
- lemon juice and black pepper to taste

METHODS

1. Soak beans in 1 litre of water overnight. Rinse and drain.
2. Heat half of the oil in a pot and fry meat until golden brown. Spoon out and set aside.
3. Heat the rest of the oil and fry onions, carrots and green pepper for a few minutes.
4. Add beans, meat, water and cinnamon. Bring to the boil and reduce the heat.
5. Simmer with a lid for 1½ hours or until the beans are cooked.
6. Add the remaining ingredients and simmer for another 30 minutes or until the meat, beans and vegetables are tender.
7. Season with lemon juice and pepper and serve hot.

TIP

- Leave out the potatoes and serve on a small portion of samp. Add 1 cup of frozen peas to the sishebo at the end.

BEEF SISHEBO

Serves: 6

Recipe from **KEDIBONE SECHUANE**

- 12 g 1 tbsp (15 ml) sunflower oil
- 1 kg beef stewing meat with bones, all fat removed
- 125 g 1 onion, chopped
- 360 g 2 large potatoes, peeled and chopped
- 160 g 2 large carrots, chopped
- 1 tbsp (15 ml) ground coriander
- 1 bay leaf
- 125 g ½ cup (125 ml) water
- 125 g ½ cup (125 ml) Homemade stock (p15) or water with 2tbsp dried mixed herbs
- 750 kg ½ medium cabbage, cut in thick strips
- 3 g ½ tsp (2.5 ml) salt
- lemon juice and black pepper to taste
- 3 tbsp (45 ml) chopped fresh parsley

METHODS

1. Heat half the oil in a large pot and fry meat in batches until golden brown. Spoon out and set aside.
2. Heat the rest of the oil in the same pot. Fry onion, potatoes and carrots with coriander and bay leaf.
3. Add water, meat and stock. Simmer with a lid for 1½ hours or until the meat is tender.
4. Add cabbage and simmer for another 15 minutes. Stir in salt.
5. Season with lemon juice and black pepper and stir in parsley.
6. Serve with a small portion of pap or mashed potatoes.

BEEF STEW WITH TOMATOES

Serves: 6

Recipe from **LIESL NEL**

- 2 tsp (10 ml) sunflower oil
- 1 kg beef stewing meat with bones, all fat removed
- 2 onions, chopped
- 3 celery stalks, thickly sliced
- 3 carrots, sliced diagonally into large chunks
- 1 clove of garlic, finely chopped
- 1 x 410 g tin chopped tomatoes
- 2 tbsp (30 ml) tomato paste
- 1 tsp (5 ml) dried mixed herbs
- 1 tbsp (15 ml) dried or chopped fresh origanum
- 2 bay leaves
- 1 tsp (5 ml) paprika
- ½ tsp (2,5 ml) salt
- ½ cup (125 ml) water or dry red wine
- ½ cup (125 ml) Homemade stock (p XX) or water with 2 tbsp dried mixed herbs
- lemon juice and black pepper to taste
- pinch of cayenne pepper

METHODS

1. Heat oil in a large pot and fry meat in batches until browned. Spoon out.
2. Fry onions, celery, carrots and garlic for a few minutes.
3. Add tomatoes, tomato paste, meat, herbs, bay leaves, paprika, salt, water and stock. Bring to the boil.
4. Reduce the heat and simmer with a lid for 1½-2 hours or until the meat is tender.
5. Season with lemon juice, pepper and cayenne pepper. Remember not to add more salt at the table.
6. Serve on small portions of brown rice or mashed potatoes and green beans.
7.

TIP

- Substitute the beef with chicken, skin and all fat removed, and simmer for 45 minutes.
- To bulk up this stew, add a tin of butter beans, drained.

ONE POT CHICKEN

Serves: 6

Recipe from **MARLENE WESTON**

- 2 tsp (10 ml) sunflower oil
- 125 g 1 large onion, chopped
- 2 g 1 clove of garlic, finely chopped
- 4 chicken breasts on the bone, halved and skin and all fat removed
- 160 g 2 large carrots, thickly sliced
- 180 g 3 baby marrows, thickly sliced
- 1 x 410 g tin chopped tomatoes
- 32 g 1 tbsp (15 ml) tomato paste
- ½ tsp (2,5 ml) paprika or cayenne pepper or to taste
- 1 tsp (5 ml) dried origanum or 1 tbsp (15 ml) chopped fresh origanum
- ½ cup (125 ml) water
- 1 x 410 g tin baked beans in tomato sauce
- 1 x 410 g tin butter or red kidney beans, drained (optional)
- 3 g ½ tsp (2.5 ml) salt
- lemon juice and black pepper to taste
- 2 tbsp (30 ml) chopped fresh parsley

METHODS

1. Heat oil in a large pot and fry onion and garlic for a few minutes. Add chicken and fry until golden brown.
2. Add carrots, baby marrows, tomatoes, tomato paste, paprika and origanum.
3. Add water, reduce heat and simmer with a lid for 30 minutes or until the chicken is cooked.
4. Add tins of beans, salt and season with lemon juice and pepper. Heat through and stir in the parsley.
5. Serve on a small portion of pap, mealie rice or mash.

SPICY SAMP AND BEANS

Serves: 8

Recipe from **BENEDICT THUTLOA**

This dish (also known as umngqusho) needs a bit of planning as you need to soak the samp and beans overnight.

- 1 cup (250 ml) uncooked samp
- 1 cup (250 ml) dried sugar beans
- 2 bay leaves
- 2 tsp (10 ml) sunflower oil
- 2 onions, chopped
- 4 carrots, sliced
- 1 tbsp (15 ml) curry powder or to taste
- 3 tomatoes, chopped
- ¼ medium cabbage, cut into strips
- 4 spinach leaves, cut into strips
- 1 tsp (5 ml) salt
- lemon juice and black pepper to taste

METHODS

1. Soak samp and beans overnight in enough water and drain well.
2. Place in a large pot with bay leaves and cover with 4 cups fresh water. Bring to the boil, reduce the heat. Cover with a lid and simmer for 2 hours or until tender. Add more water if necessary.
3. Heat oil in a pot and fry onions, carrots and curry powder.
4. Add tomatoes and simmer for 10 minutes.
5. Drain samp and beans if necessary. Add with cabbage, spinach and salt to onions and simmer for another 10 minutes.
6. Season to taste with lemon juice and pepper and serve warm.

TIP

- Add 300 g stewing beef, fat removed to the samp and beans and cook together. Follow the recipe as above and increase the curry powder to taste.

VEGETABLE CURRY BUNNY CHOW

Serves: 6

Recipe from **RAE DOUGLAS**

A bunny chow is a delicious meal for many people. This vegetarian version is filling and comforting.

- 1 tbsp (15 ml) sunflower oil
- 1 onion, chopped
- 2 cloves of garlic, finely chopped
- 3 carrots, chopped
- 1-2 green chillies, chopped (optional)
- 3 curry leaves (optional)
- ½ tsp (2,5 ml) turmeric
- 1 tbsp (15 ml) curry powder or to taste
- 1 tsp (5 ml) masala of your choice
- 3 tomatoes, chopped
- 2 potatoes, peeled and chopped
- 1 brinjal, chopped
- ½ cup (125 ml) water
- ½ tsp (2,5 ml) salt
- 1 cup (250 ml) chopped cauliflower or green beans
- ¼ medium cabbage, chopped
- 1 x 410 g tin baked beans in tomato sauce
- lemon juice and black pepper to taste
- 4 cm thick slice brown or wholewheat bread per person

METHODS

1. Heat oil in a large pot and fry onion, garlic, carrots, chillies, curry leaves and spices.
2. Add tomatoes and simmer for a few minutes. Stir in potatoes, brinjal, water and salt.
3. Bring to the boil, reduce the heat and simmer with a lid for 20 minutes.
4. Stir in cauliflower, cabbage and baked beans and simmer for another 20 minutes or until the potatoes are tender. Season with lemon juice and black pepper.
5. Hollow out the thick slices of bread and spoon the curry inside.

TIP

- Substitute baked beans for any other beans of your choice and add more tomatoes if necessary.
- Make this vegetable curry as spicy as you would like and serve with chopped fresh coriander.

FISH CAKES WITH PILCHARDS

Serves: About 20 fish cakes

Recipe from **HAZEL NORTJE**

Fish on a Friday is a familiar favourite. A tin of pilchards can go a long way to feed a family quickly.

- 1 x 425 g tin pilchards in tomato sauce
- 2 eggs, beaten
- 1 small onion, grated
- 1 carrot or baby marrow, grated
- ½ cup (125 ml) self-raising flour
- 5 tbsp (75 ml) oats
- ½ tsp (2,5 ml) salt
- lemon juice and black pepper to taste
- 3 tbsp (45 ml) chopped fresh parsley
- 3 tbsp (45 ml) chopped fresh coriander or more parsley
- 1 tbsp (15 ml) tomato sauce or chutney
- 1 tbsp (15 ml) sunflower oil

METHODS

1. Flake fish and small bones in the tomato sauce, with a fork.
2. Mix fish with the remaining ingredients, except the oil.
3. Heat a thin layer of oil in a frying pan and place spoons full of the batter in the pan.
4. Fry on both sides until golden brown and cooked. Drain on paper towel and keep warm. Repeat with the rest of the oil and batter.
5. Serve with lemon wedges, a green salad and a baked potato per person.

TIP

- Replace pilchards with any fish of your choice, like tuna or left-over hake or snoek and add another 2 tbsp tomato sauce.
- These can be served with a green salad, creamy mashed potatoes or chakalaka sauce

Appendix 10: Hawking in meals guidelines

GUIDELINES FOR CONDUCTING A FOOD VENDING BUSINESS (HAWKING IN MEALS)

The following are to be provided on site at all times (See diagram below).

1) A "**hawking in meals**" trade licence and "**certificate of acceptability**" must be obtained from your local Environmental Health office.
2) Suitable containers for the storage of clean and waste water (25 litres).
3) All working surfaces must be of a smooth, washable, and impervious material.
4) Clean aprons or overalls must be worn.
5) Braai-tongs or food handling utensils must be used.
6) Cooked or raw meat displayed must be covered.
7) The name and address of the hawker must be displayed.
8) A basin, liquid hand soap and clean towels (disposable) for hand washing.
9) A refuse container for the storage of refuse.
10) A cooler box with ice or ice blocks for the storage of raw meat and other perishable products, and the temperature is to be maintained below 10 degrees Celsius.
11) A suitable place for the storage and washing of equipment must be provided.
12) A floor or ground cover to prevent the soiling of the ground surface.
13) Only gas or electric equipment may be used for cooking.
14) Squeeze bottle containers for sauces.
15) An umbrella or shelter for shade and coverage of the cooking area.

(See diagram below on page 2)

CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

REQUIREMENTS FOR THE SALE OF MEAT PRODUCTS

PRODUCED BY C.M.C. HEALTH RESOURCE CENTRE.

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Annexure to Permit to Occupy an Informal Trading Site

30 June 2000

The Permit is issued subject to the provisions of the By-Law for the Supervision and Control of the carrying on of the Business of Street Vendor; Pedlar or Hawker in terms of Section 6A of the Businesses Act 1991 (Act 71 of 1991) and the following Standard Trading Conditions.

1) The holder of the Permit shall personally operate and be present at the site during trading hours. A person may assist the Permit Holder at the site in his / her absence, and the requisite identification of the respective assistant must be advised to the City of Cape Town and be reflected in a letter of authority in possession of the assistant.

2) The permit is only issued to the permit holder upon proof of identity and is not transferable.

3) The Permit / Original certified copy shall be available at the site at all times, and shall be produced upon demand to any law enforcement Officer of the Municipality of Cape Town.

4) The Municipality of Cape Town shall have the right to order the holder of the permit to temporarily cease trading from the hawking site in the event of it having to accommodate street parades, events of a similar nature or any roadworks, without any compensation.

5) The Trading site shall not be used as a distributing point for goods (stocks of whatever commodity) for the purpose of resale.

6) The Municipality of Cape Town reserves the right to summarily cancel a permit without payment of compensation in the event of the permit holder having provided false information in support of his / her application.

7) The permit shall automatically cease on the expiry date and the permit holder shall be required to vacate the hawking site on this date unless he/she is in possession of a valid permit authorising continued occupation of the site.

8) The hawking site will be re-allocated to interested parties on the waiting list, if the permit is not renewed by the due date.

9) Only the products which have been stipulated on the application form may be permitted on the hawking site unless otherwise authorised by the Municipality of Cape Town.

10) Monthly payment of permit fees shall be made at the City of Cape Town Cash Offices, as indicated accordingly for the different informal trading areas.

11) Not more than 2 (two) persons shall manage the trading site at any one time, except with the prior permission of the Municipality of Cape Town.

12) Save as otherwise authorised in writing by the Municipality of Cape Town, no structures, other than a device which operates in the same manner as, and is shaped like an umbrella, for the purpose of providing shelter, shall be used.

13) Only goods of a legal nature whatsoever shall be permitted for sale by permit holder.

14) **Do not trade in following areas:**

(a) In municipal garden or park without permission
(b) Outside a government or council building
(c) Outside a church or place of worship
(d) Outside a national monument
(e) In an area declared prohibited by the municipality
(f) Contrary to restriction imposed by the municipality in respect of any particular area
(g) At a place where it obstructs:

(i) a fire hydrant
(ii) an entrance or exit from any building
(iii) a sidewalk
(iv) vehicles

(h) In front of a residential premises if the people concerned objects
(i) In a manner that obstructs display windows of shops
(j) In a manner that obstructs the use of parking or loading bays

15) **DO NOT**

(a) Stay overnight at your place of business
(b) Create a nuisance
(c) Damage public property
(d) Create a traffic hazard
(e) Make a fire where it could harm people or damage property
(f) Allow your trading area to fill up with refuse
(g) Erect any structure without written approval of the City of Cape Town
(h) Attach any object by any means to any:

(i) Building
(ii) Structure
(iii) Pavement
(iv) Tree / Tree Protection Guard
(v) Parking meter
(vi) Lamp-pole
(vii) Electricity pole
(viii) Telephone Booth
(ix) Post Box

(x) Traffic Sign
(xi) Bench
(xii) Any other street furniture in or on a public road or public place

(i) Keep your goods in an unclean and / or insanitary condition
(j) Carry on your business in such a manner as to be a danger or threat to public health or public safety

16) **Do not obstruct**

(a) Street furniture
(b) Bus passenger benches, shelters or queuing lines
(c) Refuse disposal bins or other facilities intended for the use of the general public
(d) Pedestrian crossings
(e) Any road traffic sign or any marking notice or sign displayed
(f) Access to any pedestrian arcade or mall
(g) Access to any local authority service

17) Remove daily at the conclusion of trading all waste, packaging material, stock and equipment of whatsoever nature which are utilised in connection with your business.

18) The domicilium citandi et executande of the Permit Holder shall for this purpose be the address appearing on the application form: and that of the Municipality of Cape Town shall be the City Manager, P O Box 4511, Cape Town, 8000.

19) The Municipality of Cape Town reserves the right to amend the aforegoing conditions of Permit whenever it becomes necessary.

20) Permit Holder (Signature) .....

Print Name in Full .....

Date .....

Appendix 11: Vending Cart requirements

CK 2000/020615/23
Benchmark Doors Cape

PO BOX 656,
EPPINDUST 7475
FAX: 086 604 4275
EMAIL: sales@benchmarkcape.co.za

VAT 4760204664

To:	**Dr. Zandile Mchiza**	From:	**Robert J. Thompson**
Company:	**Human Science Research Council**		**Sales**
Your Reference:	**Quotation**	Tel:	**021 951- 8118**
			071 473 6095
Fax No.:		Date:	**3 September 2015**
Our Reference:	**Pro Forma**		

RE: Vendor Trolley

We thank you for your enquiry and have pleasure in submitting the following quotation/proposal as per your request.

To manufacture and supply a Vendor Trolley to the following proposal:

1. The overall size of the Unit shall be 1200mm in length x 900mm wide with overall height of 1100mm when in storage. When deployed, the Unit shall be 1800mm in length.
2. The working surface shall have a height of 950mm with 150mm splash-back. All working surfaces shall be Stainless Steel, in a brushed finish.
3. The body shall be manufactured in Galvanised Mild Steel. The external surfaces shall be painted in the colour of your choice.
4. The Unit shall be on a Galvanised Mild Steel chassis, with four (4) solid wheels, 200mm in diameter. The chassis shall have a fold-away draw-bar for pulling and steering.
5. The unit shall have a 400mm x 340mm x 150mm deep Stainless Steel basin, allowing the grey water to drain into a 25 Litre removable container. A 25 litre fresh water container with tap shall be supplied with the Unit.
6. A two (2) plate gas burner with regulator and 9 kg cylinder will be housed in the Unit.
7. An insulated compartment shall be provided to control the temperature by means of "ice-bricks".
8. The construction of the Unit shall be so that no "fat-traps" or crevices will hinder proper cleaning.
9. The construction of the Unit shall take all safety regulations into consideration.
10. Provision shall be made to attach a canvas gazebo if required.

S. Daniels (Managing Member)

CK 2000/020615/23
Benchmark Doors Cape

PO BOX 856,
EPPINDUST 7475
FAX: 086 604 4275
EMAIL: sales@benchmarkcape.co.za

VAT 4750204994

Please note, our price do not include the following consumables: LP gas, "ice-bricks" or any utensils.

Our Price: **R 18 758,65**

Should you have any enquiries, do not hesitate to call.

Regards,

Robert Thompson

TERMS AND CONDITIONS

All prices exclude VAT. All supplies and material will remain the property of Benchmark Doors (Cape) until full payment has been received. Payment terms will be 60% deposit with order, 40% on delivery. Delivery will be 7 working day from confirmation of payment of deposit. Please forward confirmation to sender with your VAT no: and address. Quotation is valid for 21 working days.

BANKING DETAILS: NEDBANK Parow Branch, Code 102510, Acc: 102 537 1720

S. Daniels (Managing Member)

UNIVERSITY of the
WESTERN CAPE