Home food gardens and poverty alleviation in the rural area of Macekane, KwaZulu-Natal

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A minor dissertation submitted in fulfilment of the requirements for the award of the degree Masters in Social Science (Social Development)

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PLAGIARISM DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to and quotation in this dissertation from the work or works of other people has been attributed and has been cited and referenced.

Signature: Signed by candidate Date: February 2023

DEDICATION

I dedicate this research paper to God who carried me to the end.

I also dedicate this research paper to my unborn child, my everlasting joy.

ACKNOWLEDGEMENTS

I am immensely grateful that God kept His promise. He promised me that although storms and circumstances may come against me during my Master's degree journey, He would not let me fail and I would remain steadfast. There were times I thought I could not do it, but He gave me strength.

My greatest appreciation goes to my supervisor, Dr.Somaya Abdullah, for her unwavering support and guidance throughout this journey. She was so patient, and restored hope when it was lost.

I also thank the participants from the Macekane area who made this research possible. *Ngyabonga ukungihlonipha nokungethemba kwenuekuthenini nikhulume izinhliziyozenu.*

Ngithanda ukudlulisa ukubonga futhi emndenini wami wasemaNgadini ngokungeseka kwabo ngithinjeboSthenjwa, nina eningengakanani nasentendeniyesandlaniyenela.

I would not have attained this level of academic progress if it had not been for my sponsors, the John and Magaret Overbeeck Trust, Dr Graaf, and the Dr Strebel bursary. I am eternally thankful for their assistance with my study fees.

ABSTRACT

Access to food, water and nutrition is a constitutional right in South Africa, yet the state of food accessibility is questionable, particularly in rural communities. After South Africa achieved political freedom in 1994, development and prosperity were prioritised, and a number of policies were designed to eradicate poverty and inequalities. However, these policies have had little effect on food security, which is still precarious in many places, especially deep rural areas. This research explored the effects of home food gardens on food accessibility and poverty reduction in the rural area of Macekane in KwaZulu-Natal. It sought to investigate the circumstances of food insecurity in this area that prevail in the face of government-related food security interventions in rural areas. The focus of the research was a recent project initiated by the youth in the uMhlathuze Municipality's Ward 31, which falls under the Somopho Traditional Council. The youth initiated a 'One home, one garden' project to address food insecurity and support self-sustainability in the community. The research employed a qualitative approach in which participants with food gardens were purposively selected and interviewed about their experiences of producing food to sustain their households. The findings revealed that water accessibility was a hindrance to the maintenance of home food gardens in Macekane. Home food gardens could contribute to the livelihood of the Macekane community, but water scarcity poses a major obstacle to achieving this goal. There is also a need for more systematic planning and implementation of community programmes such as this to ensure their success. This research brings a new perspective to the topic of food insecurity as its focus is on a specific rural community and their experiences. It therefore fills a gap in the discourse on poverty alleviation and food shortages in rural areas.

Keywords: food garden, food security, poverty alleviation

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

Lack of access to food is a persistent issue in African nations, and the subject of global attention and action. Africa has been searching for solutions to its food insecurity for decades (Omoteshoet al.,2007). Several interventions have been initiated to promote access to food, demonstrating a variety of approaches to help impoverished households maintain a measure of consistency in their food supply.

In South Africa, the Integrated Food Security Strategy was introduced in 2002 to combat poverty, according to Dlamini (2014). Although the strategy has been successful in meeting most of the country's food needs for the past twenty years, about 35% of the population still face hunger regularly. Agricultural institutions have carried out additional interventions to address the issue of food insecurity (Dlamini 2014). Despite these efforts, food insecurity persists in many communities.

People who have difficulty accessing food are likely to be those living in deep rural areas. Mcata (2014) argues that food insecurity may be experienced in both rural and urban settlements, but because rural households tend to comprise more members than urban households, food insecurity may pose more of an issue in rural communities. Macekane is one of the rural areas most affected by hunger. Poverty and unemployment are endemic, most households are headed by women or children, and many have not even one-person capable of providing for the family(Umhlathuze Ward-based Plan 2017). Most Macekane families rely on child support grants or old age grants. Carnis and Taylor (2001) state that the majority of families in South Africa's rural areas rely on these grants, which rarely provide enough for the family.

Agriculture therefore plays an essential role in reducing hunger. A key activity practised by many impoverished rural residents, not only in South Africa, is food gardening. According to Mkhize (2011), food gardening is common among rural populations. These fairly small and manageable gardens protect people from hunger. Homestead-based food gardens in South Africa contribute significantly to ensuring food security, but face a number of challenges that limit their growth and ability to do so (Dube &Sigauke 2015). Koyenikan (2007) asserts that home gardens directly improve households' food security by giving families access to a variety of nutrient-dense foods and greater purchasing power. Home gardens could contribute towards

eradicating poverty and improving food security in impoverished communities. However, the reality is that most food gardens are not as effective as they could be and may not be fulfilling their potential to keep families well nourished year round.

Therefore, this research sought to investigate the role of home food gardens in poverty reduction and the promotion of food security in the rural area of Macekane, KwaZulu-Natal. Fifteen participants took part in the study. Their names have been kept confidential, in keeping with the observation by Fall (2014)that participant confidentiality is essential to the success of any study. Strydom (2011) states that confidentiality means not disclosing to third parties any personal information those participants reveal to researchers. The participants were informed during the interviews that their personal information would be protected throughout the research process and in the written report, and that only the researcher's supervisor would have access to it.

1.2 Statement of the problem

It is evident that food garden initiatives have been implemented both globally and nationally. According to Dlamini (2014), agricultural institutions have played an important role in fighting food insecurity. However, despite the efforts of many, food insecurity persists and is pervasive in communities, particularly rural communities struggling with poverty. Chapter Two, Section 27.1 (b) of the Constitution of South Africa states that citizens have the right to basic necessities such as sufficient food and water. This means that food should be accessible and sufficient, and available to everyone without exception.

After South Africa gained freedom in 1994, various developmental goals were prioritised. Food insecurity became a critical issue after the full extent of hunger and malnutrition in the country became apparent. The government’s mandate was to eradicate the complex social and economic factors that contributed to food insecurity, especially poverty, unemployment and inequality. As part of the social development strategy to address food insecurity, South Africans were encouraged to start food gardens, especially in rural areas where people were most vulnerable.

Food gardens have in fact been a feature of rural homes for many years. However, malnutrition (which can include both over- and under nutrition) is still a concern in many areas, with under-nutrition prevailing in the Northern Cape, North West, and KwaZulu-Natal provinces (KZN) (Taylor and Kini, 2012). The problems relating to rural poverty have been recognised, and

home gardens have been especially promoted in recent years to address persistent malnutrition and food insecurity.

Currently, little information is available on home food gardens in the Macekane area of KwaZulu-Natal. To clarify whether home food gardens contribute to reducing poverty in Macekane, this study set out to evaluate the effects of food gardens on household food security, thus expanding the literature on this topic.

It has been observed that the effects of poverty and hunger cannot be overstated, as they can last for generations. On this basis, the researcher was interested in the extent to which food gardens contributed to food security in a community where hunger and poverty prevail. Macekane is typical of many South African rural communities. The researcher was also interested in whether home gardens had any broader economic effects on the community and constituted a strategy for poverty alleviation.

The researcher's interest in the topic and the area were sparked after a group of young emerging leaders from the city of Umhlathuze spearheaded an agricultural initiative in the area, with the support of the Green Development Foundation (GDF) and the Department of Agriculture. The initiative supported home vegetable gardening among households surrounding Umhlathuze and was later expanded to Macekane, where an invitation was extended to all families to benefit from the project. GDF serves the community by implementing development initiatives through environmental projects, waste management and agricultural development.

Umhlathuze, the third largest municipality in KwaZulu-Natal, appointed GDF to mobilise environmental and agricultural funding to implement the city's rural development plan. GDF presented a comprehensive plan to the city that encompassed agricultural development, environmental programmes and the training of local people on agriculture, waste management, greening and awareness of the need for environmental protection. It continues to work in the rural areas surrounding the city.

Thus, this research sought to explore the role of food gardens and their contribution to food security in the community of Macekane, a village situated about 20 km from the city of Umhlathuze. There was a need to investigate the successes and challenges of the food gardeners in this village, which is faced with rampant poverty and unemployment.

1.3 Rationale and significance of the study

According to Chaucer (2015),enough food is produced globally, and yet about 1 billion people still go without food because they cannot afford it or get access to it (Machete, 2004). The assertion that South Africa produces enough food on a national scale was reaffirmed by Baiphethi and Jacobs (2009). However, 43% of households' experience food poverty and 14 million individuals are thought to be at risk of food insecurity (Machete, 2004).

The researcher had an interest in conducting this study in Macekane because there was evidence that the youth of Macekane are interested in helping themselves and have initiated food gardens. At the same time, encounters with several people in the community raised the issue of the high levels of poverty that prevail. The combination of high poverty levels and some attempts to make a difference prompted the researcher to look into what had been done via food gardens, how successful they had been, and what their potential was.

The researcher learned that, with the help of the GDF and the City of Umhlathuze, the Macekane Youth Committee had mobilised local people to start home gardens. These two institutions had identified several rural areas in Empangeni in which to work. People in the identified areas were given seeds to start home gardens, with the seeds provided by the Department of Agriculture.

The researcher also discovered that few studies had examined the issue of food security and home gardens in the area, and none in Macekane Reserve in KwaZulu-Natal.

This research is vital since rural locations such as this are fairly neglected in the literature, and little is known on the effects of food gardens on poverty alleviation in this locality. It is important to shed new light on the current situation in this poverty-stricken area of KwaZulu-Natal, and to examine the findings considering what has been found on the topic in other areas and at other times.

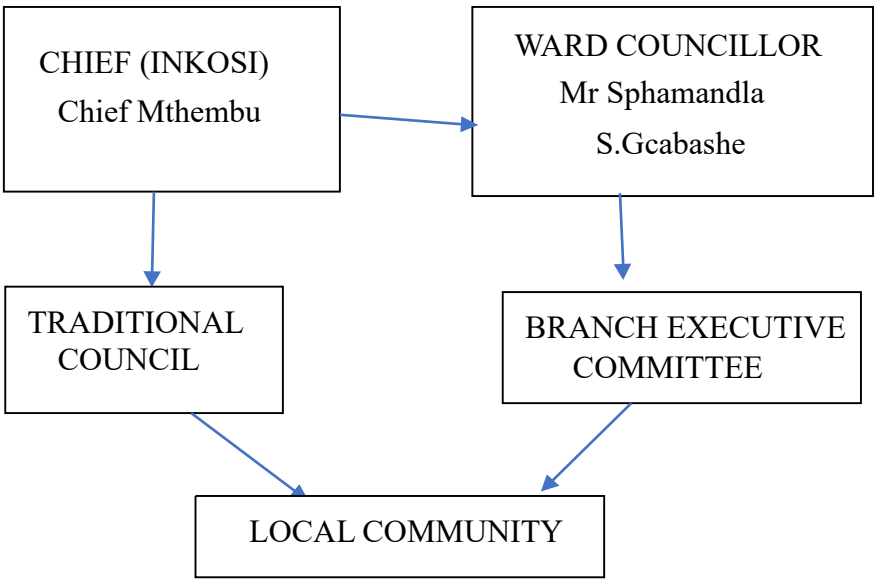
This research is needed since it will contribute to the body of knowledge on poverty alleviation, food gardens and collaboration between government entities and civil society organisations. Information from this study could also inform policy development. It will shed new light on the way in which programmes such as the one run by GDF address food insecurity, and it will reveal the challenges faced by rural communities in relation to food supply. There is currently a lack of information on the benefits and challenges of community gardens, and on how food

is produced. Investigations such as this can lead to the discovery of innovative strategies to support people involved in agricultural endeavours that have the potential to affect communities and the nation at large.

1.4 Macekane community

Macekane is a rural community comprising about 10 000 people, according to the Umhlathuze Ward-based Plan (2017/2018). The main ethnic group is Zulu. The Ward-based Plan (2017/2018) states that the community suffers from poverty, with many families headed by children or single women. Unemployment is rife and hunger is common in many households where one person may be supporting the extended family, or the entire household may depend on government grants. Since poverty is chronic in the area, the local government works in tandem with the traditional council to combat it. People in need in the community have been identified via door-to-door visits, with all households profiled according to number and age of persons in the home, and income. All names have been entered onto a database. Various local and provincial government initiatives assist those in dire need, distributing food parcels on a monthly basis. Supporting agencies include the local municipality, the South African Social Security Agency (SASSA) and the local Fire Department.

Figure 1.1: The authority structure in Macekane



As shown in Figure 1.1, authority in Macekane is distributed amongst traditional chiefs and the local municipality, who work collaboratively for positive change in the community. The chief

is typically a member of one family that has been designated to assume inherited leadership. This person holds the position for life. Their main responsibility is to oversee social behaviour in the community over which they have jurisdiction. Service delivery is not under the supervision of chiefs; it is under the jurisdiction of the local government. Rather than being part of government, chiefs are social leaders. In Macekane, Chief Mthembu presides over the Somopho Traditional Council and is the recognised traditional authority.

According to Mkhize (2011),political leadership derives from the local government, which falls under the provincial government, which in turn falls under the national government. Each area under local government has a local ward councillor, whose term is only five years long, as stated in the Constitution. However, if there is no party leadership dispute, the ward councillors can run for office as many times as they wish to. For local government goals to be achieved, council members have a crucial role to play. These goals include providing local communities with democratic and accountable government, guaranteeing sustainable service delivery to communities, encouraging social and economic development and a safe and healthy environment, and encouraging communities and their organisations to get involved in local government affairs.

Constitutional democracy guarantees citizens their rights through the Bill of Rights. Representative democracy allows for direct election of individuals from communities to represent their interests in the local council, and participatory democracy makes it possible for communities to participate actively in the policy-making and decision-making space in council. Macekane is democratically led by Councillor Shamindra Wesley Gcabashe who is serving from 2021 until 2025.

Figure 1.2 shows a map of the Macekane area.

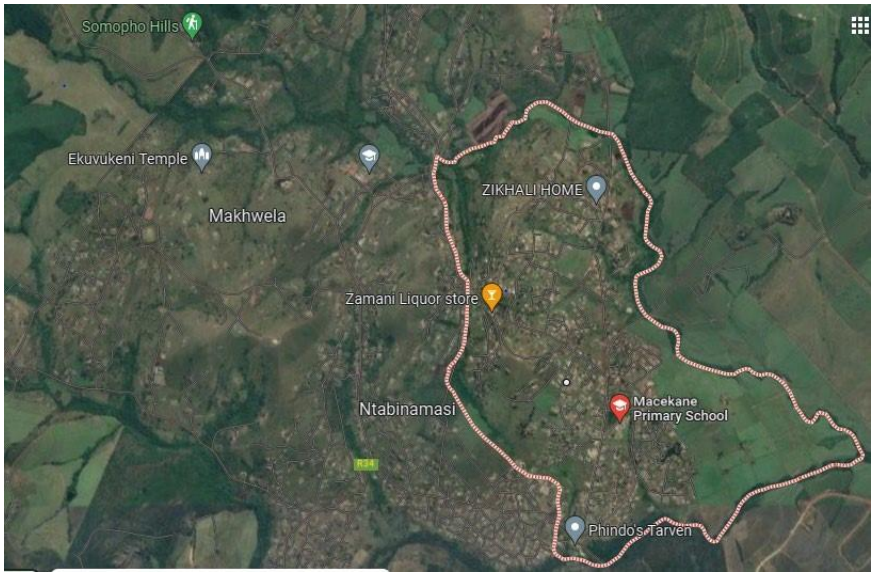


Figure 1.2: Map of Macekane area

Macekane is located about 20 km from the city Umhlathuze (KZ 282)on KwaZulu-Natal's north-east coast, about 180 kilometres northeast of Durban. Hadebe (2022) reported that the Umhlathuze Municipality extends far beyond the city, encompassing a land area of 123 359 square miles and including rural regions governed by traditional councils such as Dube, Mkhwanazi, Khoza (Bhejane), Zungu (Madlebe), Somopho (Macekane) (Mthembu), Obuka (Biyela) and Obizo. It also includes Richards Bay, Empangeni and eSikhaleni (Cebekhulu). Urban areas are relatively close to Macekane. Although newly constructed homes still lack water and electricity, the area does have the basic utilities of water and power. Six sections make up Macekane: KwaNkosi, Izixe, Izithombothi, Gxigxi, and KwaMkhwanazi and Dibha.By Municipal Act 55, Macekane officially forms part of the city of uMhlathuze andcomprisestwo wards for the purposes of local administration – Wards 31 and 32.

Figure 1.3 shows the main sources of power in Macekane, revealing that electricity is the main source used.

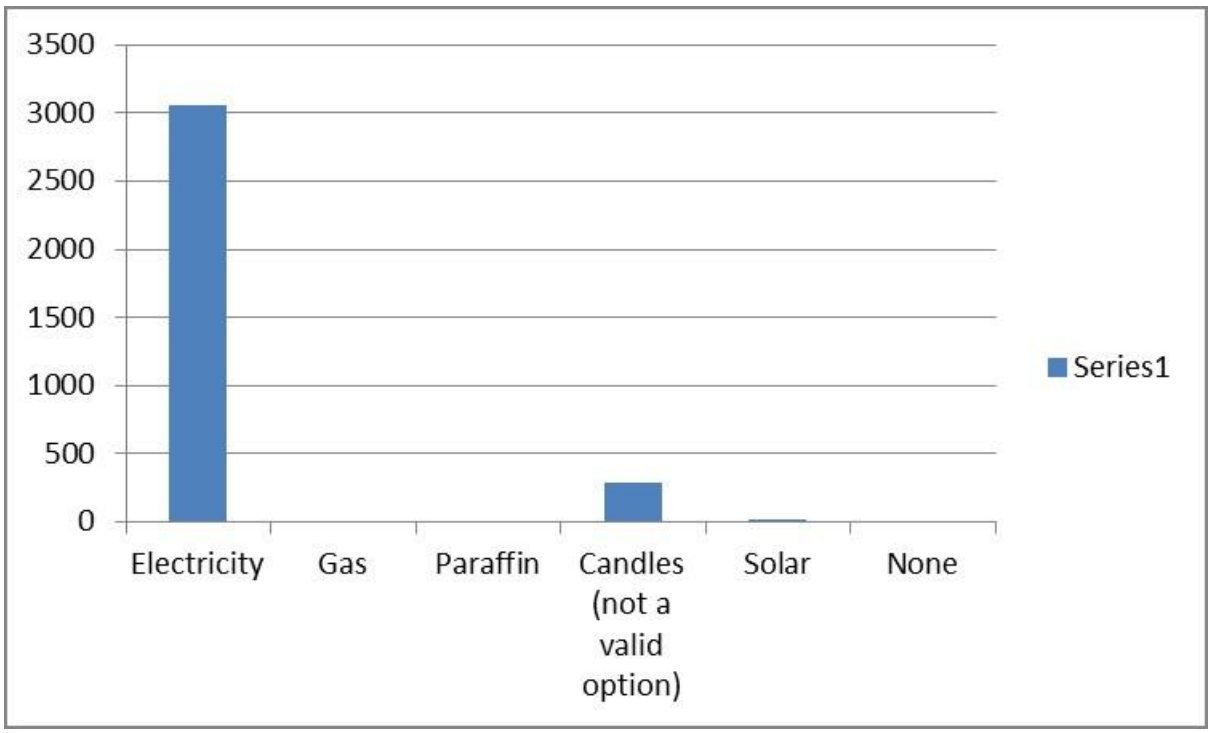


Figure 1.3: Household sources of power in Macekane

Figure 1.3 shows that the number of households using electricity for lighting in this area is relatively high. However, Eskom has identified that a high number of homes use stolen electricity derived from illegal connections. Eskom states that they are dealing with this in tandem with the local municipality. The households of Macekane have a piped water system, and yet there is in fact no running water. Some participants in this study indicated that they buy water from water tanks that are normally sent by the municipality to the community to distribute water.

1.3 Research topic

The topic of this research is: Home food gardens and poverty alleviation in the rural area of Macekane, KwaZulu-Natal

1.4 Research goal and objectives

The goal of this research was to explore people's experiences and perceptions of home food gardens and the effects of home food gardens on food accessibility and poverty in the rural area of Macekane, KwaZulu-Natal.

This goal was guided by the following objectives:

- to explore whether food gardens support food security;
- to assess whether home food gardens play a role in poverty alleviation; and
- to assess the youth home gardens campaign as a poverty alleviation strategy in Macekane

1.5 Research questions

This research responded to the following questions:

- Do food gardens support food security?
- What is the significance of home food gardens in poverty alleviation?
- Do home food gardens play a role in poverty alleviation?

1.6 Research assumptions

The researcher assumed that the challenges and problems of home food gardens found in one home garden would be likely to apply to other home gardens. It was also assumed that the participants would be truthful and honest in responding to questions about their home gardens.

1.7 Clarification of terms

1.7.1 Poverty

Poverty is a multifaceted concept based on the notion of deprivation. It is ascertained by an examination of elements such as assets and income. It can be understood by an examination of its contributing components (Noyoo, 2012). Economic deprivation of any kind is referred to as poverty. However, the issue of poverty can manifest in a variety of ways

Multidimensionality is the term used to describe the many aspects of poverty. Some definitions centre on a lack of access to necessities. Sen.'s (2000) definition is centred on material deprivations. This is a relatively new understanding of poverty that was once defined solely by lack of income. Nussbaum(2000) echoes Sen, adding that earlier definitions of poverty often included a racial element. Batson's definition of poverty hints at a racial slant:'… the barest minimum upon which subsistence and health can be achieved under Western conditions. Generally poverty is considered a measure of deprivation of any basic necessities that a person, household or community require for a basic standard of living.

Many definition of poverty incorporate the idea of deprivation, which is quantified in terms of a lack of capabilities (such as skills, knowledge and technology), resources (such as income and assets), or both. Deprivation can include material deprivation, isolation, alienation, dependence, lack of decision-making power, lack of assets, and vulnerability.

1.7.2 Rural poverty

Poverty is understood according to type. Rural poverty studies isolate urban poverty and focus on rural communities. Extreme poverty and rural poverty tend to go together, yet rural communities do have the possibility of engaging in agriculture, which plays a role in sustaining life and livelihoods (World Health Organization, 2018).

1.7.3 Food security

It is crucial to define food insecurity in an academic context. Shisana and Hendriks (2011) define food security as the presence of a stable food system where there is availability of nutritional food for all. This is backed up by the Food and Agriculture Organization (FAO), (2015) and Haysom(2017). The United Nations (2017) confirms that food security refers to a stable food system that includes access to food with substantial nutritional content.

1.7.4 Food insecurity

Food insecurity refers to a shortage of food. Food insecurity can also be viewed as uncertain access to 'nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways' (Anderson 1990).

1.7.5 Hunger

Hunger is the temporary physical discomfort brought on by a persistent food scarcity, or in extreme situations, a food shortfall that poses a serious threat to life (National Research Council, 206). Hunger is also described as a state in which people do not consume enough food to sustain their basic needs for nutrition and energy. A global scale can be used to describe the global hunger problem.

According to the World Health Organization (2019), hunger is a physically uneasy or painful experience brought on by a lack of dietary energy consumption.

1.7.6 Malnutrition

Malnutrition means having too little food to eat, or the consumption of food of such low quality and variety that the diet does not provide the nutrients necessary to sustain health. Malnutrition

can result from inadequate intake of calories, a unit of measurement for how much energy the body needs, protein, a component needed to maintain healthy muscle mass, iron, and other nutrients (Geisler et al., 2018). Malnutrition is defined by WHO (2019) as deficiencies, excesses or imbalances in a person's calorie intake. Malnutrition and food insecurity are related concepts. Limited or inconsistent access to nutritious food is referred to as food insecurity (National Research Council, 2015).

1.7.7 Home gardens

Home gardens can be defined as an integrated system that includes many activities and programmes on a very modest plot of land (Food and Agricultural Organisation, 2015). Both domestic plants and ornamental flowers may be produced in a home garden. In this study, the terms ‘home garden ‘and ‘food garden’ are used interchangeably. Musotsiet al. (2008) define a home garden as a vegetable garden. Members of the household who reside in the home build and manage their own home gardens. Home gardens are among the most traditional methods of food production still used today, according to Talukder et al. (2003).

1.7.8 Sustainable livelihood approach

The sustainable livelihood approach is a tool used in development work. It outlines the key elements that influence the poor’s means of subsistence (Pedersen, 2010, cited in Hussein, 2002). In addition, Ashley (1999) states that this approach prioritises work towards the attainment of the United Nations Sustainable Development Goals in order to accelerate the fight against poverty. The sustainable livelihood approach stresses a sustainable way of life, which is an economic plan designed to meet one's basic physiological demands while also addressing issues such as conservation and climate change.

1.8 Research methodology

To answer the research questions, a qualitative research method was employed. The collection of data depended on three methods: First, a preliminary literature review in order to build a theoretical foundation and to identify the research questions; second, a review of the policy landscape for food security; and third, structured interviews with Macekane households that have food gardens.

1.9 Ethical considerations

When conducting social research, it is necessary to be cognisant of certain moral and ethical principles. According to Strydom (2014), ethics are a collection of moral ideas established by a person or organisation that provides guidelines and expectations for appropriate behaviour in research. It is critical that study participants are protected, that trust is established with them, and that research is conducted ethically to uphold the research's integrity (Neuman, 2014). In order to avoid violating the rights of participants, the researcher made sure that ethical considerations were followed. The researcher followed the following ethical guidelines during the process of interviewing the participants.

1.9.1 Avoidance of harm

According to Strydom (2011), avoidance of harm is the prevention of deliberate harm to participants, whether physical or emotional. One of the major roles of a researcher when conducting research is to ensure that participants are safeguarded and not harmed (Strydom, 2014). If a participant feels violated or highly uncomfortable, they should be permitted to express their discomfort, decline to answer a question or even end the interview. In this study, interviews were conducted through phone calls and WhatsApp messages, with the researcher taking special care to be aware of participants' physical and emotional state during the interviews. Participants were made aware of their rights and the researcher's limitations. The researcher did not ask intrusive questions that would have made the participants feel uncomfortable, and they were informed that they had the right to indicate if any of the questions concerned sensitive matters.

1.9.2 Informed consent

According to Hesse-Bibber (2016), informed consent must be obtained when a researcher makes use of human subjects. This entails carrying out a number of processes. Giving their informed consent requires that participants are aware of the nature and objectives of the research, what their role in it will be, how the results will be disseminated, and the assurance of anonymity during the process and in the final report. In this study, the researcher made sure that the description of the study was clear, comprehensive and simple, so that the participants would fully understand what the research was about and what was required of them (Blumberg, et al. 2014). The consent form used to solicit participation included information on the study. The researcher sent consent forms to the participants for signatures before interviews commenced. All signed and returned these.

1.9.3 Privacy

‘Privacy ‘applies when participants are given the right to decide on what to share and what not to share during the research regarding their physical state, social network, thoughts and feelings (Fisher, 2015). In this study, the researcher made participants aware that interviews were private and that their names would appear only on the researcher’s cell phone.

1.9.4 Anonymity

Anonymity applies when a researcher and readers are unable to link participant-provided information to any person’s name or identity. It therefore safeguards the participants in that their identities cannot be accessed by any third party (Babbie & Mouton, 2001). Van Nieuwenhuyze (2009) points out that the use of pseudonyms alone may not completely protect the participants, particularly in qualitative research that calls for the provision of in-depth descriptions of events to the point where those who are familiar with the person might determine who they are even without seeing their name. In this study, the researcher briefed the participants, informing them that they had the right to information and that the information gathered was for academic purposes only and would be kept securely. Participants were asked for their permission for the interviews to be recorded but their names were not mentioned in the recordings. All participants' personal information was kept confidential, and this fact was made clear to all.

1.9.5 Confidentiality

According to Fall (2014), maintaining participant confidentiality is essential to the success of any study. Strydom (2011) states that maintaining confidentiality involves not disclosing to third parties any information that participants reveal to the researcher. In this study, the researcher informed the participants during the interviews that the information provided would remain private. According to Strydom (2011), it is essential to keep information acquired from research participants private. Therefore, the researcher took precautions to keep names and certain other information obtained during the research private, and to make sure it was never disclosed to anyone other than the research supervisor.

1 9.6 Voluntary participation

According to Hogan (2001), potential participants must be free to exercise their power of choice when it comes to whether or not participate in research. In this study, the researcher did not compel participants to take part; instead, she informed them of the nature of the research and invited them to participate if they so desired. She also made them aware that they were free to

withdraw from the study at any time without consequences. This was stated in the consent form and explained verbally (Neuman, 2014; Terreblanche, Durrheirm and Painter, 2015).

The idea behind voluntariness is that subjects should not feel threatened or pressured into taking part in the research. This comes down to allowing them the freedom of choice, willingness and action (Phezisa, 2016). In this study, before giving their agreement, participants were invited to ask any questions they wished to ask about the research.

Thus, the principle of voluntary participation was upheld.

1.9.7 Publication of findings

This research is a compiled report based on findings revealed by the research. It includes all information necessary for the reader to understand the process and the results (Des Vos et al., 2014). Participants were informed that their contributions would be included in a written report and made available online afterwards for academic use at the University of Cape Town library and other libraries (Engel &Shut, 2010).The report was written and submitted only after participants' permission to do so had been obtained.

1.10 Chapter outline

This research is divided into five chapters as follows:

Chapter One introduces of the topic, describing the purpose of the research and giving background information on the research process and the area in which it was conducted. The chapter gave a detailed description of relevant concepts and concluded with ethical considerations.

Chapter Two presents findings from the literature on home gardens as poverty alleviation strategy in rural areas. It further discusses the theoretical framework relevant to food insecurity and poverty, and the legislation and policies that pertain to the research topic in South Africa.

Chapter Three describes the research methodology. It gives details of the research design and approach employed, the ways in which data was collected, the population and the sample, and the method of data analysis used.

Chapter Four presents the findings of the research, arranged according to the themes, categories and sub-categories that emerged from analysis. They refer to facts that are largely missing in

the literature. The themes and categories are supported by verbatim quotes to enhance the trustworthiness of the study. Each finding is discussed.

Chapter Five presents conclusions and recommendations based on the findings. The recommendations will be presented to institutions, policy makers, researchers and individuals who have an interest in improving policy and practice about poverty alleviation and food security.

1.11 Summary

This chapter has established a foundation for understanding the research study. It has described the research topic, rationale and significance of the study, along with the problem statement, research objectives, the meaning of relevant concepts and ethical considerations.

The following chapter examines the literature on the topic of food gardens in relation to poverty alleviation.

CHAPTERTWO:LITERATURE REVIEW

2.1 Introduction

This chapter presents an overview of the available literature on the topic under investigation. Global issues to do with food security, poverty, hunger and food gardening are also examined globally, with a special focus on South Africa and KwaZulu-Natal. In addition, the chapter presents the theoretical foundation of the study, including relevant policies and legislation.

2.2 Global poverty and food insecurity

Sen.'s approach to understanding poverty links human rights, social exclusion and sustainable livelihoods. Human beings are fundamentally rational agents with the ability to recognise personal wants, needs and resources. Nussbaum (2000) maintains that resources need to be converted for the functioning of the individual. In this way, capabilities may spring from substantial needs.

In the discourse on global poverty and food insecurity, certain concepts are key. These are discussed below.

Economic, political, social and environmental aspects. These aspects need to be known and described to give poverty a context. This approach is structural and seeks to direct attention to the objective characteristics of poverty. A description of the context provides a snapshot of the conditions creating and characterising poverty.

Spatial and temporal dimensions. A description of these elements stresses the dynamic nature of poverty. The significance of poverty's variations across time and geography are occasionally underappreciated. For example, the circumstances of underprivileged rural households frequently improve dramatically once a crop is harvested, in terms of money, food, labour and health. Nonetheless, some individuals live in chronic poverty and experience ongoing hunger, contaminated water, illiteracy and social prejudice, among other disadvantages (Saxena, 2018). The likelihood that poor people will be able to leave poverty is greatly influenced geographically by their distance to infrastructure such as markets, hospitals and schools. Looking at these spatial and temporal dimensions has the benefit of highlighting the unpredictability of poverty, which makes it easier to provide possibilities for development.

Powerlessness, vulnerability and solitude. These concepts draw attention to various dimensions of poverty (). Lack of resources to counteract deteriorating circumstances is referred to as vulnerability. Solitude and isolation refer to the incapacity, on a physical and social level, to take advantage of opportunities and resources that are available to others. Powerlessness is a reflection of the inability to assert one's rights and to object to abuse. The actions of the impoverished may be explained by these three ideas, which also explain why risk minimisation is a common strategy. These aspects make a significant addition to the discourse as they illustrate how poverty and social exclusion lead to genuinely different choices for the poor in comparison with the non-poor.

The Human Development Index (HDI) and the Human Poverty Index (HPI) are some mechanisms used to measure what poverty entails (CIA, 2008).

United Nations (2015) mentions that poverty may be determined by the use of the poverty line, which is a level below which an individual or a household fails to satisfy their basic needs. When people live below this line, they are said to be living in subjective poverty.

Subjective poverty may be defined as the absence of sufficient income and productive resources to support sustainable livelihoods, along with other conditions such as hunger and malnutrition, poor health, limited or no access to basic services such as education, increased morbidity and mortality from illness, inadequate housing, unsafe living conditions, and social exclusion. It is also characterised by a lack of involvement in civic, social and cultural life as well as in decision-making (Batty et al., 2021).

United Nations (2015) maintains that extreme lack of essential human necessities, such as food, clean water to drink, sanitary facilities, health care, housing, education and information, constitutes absolute poverty.

Green and Hulme (2014) identified poverty as a social condition and not an inevitable fact. The National Planning Commission (2016) of Namibia defines the absolute poverty line as a minimum standard, usually based on a need such as the cost of a basket of food items that provide a basic level of nutrition. The absolute poverty line is the common approach used in countries such as South Africa, where poverty levels are extremely high.

Three national poverty lines are used for measuring poverty in the South Africa: The Food Poverty Line (FPL), the Lower-Bound Poverty Line (LBPL) and the Upper-Bound Poverty Line (UBPL).

The Food Poverty Line is the point below which there is an inability to purchase sufficient food for consumption. The Lower-Bound Poverty Level includes non-food items. Those who fall into this category must sacrifice food in order to purchase the non-food items they need. Those who fall into the Upper-Bound Poverty Line are those who can afford both appropriate food and non-food products(Stats', 2014).

Research has been conducted on food shortages and the effects of home gardens. Findings have been mixed. Crush et al. (2017) mention that globally, the issue of food insecurity is profoundly hard to tackle. They state that efforts have to be paid to the integration of local and global efforts to reduce food insecurity.

Levels of poverty and inequality are high in South Africa. It has been observed that those classified as poor are likely to be poor forever and those classified as wealthy are likely to remain so or become even wealthier, leaving the poor behind. It is evident that the majority of South Africans are poor, and a far smaller group is wealthy (StatsSA, 2014). South Africa's economic growth keeps declining, with the rising cost of fuel and food badly affecting those whose incomes are static.

The National Development Plan (NDP) has the ambitious target of eliminating or significantly reducing poverty in South Africa over the next 20 years. According to Hendriks and Olivier (2015), the extent of food insecurity among South African households is still uncertain. Programmes such as social assistance grants are run by government with the intention of helping poor and food-insecure households; however, the government has failed to formulate substantial strategy for tackling the issue of food shortage in the nation. Such a strategy would entail a shift from grants to a focus on the active participation of the socially and economically marginalised. This would result in more engaged citizens and effective government development efforts, and possibly break the cycle of dependence on government for survival.

Kuala (2018) notes that in the midst of such crises, citizens have found ways to tackle poverty and fight the scourge of malnutrition through initiatives such as food gardens. Many homes that have big plots have small gardens close to the home. The householders purchase seeds for themselves and plant for their own consumption.

To understand the nexus of poverty, inequality and food shortages, it is important to know where South Africa is in terms of overall development. The South African government has had to formulate its development strategy to foreground poverty reduction. When South Africa gained freedom, the government was optimistic, and introduced a plethora of new policies that shaped the new era. One of these was the Reconstruction and Programme (RDP), which worked with civil society to implement wealth redistribution and to redress the unequal and racist policies of apartheid (Noyoo, 2015). Some of the policies implemented as part of this programme were the child support grant, the foster care grant, and the Zibambele Expanded Public Works Programme. These three were deemed crucial for alleviating poverty (FAO, 2015).

When Jacob Zuma led the country, the Growth, Employment and Redistribution (GEAR) policy as introduced. GEAR sought to stabilise the economy but was deemed ineffective for poverty reduction by many owing to its neo-liberalist nature (Noyoo, 2015). The Poverty Reduction Strategy Paper (PRSP) was the main instrument used at the time to inform poverty reduction efforts. The paper has been criticised for targeting the consequences of social ills rather than the causes.

An analysis of increases in inequality and poverty between 2015 and 2017 shows that the figure of 25,2% of the population living in poverty increased to 28,4% in 2015. South Africa saw a further increase in the percentage of persons living below the food poverty threshold between 2015 and 2009, going from 28% to 33%(, 2018). However, the graph fluctuated thereafter, showing a rise in poverty followed by a decrease to 21% in 2011. Thirty years after the advent of democracy in the country, food security remains a critical problem in South Africa.

The Food and Agricultural Organization (2008) states that South Africa may be regarded as having food shortage issues. Hart et al. (2009) argue that South Africa is food secure, but only at the national level and not in rural regions. This is contrary to the findings of the General Household Survey (2020), which asserts that food access has long been a problem in South Africa. High levels of HIV/AIDS have contributed to both the country's food insecurity and high levels of unemployment. The material that is now available suggests that reducing poverty is a difficult problem to deal with, both because it is complex in itself and because the numbers of people living in poverty are so high.

COVID-19 contributed to an increase in food shortages across the globe. The pandemic overshadowed some of the development advances made globally, exacerbating an already high unemployment rate in South Africa. According to Jain et al. (2020), COVID-19 tipped 1.7 million people who had lost their jobs and their 3 to 5.5 million dependents into poverty. Food prices, which contribute to food insecurity and poverty, also rose during the period of the pandemic. For the most of the past ten years, food prices have been erratic, but mostly on the rise. According to Clover (2003), food insecurity is intimately tied to food poverty and hunger, and the inability to buy food. This is specifically a result of the fact that most people purchase food rather than grow it. The rise in food prices has potentially disastrous implications for food shortages and poverty. Being net food consumers, poor households are compelled to spend more and more of their money on food, which leads to less variety in meals, lower-quality produce, and lower energy intake.

2.3 Poverty and food insecurity in KwaZulu-Natal

KwaZulu-Natal (KZN) has the second largest population of all the provinces in South Africa, with over 10,457 million people. KZN is also one the strongest contributors to the South African economy (, 2020) and yet it is dominated by the previously and currently disadvantaged.

In the face of mounting pressure from poverty and other issues, the KZN provincial government continues to strive to combat the high levels of poverty. The government's action plan consistently emphasises development. The Economic Cluster (2015) states that government has a mandate for development in KwaZulu-Natal Province.

Agricultural support, social grants and school feeding programmes are all visible in rural KwaZulu-Natal and have boosted dietary diversity and improved the intake of balanced meals for children in the region (D'Haese et al., 2013). Nevertheless, major issues arising from poverty and food insecurity persist among rural households in the province (Faber et al., 2011). Rural populations frequently turn to gardening as a means of self-sufficiency.

Carnis and Taylor (2001) state that lack of employment and reliance on social assistance are contributing factors to poverty and food shortages in the rural areas of South Africa. Many people in rural areas are forced to live permanently on government support (Mkhize, 2011). Kuala (2018) confirmed that households experience food insecurity because they lack employment. The effect of hunger and poverty cannot be overstated, since it is often

intergenerational, putting children at risk from the moment they are born. According to Mown(2015), race and ethnicity could be significantly contributed to food insecurity among older people. Black people are regarded as the most food insecure ethnic group. Brewer(2010)states that black people are twice as likely to be food insecure as white people.

One of the main causes of households' inability to pursue sustainable livelihoods is KwaZulu Natal's high HIV/AIDS prevalence. According to De Klerk et al. (2004), South Africa has the highest incidence of HIV/AIDS in the world, which has a terrible effect on both nutritional status and food security. Busse (2017) reported that those who have AIDS are particularly at risk for nutritional problems in households with food insecurity (Chiminea et al, 2015).

2.4 Food insecurity in other provinces

Bahta (2022) indicates that the number of households that reported experiencing food insecurity in South Africa in 2021 was slightly above 2 million, or 11,6% of households in the country. Most of those households are headed by African/black people. The provinces with the highest proportion of households that experienced hunger in 2021 are Gauteng (25,3%) followed by KwaZulu-Natal (17,5%) and the Western Cape (14,0%).

The Eastern Cape Province is also characterised by high food insecurity. Mcata (2019) reports that the causal factors in that province are high unemployment, underemployment and dependence on State grants. Mcata (2019) also states that government services are inadequate and there is a dearth of programmes that could alleviate food insecurity through the promotion subsistence farming.

Community development programmes are unevenly distributed in the province owing to a lack of communication between various bodies. Many households have an abundance of land but very little or no food production and land is therefore underused (Mcata, 2019). However, in almost every province, food gardening is promoted by non-government organisations and implemented to some extent by communities.

Urban agriculture projects are also promoted in other provinces. Reuther and Dewar (2014), whose study was conducted in the Western Cape, state that urban agricultural projects sustain food security at the household level. However, numerous challenges affect urban garden projects. One is space. Space is a concern for most households and organisations in the

townships as people live in residential properties of less than 350 square meters (Crush, et al., 2011). Yet urban gardening remains an imperative for anyone struggling with high food prices.

Many factors have contributed to rises in food prices. When COVID-19 struck, all countries were affected economically as global supply chains were disrupted. This, coupled with the widespread loss of jobs, exacerbated food insecurity, particularly among those already living in poverty (United Nations 2020). According to Battersby (2011), difficulties like rising food and utility costs, persistent unemployment and a lack of skills were already causing many Western Cape households to experience food insecurity. Households in Cape Town identified several issues as having an effect on their ability to provide for their families, including losing their jobs, passing away, falling sick, having an accident, and losing all or part of the household income.

Lee and Frongillo(2001), whose study was conducted amongst the elderly, concur that various factors contribute to food insecurity. Factors such as low-income, reliance on food stamp benefits, low educational attainment, and isolation, demographic factors such as age and race/ethnicity and geographic location are all contributing factors (Lee &Frongillo 2001). Ziliak and Gundersen (2020) state that many of these problems emanate from the period when formerly colonised nations gained their independence.

It is evident that food security differs from province to province. The matter is highly complex, as may be seen in the Western Cape, which is diverse in terms of racial composition. Food insecurity in Cape Town is mostly experienced by black African and coloured people, resulting in malnutrition that can have lasting effects on the health and wellbeing of individuals and communities (Altman, et al., 2009).

According to the 2017 General Household Survey, the Western Cape has extremely poor access to food (defined as running out of food, going to bed hungry, or going a whole day and night without eating). Of all the metro areas in the nation, the City of Cape Town has the greatest percentage of households reporting food insecurity, at 31% of households. This is noteworthy. Hunger and malnutrition are a problem in the Western Cape because of poverty, household food insecurity, and social marginalisation.

2.5 Hunger and malnutrition

Hunger and malnutrition remain pervasive problems, both in rural and urban informal settlements, with malnutrition strongly associated with food insecurity, according to Musotsi et al. (2008). Food instability has a direct effect on nutrition. One in five young children and many infants in South Africa has stunted growth. The health, development and learning of young children as well as the productivity of the adult population are all affected by micronutrient deficiency, particularly deficiencies in Vitamin A, iron and zinc. Obesity dramatically increases the risk of developing chronic diseases such as Type 2 diabetes, cancer and coronary heart disease at the same time, frequently in the same neighbourhoods and the same homes (WHO, 2019).

Obesity and overweight are experienced mostly in poor communities with high levels of food insecurity. This is probably because the poor eat far less balanced diets than the wealthy, with a heavy reliance on cheap, less nutritious starchy foods. This applies in rural and urban communities (Boon, 2009). Health issues like undernourishment and malnutrition can influence a person's mental, physical and emotional wellbeing (Olajide-Taiwo et al., 2010).

2.6 Food gardening

Many food gardening projects have been put in place by the government through NGOs working closely with the Department of Agriculture. Dlamini (2014) confirms that poverty alleviation interventions have long been in place in many urban and rural communities. The commercial and subsistence agricultural sectors make up the profile of South African agriculture (Chikazunga 2013). The commercial sector naturally contributes more to agricultural production than the subsistence farming sector (Aliber & Hart, 2009). According to Moyo (2003), South African agriculture makes a significant contribution to food security in the country because it not only provides food but also opportunities for employment and revenue generation, as well as other resources for economic growth.

Masuku (2013) observed that rural farming is viewed as an anchor in the effort to reduce poverty in rural communities, which suggests that greater efforts need to be directed at household-level or subsistence farming. This should be accompanied by stronger infrastructural assistance. According to Cruz (2010) and Valdés, et al. (2010), food gardening is the most adaptive and accessible land resource in a community. It lowers the incidence of

food insecurity and enhances household nutrition. Various initiatives encourage people to cultivate their own food by establishing a food garden at home, especially in rural areas (Faber et al, 2011).

It is vital to recognise the importance and the potential of domestic food gardens to impoverished households. The benefits of food gardens include improved mental and physical health, social inclusion and cohesion, and a stronger bond between people and their surroundings. Guitart et al. (2012) mention the ability to consume fresh foods, social development or cohesion, such as community/capacity building and cultural exchange, improved member health, and the ability to make or save money by eating from the garden or selling the produce. Food gardens ensure that low-income people have access to affordable, high-quality food to supplement their diets, enhance their household's food and nutritional security, and generate sustainable additional revenue (Earl, 2011). In an effort to increase household income, vegetable gardens have become popular (UNDP, 2010; Earl, 2011). Home gardens are also recognised as a significant food source for food with high nutritional value. Home gardens are a well-established source of food and have the ability to increase household food security.

Faber (2011) concurs that food gardens make it easier for household members to obtain food with nutritional value, and Machete (2004) concurs that home-grown food both enhances households' nutritional condition and contributes to the development of food security. Silver, (2021)states that gardens educate people about how to produce enough food for their family's sustenance and possibly have surplus to sell without the assistance of others. In addition, food gardening teaches children how to recognise and mobilise resources and encourages people to improve their own livelihoods in their own ways, making food gardens a sustainable means to improved quality of life (FAO, 2015).

According to Hancock (2001), community gardens contribute to four types of capital: human, natural, economic and social. Gardens are regarded as a paradigm for encouraging sustainable lifestyles (Adekunle, 2013; Faber et al, 2002). In addition, they can assist people and communities to rediscover the socio-cultural significance of food, promoting greater involvement in the food system. According to Guitart et al. (2012), the main reasons people engage in food gardening are to eat fresh foods, foster social cohesion through activities such as community/capacity building and cultural exchange, enhance member health, and earn or save money on food.

2.7 Food gardens in KwaZulu-Natal

Most rural communities in South Africa and in KwaZulu-Natal practise food gardening to some extent at the household level (Johnson, 2011). Johnson (2011)states that many interventional programmes that have been implemented in rural of KwaZulu-Natal. One of these is the 'One home, one garden' project.

'One home, one garden' was implemented around Ngcolosi the Nkandla area. When first implemented, the campaign evoked some uncertainty about whether or not it would have any effect on the food security of surrounding households. This campaign was launched by the Premier of KwaZulu-Natal, Dr.Zweli Mkhize, in eQhudeni on 18 July, 2009.

The campaign sought to revitalise domestic food production while reducing the burden on the State for those who depend on it. Participants were trained to ensure that certain standard methods and proven scientific techniques were used.

'One Home, One Garden 'employed a practical and promising strategy to end poverty by assuring household food security stability, according to the KZN Department of Community Safety and Liaison (2010). However, most people surveyed in the area where the idea was implemented found it unsuccessful at achieving its stated aim (Adlibber, 2013). Poverty was already high when the project began, and the general feeling among recipients of the training was that one small garden per household was too insubstantial to make a real difference to their poverty levels.

Another project launched in KwaZulu-Natal was Xoshindlala. This was a multi-faceted project launched by the Department of Agriculture provincially with external funding (Vision 2020 for the Province of KwaZulu-Natal). One of its primary aims was to address food insecurity in the province via community gardens. Xoshindlala comprised a range of developmental initiatives, all geared towards combating poverty. Community gardening was one component, designed to combat food insecurity at the household level through community gardens. Unfortunately, the project collapsed in 2001. One of the reasons may have been that it was too diversified in its aims, failing to focus on one main activity which could have yielded a return on investment.

2.8 Theoretical framework

A theoretical framework is an imperative aspect of a research study, since it establishes the theoretical foundation on which the entire study is built. In this way, it guides the enquiry.

In this study, various concepts and policies served as the theoretical framework for the enquiry, all of which yield some insight into the context of poverty alleviation efforts in South Africa. Broadly, the study adopts the sustainable livelihood approach (Mkhize, 2011).

2.8.1 The sustainable livelihood approach

This research used the sustainable livelihood approach (SLA) to investigate food gardens in the Macekane area. The SLA may be viewed as an integrated method that advocates the promotion of livelihoods that are sustainable over the long term and are not 'quick fixes'. The approach also offers strategies that limit constraints and maximise available opportunities to improve the livelihoods of poor people. The sustainable livelihood approach recognises capital in all its forms; human, natural, physical, social and financial. It seeks to find pragmatic, creative and long-term ways of meeting the needs of rural people, employing strategies that people can implement themselves. Food gardening, the focus on the current study, is one such pragmatic and long-term strategy for poverty alleviation. The SLA works with the underlying causes of poverty, seeking to identify the opportunities and challenges related to livelihood improvement (Scoones, 2009).

According to Madlala (2012), the sustainable livelihoods paradigm puts individuals, particularly poor rural individuals, at the centre of a network of interconnected variables that determine how these individuals establish a livelihood for themselves and their households. The SLF pushes organisations working on community and food security to act in ways that take into account the realities of those who are affected by food insecurity. In the fight against food insecurity, the SLF particularly emphasises the value of social capital (Knifes 2000). If households and individuals have appropriate access to all forms of capital at once, the sustainable livelihood approach can guarantee food security.

In addition, having access to these resources help individuals to develop their independence and self-reliance. The sustainable livelihood framework is central to this research. It highlights the importance of maintaining a strong and self-regenerating environment, advocating that people use the natural environment in ways that will also benefit future generations (Warburton, 1998).The sustainable livelihoods approach is used to analyse poverty levels in the context of poor households (Nicol, 2000).In the current research, the SLF was applied to an assessment of the home food gardening strategy used in the community of Macekane.

2.8.2 Policy and legislation

According to Peter (2014),legislation is brought into effect by provincial legislature and Acts of Parliament, as is subordinate legislation such as regulations issued to guide how legislation is implemented. All studies should be cognisant of legislation and policies in their respective fields. Policy is a multidimensional concept; it can be viewed in an inclusive measure used to address society's social needs. There are several types of policies. In this research, the focus is on national policy on food and nutrition security. Mkandawire (2011) views social policy as a set of guidelines and interventions that enhance living conditions for people. It is composed of collective interventions that directly affect social institutions and cohesion in society. Social policy in Africa revolves mainly around five social challenges: poverty, poor health, inadequate housing, lack of education and unemployment. These challenges, prevalent in most African countries, were entrenched and reinforced by the history of colonisation and exploitation on the continent (Mkandawire, 2004). In this way, social policy is a critical instrument for socioeconomic development.

2.8.3 The National Policy on Food and Nutrition Security

By establishing procedures that assure stricter alignment, greater coordination and stronger monitoring, the National Policy on Food and Nutrition Security seeks to improve current programmes and processes. In addition, the policy aims to guarantee that the response to food and nutrition insecurity is ambitious, strict and dynamic. The focus of the policy is on a small number of initiatives that can help extremely poor people increase their food security through food gardens, as well as the mobilisation of resources and efforts in this direction.

These measures are relevant to the research. The policy continues to place food and nutrition security and the country's development agenda at the centre of the Department of Agriculture's efforts, and prioritises food security, job creation and agriculture's contribution to the economy.

2.8.4 The National Development Plan

The National Development Plan is mandated to fight levels of inequality and combat poverty. This mandate can be fulfilled through a strategy that unites South Africans, releases their energy, establishes an inclusive economy and build capabilities (NDP 2030, 2012). The National Development Plan (NDP) outlines several strategies and deadlines for ending poverty, reducing unemployment and abolishing inequality by 2030, according to Thow et al. (2018).

The NDP puts food and nutrition first, particularly in impoverished communities. The NDP promises to promote food security by expanding irrigation use, ensuring that women have secure land tenure, and promoting nutrition education (NDP 2030, 2012). These are pertinent to the study. In this regard, the Department of Agriculture prioritises food security, employment creation, and the economic contribution of agriculture.

According to Hendriks and Oliver (2002), the Poverty Alleviation and Reduction Policy is in line with the following NDP elements: effectively redressing historical injustices; promoting collaboration between the public and business sectors; developing leadership in all spheres of society; and encouraging the active participation of all South Africans in their own development.

2.9 Summary

This chapter has clarified the concepts that are foundational to understanding poverty alleviation and food security, with definitions derived from a number of different sources. The chapter began with the contextualisation of poverty; this was followed by the contextualisation of hunger and malnutrition, food insecurity, and poverty and food security in the local context. The literature review also discussed the theoretical underpinnings of the study, namely, the sustainable development approach and the various policies and programmes that seek to improve food security and sustainable livelihoods.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This section presents the methodological approach employed in the research. The chapter discusses the research design, population, sampling method used, the way in which data was collected, recorded and analysed, and the vital issue of the study's trustworthiness. It concludes with a personal reflection on the study, the study's limitations, and a summary.

3.2 Research design

This research used a qualitative research design. Creswell (2014) states that a qualitative design enables the researcher to investigate and capture the perspectives of participants about a particular phenomenon. Creswell and Poth (2018) state that a qualitative research methodology draws its analysis, interpretations and report writing from conventional qualitative methodologies. The researcher was interested in reality from the point of view of the participants, along with their feelings and experiences on the topic under investigation, making it the qualitative design the most appropriate for the study. According to Babbie and Mouton (2011), the qualitative design is exploratory and descriptive in nature, and may be more trustworthy than a quantitative design in that it is able to offer more comprehensive and detailed information than a study based on numerical data only. It offers a descriptive analysis of a phenomenon and tries to comprehend actions and behaviours in a specific setting.

Babbie and Mouton (2012) also state that qualitative research takes an exploratory approach, aiming to understand relatively novel phenomena. Its main goal is to aid the researcher in developing and presenting fresh insights about a subject for deeper knowledge.

The qualitative design made it relatively easy for the researcher to obtain data on the thoughts, feelings, experiences and perceptions of the participants regarding their experiences of home food gardens, and the effects of their garden son their households. The participants were open enough to give the researcher a broad and deep knowledge on this topic. In addition, qualitative research enables the researcher to identify the nature of participants in their setting (Babbie &Rubin, 2011).

The research was conducted at Macekane Reserve in Empangeni, KwaZulu-Natal, where participants originally resided. Van Nieuwenhuis (2009) states that a researcher chooses a design that is in line with their philosophical assumptions, and which is best suited for producing the kind of data needed to address their research questions. The researcher gathered all the information from the participants, and thereafter identified specific themes relevant to the research objectives.

3.3 Population

Terre Blanche, Durrheirm and Painter (2015) define a population as a larger pool from which sampling elements are drawn. These sampling elements become the units of analysis. Babbie and Mouton (2001) explain population as the group of people among whom the researcher wants to explore a topic. The population of this research comprised persons in households that have food gardens in Macekane. In consultation with the youth committee leader, the researcher recruited 15 families that had food gardens in their households.

3.4 Sampling

Grove, Grey and Burns (2015) define sampling as the process of choosing a collection of individuals, occasions, behaviours or other factors to use in a study. Mwenemeru (2013) states that the technique of choosing a portion of the study population from the entire population is known as sampling. In this study, purposive sampling was used. Purposive sampling is kind of non-probability sampling in which all members of the population do not have an equal probability of being included. It involves the selection of a sample based on the members' likelihood of being able to answer the research questions and help the researcher attain the objectives of the study. Most researchers performing qualitative studies use non-probability sampling (Blackstone, 2012). The participants in this research were those who benefited from the Macekane home food garden programme.

3.5 Data collection approach

This research used in-depth interviews as the approach to data collection. This approach involves face-to-face semi-structured interviews where the participants are asked open-ended questions (Babbie &Mouton, 2001).The researcher opted for structured interviews rather than semi-structured interviews, a result of the fact that face-to-face interviews were prohibited

because of COVID-related lockdowns. Because the researcher could not meet the participants face to face, a more structured approach was deemed necessary.

3.6 Data collection method

The researcher created an interview guide that included questions and themes that had to be covered during the session in a particular order. The researcher later created a structured questionnaire that covered participants' socio demographic characteristics, whether or not they had home gardens, their level of household food security, and their methods of subsistence. The research objectives informed the design of the questionnaire, which provided the direct data needed for the study. The questionnaire made provision for some flexibility, in that it allowed the researcher to ask for examples or further elaboration on certain points (Mudzinganyama, 2012). The structured interview guide was distributed to each of the participants in advance to allow them to familiarise themselves with the questions.

The researcher telephonically contacted the leader of the local youth committee that runs the home food gardening project in Macekane. The researcher and the youth committee leader arranged a face-to-face meeting where the nature of the research was explained. The youth committee leader gave details of the project and the people who benefited from the project, explaining that the Department of Agriculture was also involved in it. The youth committee leader then provided contacts of homes that had been given seeds, after which the researcher communicated with the participants to ask for virtual interviews.

Before the commencement of interviews, COVID-19 lockdowns were announced which restricted in-person gatherings. With the country on lockdown, physical access to participants was not possible and the only way to connect with participants was virtually. Therefore, the researcher offered four interview options for participants: a telephone call, video call, WhatsApp audio or text message. Nine of the participants opted for a phone since data is costly. The remaining eight were interviewed through WhatsApp text. The researcher purchased R500 in airtime to cover the interviews and received number of free unlimited minutes that covered the telephone calls with all the participants. one-hour phone call cost R30.00 of airtime, which brought the total for all interviews to just underR500. The University of Cape Town also provides 20 gigabytes to support online learning. This was helpful when the researcher was conducting the research, since the data bundles were needed. The estimated time for interviews was one hour, but in the end most took longer than this.

3.7 Data recording

Strydom (2011) states that, with the participants' permission, researchers should record all interviews conducted. The researcher recorded nine of the interviews using her cell phone and an app known as Caller Recorder. The other six participants had opted to be interviewed through WhatsApp text. These interviews could not be audio recorded but the WhatsApp texts have been stored as evidence to enhance the trustworthiness of the study.

3.8 Transcribing

The data was transcribed by the researcher in preparation for analysis. The participants' identities were protected during this process, and no names were used.

3.8 Data analysis

Babbie (2010) defines qualitative data analysis as the examination of non-numerical data (such as conversations from focus groups or interviews) to find new connections or meanings. Tesch (1990) defines data analysis as an endeavour to explicitly identify themes, construct hypotheses (ideas) as they are suggested by the data and provide evidence in support of those themes and hypotheses.

Tesch's(1990) method was used by the researcher to analyse the transcripts. The researcher read and re-read the transcripts to detect areas of commonality between interviews, and to cluster data into themes and sub-themes (Krippendorff & Bock, 2008). These themes were formulated with reference to the research questions and objectives, key ideas in the literature, and the theoretical framework.

Tesch's (1990) steps are as follows:

Step 1: The researcher acquires the gist of what the transcripts are saying. In this study, the researcher read through each transcript several times and made notes.

Step 2: The researcher chooses a case and asks, 'What is this about?', taking into account the information's underlying meaning. The researcher may record their thoughts in the margins of the transcripts. At this stage, themes begin to emerge.

Step 3: The researcher writes our list of the emerging themes and gives each a name.

Step 4: The researcher connects sections of the data to the themes. These units of data are given codes that link with the themes.

Step 5: Using the most descriptive terminology available, the researcher groups the themes or issues. Lines are drawn to represent the relationships between the categories.

Step 6: The researcher organises the codes alphabetically and selects a specific abbreviation for each category.

Step 7: After acquiring the data from each category, a preliminary analysis is done.

Step 8: When necessary, the researcher reviews the recorded the material and transcribes it again.

The researcher created categories and sub-categories from the data, using Tesch's steps of data analysis. The researcher noted all the topics that emanated from transcripts and grouped each to a research objective. Similar codes were grouped together for category formulation (Babbie & Rubin, 2011). The categories created were contrasted with one another throughout the process. Themes were formed by collecting those that were related to one another. The categories and themes could be linked across the various interview transcripts since the topics were based on the study's objectives. As a qualitative methodology, this approach was suited to the study.

3.9 Data verification

Data verification is attained by ensuring that all the elements of trustworthiness are observed and implemented. (Babbie &Mouton, 2012). According to De Vos (1998), the researcher must ensure that the data is verified and verifiable by others for the purpose of establishing the study's trustworthiness.

To decide whether to designate the values in the data as valid or incorrect, data verification requires that the researcher and readers are able to evaluate the accuracy and consistency of the information generated. By evaluating four factors, the researcher was able to ensure that the research was trustworthy (Lincoln &Guba, 1985). These four factors are credibility, transferability, dependability and conformability.

3.9.1 Credibility

For credibility to be distinguished, results and reality should be compared to determine if there is correspondence.

Creswell (2003) states that credibility is attained through the proper use of field experience. Credibility is enhanced by prolonged and varied field experience, time sampling, and reflexivity. In the current study, the researcher spent if was necessary with each of the 15 participants to ensure that data collected was comprehensive and accurate. The researcher used a relevant sample which ensured that the data gathered aligned with the research questions and objectives. The researcher also employed a structured interview guide to ensure that the interviews remained focused on the topic of the study and that irrelevant questions were limited or eliminated (Morse et al., 2002). The researcher also practised reflexivity by constantly checking whether researcher bias might have crept into the discussion of data.

3.9.2 Transferability

Burchett, Muriah and Dobrow (2011) state that transferability occurs when the researcher gives sufficient detail so that if another researcher wished to replicate the study they could do so and expect to find similar results. With the assistance of the supervisor, the researcher chose and described the appropriate sample to obtain information relevant to the study. The researcher described the theoretical framework of the study and how data was collected and analysed. The researcher took care to link the findings to the literature.

3.9.3 Dependability

Dependability can be determined by the consistency or reliability of the data retrieved across time (Shenton, 2004). In this study, data was gathered through a qualitative research approach, chosen because it is a dependable option in a social world that is dynamic and continually changing. Since the sample was well suited to the aims of the research, the researcher was able to gather detailed information from the participants. According to Babbie and Mouton (2012), dependability is attained when a research method is thoroughly recorded, logical and audited. In this study, the researcher documented each step of the process, including how the data was analysed, so that readers and other researchers would be able to confirm the information gathered (Patsika, 2021).

3.9.4 Confirmability

Confirmability refers to whether the research findings can be verified by another (Krefting, 1991). Confirmability makes it possible to compare research conclusions with those of other researchers (Des Vos et al., 2014).

Although it is plausible, the researcher felt that the likelihood of attaining complete confirmability in this study was quite low. By outlining the theoretical, methodological and analytical choices made throughout the study, the researcher was able show readers why particular decisions and actions were taken, which enhanced both confirmability and the overall trustworthiness of the study (Nowell et al., 2017). The results of this study were analysed, assimilated and compared to the body of existing knowledge on the subject. According to Shenton (2004), the outcomes of the study should accurately reflect the data. Prior to doing research on food gardens, the researcher was involved with a food garden project funded by the Department of Social Development in the Western Cape, where continuous visits to the food gardens were made. However, this did not influence the results of the research. The researcher kept all original data and transcriptions to compare the findings with the existing literature.

3.10 Reflection

De Vos et al. (2014) state that the researcher should reflect on their role in the study and recognise the influence that they have another human being and possibly on the research findings. May and Perry (2013) suggest that the researcher's views will always be subjective in social research, since everyone's experiences differ from those of others. Babbie and Mouton(2012) mention that researchers need to reflect on their own role in research and ensure that they do not allow their own perceptions and bias to unduly influence findings. At the same time, some degree of influence must be acknowledged in quantitative studies, and the researcher's own interests and perceptions will always shape the nature of the research. In this study, the researcher resides in the same area as the participants. Therefore, the researcher was able to relate well to the participants and obtain high quality, trustworthy data. The researcher is passionate about social justice, especially in relation to poverty eradication. The topic of the research is important to the researcher, and the study was of personal interest since it yielded insights on how to deal with the issue of poverty alleviation through practical means that make use of resources many rural people already have.

3.11 Study limitations

According to Smith(2017) limitations are hindrances and difficulties that the research may encounter during the research process. Limitations may also be defined as factors that may delay the completion of a piece of research. In this study, multiple limitations prevented the researcher from completing the research within the stipulated timeframe. Just before interviews were schedule to start, COVID-19 broke out in South Africa, which completely changed the course of the research. The university announce that face-to-face interviews were now prohibited. The data had to be collected remotely via phone calls, WhatsApp or text messages.

The collection of data was not consistent because of this. Participants frequently postponed their virtual interviews, while those interviewed by WhatsApp were sometimes very slow to respond. Some said they could not participate through WhatsApp because they could not afford data. However, they were given the option of being called on their mobile cell phones. At times they did not answer calls. Eventually all participants were reached and interviews that were conducted by the spoken word were recorded for transcribing purposes.

The conceptual and methodological shortcomings were also a drawback of this research. The specific setting of the investigation informs the way in which qualitative studies are developed (Creswell, 2014). Initially, 20 people made themselves available to the researcher to participate in the study, but only 15 ended up participating because five who had given their consent later withdrew. Purposive sampling was used to recruit these participants, but a purposively sampled group is not usually representative of the entire research population. This makes it challenging to extrapolate the findings from the participants.

Time constraints and participant reluctance to answer the questions were two additional drawbacks of this study. Some of the participants expressed dissatisfaction with the length of interviews. In addition, the researcher experienced personal difficulties in terms of documenting the final report. Another limitation causing delays in the write-up of the report was the home environment which was not conducive to study and concentration. Like the participants, the researcher often lacked data as UCT stopped providing students with a set amount each month.

3.12 Summary

The section has discussed the methodology employed in the study. The research design, population, sampling method, and data collection and analysis method were discussed. Details demonstrating the study's trustworthiness were discussed. The chapter concluded with reflection on the researcher's role and interest in the study, and the study's limitations.

CHAPTER FOUR:FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings of the study, which sought to explore whether food gardens support food security, whether home food gardens play a role in poverty alleviation, and whether the home garden campaign as a poverty alleviation strategy was working in Macekane. The findings are based on the data collected from 15 participants who had gardens at their homes. The chapter begins with a presentation of the demographic details of the participants, followed by a table showing categories and sub-categories that emerged for each of the three objectives of the research. The table is followed by a discussion of each of the categories and sub-categories. The discussion fills many of the gaps that are evident in the literature by revealing new information on the role of food gardens in poverty alleviation. The researcher critically discusses the findings considering the participants' responses, the literature review, and the theoretical framework, along with the researcher's interpretation of the findings.

4.2 Demographics of the participants

Table 4.1 shows the demographic details of the 15 people who participated in the study.

Table 4.2: Demographics of the study participants

PARTICIPANT	GENDER	AGE	RACE	OCCUPATION
Participant 1	Female	30	Black	employed
Participant 2	Female	55	Black	Unemployed
Participant 3	Female	33	Black	employed
Participant 4	Female	33	Black	employed
Participant 5	Female	26	Black	Unemployed
Participant 6	Male	29	Black	employed
Participant 7	Female	32	Black	Unemployed
Participant 8	Female	25	Black	employed
Participant 9	Female	36	Black	employed
Participant 10	Female	38	Black	unemployed
Participant 11	Female	32	Black	Unemployed
Participant 12	Female	36	Black	Unemployed.
Participant 13	Male	25	Black	Employed
Participant 14	Male	34	black	unemployed
Participant 15	Male	25	Black	employed

4.2.1 Age, race and gender

The participants ranged in age from 25 to 55 and were predominantly female. All were black African and spoke the Zulu language. There were 10 female and five male participants. Most of participants had matriculated and all had graduated from high school. Eight participants were employed and seven were unemployed.

4.2.2 Household characteristics

The participants lived in homes they owned and did not rent. All had electricity but no running water. Some participants indicated that they lived with parents and siblings, and some single parents lived with their children. In most homes, few or even no people were working. Some participants' parents were self-employed. The participants had different socio-economic backgrounds.

Table 4.2 presents the categories and sub-categories that emerged from the interviews in relation to the three main themes, which correspond with the objectives of the study. These form a framework for presentation of the findings.

Table 4.2: Framework for discussion of findings

THEMES	CATEGORIES	SUB-CATEGORIES
Food gardens and food security	Home gardens campaign as a poverty alleviation strategy	Distribution of seed
	The availability of food resource management.	Lack of resources to maintain garden
		Lack of garden/nutrition education
Home food gardens and poverty alleviation	The significance of home food gardens for poverty alleviation	Limited crops production
		Seasonal crops
		Hunger reduction
To assess the youth home gardens campaign as a poverty alleviation strategy in Macekane, KwaZulu-Natal	The effect and role of food gardening poverty for alleviating poverty	Home gardens to reduce grocery money spent.
		Home garden as a source of nutrition
		The sustainability of the programme
	The challenges of growing crops	Water accessibility
		Livestock and insects

4.3 Presentations and discussions of findings

The presentation and analysis of the findings examines the categories in relation to the objectives of the study. Babbie (2010) mentions that themes should be coded based on the patterns of meaning that the researcher identifies through analysis.

Three research objectives were specified by the researcher. Using Tesch's (1990) processes for data analysis, categories and sub-categories of information were found that related to each of these objectives. The researcher noted ideas that recurred throughout the interview transcripts. Emerging topics were given a code that best characterised them and connected to the research objectives (Creswell, 2014). The researcher then found related codes and grouped them to create sub-categories (Babbie &Rubin, 2011). The categories created were compared with one another across the transcripts.

The themes are presented and discussed below, with their sub-categories.

The first research objective was to examine food gardens as a strategy for alleviating poverty. Under this objective, two categories were found: Home food gardens and poverty alleviation, and the availability of food resource management.

4.3.1 Home food gardens and poverty alleviation

The researcher asked the participants a number of questions on food gardens as a means of poverty alleviation. Their answers gave insight on the project and whether it was achieving its intended goal.

4.3.1.1 Distribution of seeds

Participants said that the Department of Agriculture regularly donated seeds to communities, and that Macekane community had benefited from this. Together with the local youth committee, the Department had distributed carrots and spinach seeds. Participants made it clear that the venture had been spearheaded by the youth in the area, which were already working on vegetable gardens at their homes and had decided to expand the venture by inviting other families to get involved in subsistence farming. Seeds were distributed to each home but in limited quantities, so that some people who had gardens did not receive any seeds.

> *Participant 2: No, they weren't enough. However, there were already crops that we had in our garden.*

Participant 6: Sometimes the local Department of Agriculture supplies us with seeds which are generally not the best quality and sometimes I buy seed from shops, do a seed bed and exchange with neighbours.

Participant 11: For someone who already had a garden it was enough, but for someone who did not have any crops at the garden … because even the quantity was not sufficient.

4.3.2 The availability of food resource management

4.3.2.1 Lack of resources to maintain gardens.

The participants were asked whether their gardens were maintained. Food gardens require a great deal of work to maintain, with failure to do so resulting in low production or death of the crops. Proper maintenance requires access to affordable inputs such as fertilisers and water.

Lack of these inputs was causing crops not to grow as they should. Insufficient water could be seen as the main cause, resulting in a situation where there was 'food garden drought'. Agricultural or food garden drought is experienced when there is insufficient water or when water is not accessible to cultivate the growth of the crops (Anjum et al., 2011).

Participant 3: I try to maintain it, but water is a big issue.

Participants 6: Yes, we do not have enough resources. We do the best with what we have but there is room for improvement.

It is evident that the Macekane area is suffering from lack of basic services, such as running water. There is no running water, with water normally provided by water trucks that are inconsistent. Most of the participants indicated that there was lack of garden maintenance as result of this. WHO (2019) states many challenges face home gardeners trying to maintain subsistence farming. These include droughts, soil erosion and shifting rainy seasons.

4.3.2.2 Lack of gardening/nutrition education

Participants indicated that no gardening education had been provided for the community; however, most had a basic knowledge from their parents, as indicated by Participant 3.

Participant 3: No, we did not receive any training, but at least my mom knows of gardens, so it was not necessary to undergo training.

Community education is crucial to the success of food gardens. There needs to be a strong foundational understanding of nutrition and of the importance of good soil quality for the production of foods rich in nutrients.

Keller (2019) noted that food-related education was a necessity for every household, since this would inform households of the benefits of growing and eating vegetables and maintaining a food garden. This type of awareness could improve people's diets. In addition, an essential requirement for the success of agricultural endeavours is skills development. Communities that receive assistance with seeds also need training in optimum gardening methods to ensure that the seeds yield value. Participant 6 raised the issue that not only did they not receive any training, the seeds they received were old and of poor quality.

> *Participant6: No, they could supply quality seeds and seedlings, instead of giving out-of-date items.*

Many of the participants' comments suggested that the home food gardening project could have been far more successful if planned and implemented accordingly. Their comments about their gardens also suggested that change makers in the district ran community assistance projects haphazardly.

4.3.3 The significance of home food gardens for poverty alleviation

This category had many areas of overlap with the previous one. In this category, the researcher was seeking information on the significance of the food gardens for poverty alleviation.

4.3.3.1 Limited crop production

It appeared that the food gardens were hampered from the start because the project manager who distributed the seeds did not have enough seeds for the whole community. Fortunately, some of the homes had gardens prior to the commencement of the project.

Some members of the Macekane community members relied on vegetables from their food gardens, so that for them, the gardens played a very significant role; others, however, obtained most of their food through grocery shopping. For these participants, the significance of the gardens was low. Participant 1 re-stated the point about lack of seeds.

> *Participant 1: They were not enough. However, there were already crops that we had in our garden.*

4.3.3.2 Seasonal crops

The participants were asked to elaborate on the production of crops, since the researcher was now aware of which seeds had been provided (carrots and spinach). The researcher was therefore interested in whether the seeds had germinated and were resulting in successful crops.

Participant 2: Spinach is quick to produce, especially when it rains. We never run out of spinach. With other crops, it depends on the season.

Participant 3: Depends on rainy seasons and the types of crops. Onions after six months; I produce spinach almost every two weeks.

Participant 4: I produce spinach almost every two weeks. With carrots, it hasn't grown.

Participant 6: Quarterly basis. With spinach and green pepper, it's all year round.

These comments show that crop success varies and may depend on the season. Seaman et al. (2000) support this finding, stating that crops produce seasonally and are harvested according to the season. Seasonality may force households to reduce their food intake at times, while they wait until the following season for certain foods to become available. Thus, it appears that Macekane households live in a deprivation trap, which encompasses all the elements of poverty such as vulnerability, powerlessness and physical weakness. Most of the participants indicated that the crops they harvested from their gardens were not enough to sustain their families. This constant state of lack would limit their access to services and opportunities. Opportunities are usually found and exploited by people who have a sense of agency and power.

4.3.3.3 Hunger reduction

The participants were asked to state whether their home food gardens eradicated hunger in their households. Despite widespread efforts to meet the 'zero hunger' Sustainable Development Goal (SDG) by 2030, sub-Saharan Africa (SSA) is a long way from achieving food security (FAO, 2020). This was evident in the responses of the participants in this study. Kantor (2003) mentions that food gardens cannot completely eradicate poverty, and that other solutions should be in place to complement the food garden strategy.

Those who had established food gardens shared their experience of the effect of their food gardens on their family members. Some found that food gardens were very helpful in reducing hunger. These were the participants who had started food garden prior to the inception of the project. They indicated that since they had started their gardens, they had seen the positive effects, and no one in their family was suffering from hunger. However, those who had started their gardens recently said that there had been no change in terms of hunger reduction.

Participant 1: Besides the programme, the food production has helped me in a way that I only buy potatoes. The other vegetables, I grow them myself.

This implies that home food gardens are important for reducing hunger and poverty. Food gardens can give homes and communities in poverty direct access to nutrient-dense crops that

are not easily accessible or affordable (Faber et al, 2015). In rural sub-Saharan Africa, home gardening is encouraged as an adaptation method to reduce growing food insecurity brought on by the effects of climate change. Hunger was a reality in the households of some of the participants. However, some seemed unaware of the effect that their gardens might have on their household. Their emphasis was on becoming employed and being able to afford grocery shopping, with the garden playing an insignificant role in their thinking and actions. They seemed unaware that food gardens could play a central role in easing hunger and improving quality of life.

4.3.4 The effects and role of food gardens in alleviating poverty

4.3.4.1 Home gardens to reduce grocery money spent.

In this category, the coping mechanisms and the livelihood strategies of the households was discussed. This category shed light on the effects of home food gardens.

> *Participant 1: We don't buy vegetables anymore.*
>
> *Participant 2: Yes, we don't buy vegetables anymore.*
>
> *Participant 3: I don't have to buy vegetables from the shop and the fact that we always eat foods that are nutritious.*
>
> *Participant 15: We reduced grocery spending.*

Critics of commercially produced vegetables advocate food gardens as a strategy to decrease chemical dependency and improve the quality of food and access to food for all. The most frequent reasons given for food gardening, according to Guitart et al. (2012), are to consume fresh foods, foster social development or cohesion through activities like community/capacity building and cultural exchange, improve member health, and earn or save money by eating from the garden or selling the vegetables.

These factors were evident in the participants' responses, since many indicated that they did not spend as much on groceries as they used to do. Thus, they still spent on groceries, but to a far lower extent than when they did not have gardens. It has been observed that there are typically not enough foods in rural households at various times of the week, month or year. For households who depend on a monthly income in the form of employment, remittances or grants, month-end is invariably a miserable time. Own-production households are not always better off in terms of food security. They might cultivate their own vegetables because it is an additional means of support, but it does not sustain them entirely.

Food accessibility has become more challenging for many people, especially for those who were already food insecure or lived below the poverty line when they began gardening. In addition, international disruptions of in food supply chains, during the COVID-19 pandemic raised food costs (United Nations 2020).

4.3.4.2 Home gardens as a source of nutrition

Some participants indicated that having a food garden at home enabled them to meet their nutritional needs.

> *Participant 2: I don't have to buy vegetables from the shop and … we always eat foods that are nutritious.*
>
> *Participant 6: You eat healthy food and there is significant difference on the total amount spent on groceries.*
>
> *Participant 12: I do believe that it has changed our lifestyle into healthy-living lifestyle, because not a day goes by without eating the vegetables from the garden.*

Home food gardens are the way to help households improve access to fresh and nutritious produce. Kantoor (2001) mentions that the consumption of vegetables can contribute towards a reduction in the nutrient deficiencies associated with malnutrition. A food garden also contributes to improved food security, diet quality and nutritional status among target populations. Home gardens also appear to be a promising tool for climate change adaptation, while simultaneously improving food security and the nutritional profile of women and young children in sub-Saharan Africa (Kantoor 2001).

Hendriks (2014) argues that the current assortment of public programmes in South Africa has not improved the levels of nutrition among the food insecure…despite significant increases in participation of the food insecure in the social security system'. This suggests flaws at both a policy design and programme implementation level. However, in this study, those who had established gardens said that the food gardens were beneficial to them, since they ate nutritious meals each day. This suggests that home food gardens are beneficial as a source of nutrition.

A study conducted by Kubheka (2012) found that the beneficiaries of a homestead food garden programme cultivated more vegetables and had access to more diverse foods than non-beneficiaries. This supports the current findings, showing that household-based food production has great potential for improving food availability in rural areas, and thus alleviating

some of the effects of poverty, if not entirely removing it. Food gardens go a long way to improving household food consumption (Phezisa, 2016).

The success of South Africa's food security at the national level has been noted by scholars such as Richardson (2013). However, at the local or household level the situation is quite different, with many households having very little food security. The food security of the urban and rural poor is under threat. Despite food gardening having been used for many years to help alleviate food insecurity among rural poor communities, malnutrition remains a problem in many rural areas of KwaZulu-Natal as well as other parts of South Africa (Adekunle 2013) Faber (2011) indicates that food gardens facilitate access to nutritious meals for households, improve food security and contribute to the improvement of nutritional status. Machete (2004) states that home-grown food improves the nutritional status of many households. Home gardens have great potential to improve household food security, as well as maternal and child diet quality (Wanjohi 2015). Wanjohi (2015)found that a food garden project resulted in an enhanced supply of critical nutrients such as Vitamin A, iron, and zinc.

4.3.4.3 The sustainability of the gardens

The issue of whether the food gardens were sustainable differed according to the participants' experiences. Questions on this topic allowed the participants to evaluate the project.

> *Participant 1: They could expand from this initiative. It's a beautiful project.*
>
> *Participant 8: It can be improved. If this could be planned properly with other leaders of the community, it would be substantial.*
>
> *Participant 9: I believe that in the long run, this could affect a lot of people in our community.*

Responses implied that the food garden project had not yet alleviated poverty in the community of Macekane. However, the project had the potential to substantially reduce hunger and poverty. This would require thorough planning and amore considered implementation, taking a multi-pronged approach that included the provision of implements and training. Although participants perceived the contribution of the project to be inadequate for addressing household food insecurity, the efforts of State and local programmes did sustain participants and enabled households to cope slightly better. Most participants indicated that the home food garden project was a good initiative, but that lack of collaboration hampered it. This barrier is still an issue in South African community-based projects; the drivers of these projects do not engage community members for collaboration on planning. Involving community members during the

process of planning would result in more positive outcomes. Policies and political support for coordinating community development is only beginning to take place.

Khoza (2022) states that community development cannot take place if certain structures are lacking, although the mere existence of structures is not a guarantee for proper co-ordination. Community development is more likely to succeed when the ownership of projects lies with community members, not outsiders. In such cases, the matter of co-ordination would be less of an issue. When community projects are in the hands of the community, the community will initiate collaboration. The community at large is the most important stakeholder in poverty alleviation, since the community is aware of its own needs, resources and capabilities. Thus, as Khoza (2022) points out, community projects are not a result of the action of an individual or a few individuals. Individuals are important, but a collective approach is needed for true community development.

4.3.5 The challenges of growing crops

4.3.5.1 Water accessibility

Participants were asked about the challenges of growing crops in their area. The responses showed that lack of water was the greatest challenge. Water sources are inadequate; the majority of the households used community boreholes as their main source of water, but they still had to queue for water. Boreholes were characterised by low yield, non-functionality, and disparity in number of water points, theft and vandalism.

For irrigation, households still rely on traditional methods of irrigation, namely, watering cans. Very few homes have treadle pumps, and the use of cans is labour intensive. From the stakeholders' point of view, other challenges were lack of finances, failure of the current community management system, lack of coordination, and lack of enabling policies for development. Participants indicated that there were taps in the community which should supply water, but that they were all faulty. There were constant interruptions in the supply because of technical problems. Thus, water accessibility was the main hindrance to the success of their home gardens. Obviously, vegetables need to be watered at regular intervals to ensure growth and the quality of the product. Participants indicated relying on rain and water from the municipality that was distributed by water trucks, usually daily.

Participant 1: Water is a challenge. I tried water harvesting which barely works.

Participant 2: The main challenge has been water. The other one has been the fact that livestock eat the crops. They can jump in the fence if no one is noticing.

Participant 3: The main challenge has been water. the other one has been the fact that livestock eat the crops, and the soil is not fertile.

Availability of water is critical to the growth and sustainability of agricultural projects. Water in households is used by both humans and livestock as well as for irrigation. The inadequate provision of water leads to serious problems. Lack of safe drinking water is one of the signs of poverty. Thus, the sustainability of the food gardens in Macekane is not guaranteed. The World Health Organization (WHO, 2011) defines access to water supply in terms of the types of technology and levels of service required. WHO (2011) states that access to an adequate water supply means having at least 20 litres per person per day from an 'improved 'source within one kilometre of the user's dwelling. They define improved drinking water sources as piped water into the dwelling, yard or plot, a public tap or standpipe, a tube well, borehole or protected dug well, a protected spring or rainwater collection.

Phiri (2017) records that globally, about 663 million people lack access to safe drinking water, and that nearly half of these people live in sub-Saharan Africa (SSA), where only 68% of the population has access to improved drinking water. Phiri (2017) records that an estimated 79% of people using unimproved sources and 93% of people using surface water live in rural areas. In terms of water for agriculture, most countries in sub-Saharan Africa rely on rain-fed agriculture, which is threatened by the effects of climate change, which exacerbates food insecurity. Lack of water is a major environmental constraint to crop productivity, causing a variable percentage of yield loss (Venuprasad et al., 2007; Barnabás et al., 2008; Daryanto et al., 2016).

The variability of yield loss depends on the crop, its growth stage, the intensity of drought event, cultivar, and the genotype-by-environment (G x E) interaction (Barnabás et al., 2008; Farooq et al., 2012; Andrade et al., 2016; Daryanto et al., 2016). Pandey and Shukla (2016) note that drought is a major stress causing significant yield losses in crop production. Improved drought tolerance is desirable in crop species that are drought sensitive, or in plants grown in any environment facing water stress caused by reduced rainfall. Adequate provision of drinking and irrigation water enhances development in areas such as health, education, food security and women's empowerment.

4.3.5.2 Livestock and insects

One of the other challenges affecting the success of food gardens was insects and livestock. Participants indicated that crops would grow properly during the rooting stage, but that insects started to eat the leaves before the plants blossomed.

> *Participant 4: We only have spinach and carrots which really don't grow well because of insects that exist in our garden.*
>
> *Participant 12: No, because we always must deal with challenges, like insects. They hold us back because when the crops start to blossom, they eat them.*
>
> *Participant 12: Insects are a hindrance and water sometimes is an issue because we don't always have water.*

Participant 6 referred to the threat of livestock.

> *Participant 6: The water crisis is persistent in Macekane, so I normally use the after-wash water and make sure that the gate is always closed.*

Keeping the gate closed indicates that livestock are a threat to food gardens in Macekane. Livestock is widely scattered, and animals often end up grazing from their owners' or other people's gardens.

4.4 Concluding remarks.

The literature on home gardens in relation to poverty alleviation is vast and contributes to an understanding of whether food gardens contribute to improved nutrition and poverty alleviation.

Home gardens are an important source of food and nutrition. Assan (2021) argues that gardening is an adaptation strategy for ameliorating the increasing food insecurity caused by climate change in sub-Saharan Africa. However, the geographic distribution of home gardens, their setup, management and their effects on nutrition outcomes have not been fully described.

Home gardens are an established, traditional way of providing food and offer great potential for improving household food security and alleviating poverty and overall wellbeing. KwaZulu-Natal is characterised by poverty and high levels of unemployment. Home gardening can help enhance household food security through direct access to fresh, nutritionally rich vegetables. Access to food depends on the purchasing power of the money that people earn, their access to land to grow food crops, and, where necessary, on foraging.

4.5 Summary

This chapter has presented and discussed the research findings of the study which sought to explore whether food gardens support food security in Macekane, KwaZulu-Natal. This was done by assessing whether home food gardens play a role in poverty alleviation and assessing whether the youth-led home gardens campaign had worked as a poverty alleviation strategy in Macekane. The discussion focused on the thematic outcomes of the interviews, which indicated various facts that are missing from the existing literature. The discussion expanded from a narrow to a broad analysis. The sustainable livelihood approach was employed as a theoretical framework, and assisted with the analysis of the data, highlighting the relationship between food security and sustainable livelihoods. Food gardens were found to be a sustainable livelihood strategy for alleviating poverty in rural areas, but with modifications to their planning and implementation.

CHAPTER FIVE:
CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the researcher draws conclusion and makes recommendations based on the findings.

5.2 Conclusions

Conclusions were drawn about the findings of this study in relation to the three research questions:

- Do food gardens support food security?
- What is the significance of home food gardens for poverty alleviation?
- Do home food gardens play a role in poverty alleviation?

5.2.1 Do food gardens support food security?

The findings indicate that there are certain hindrances that prevent food gardens from making a substantial contribution to food security for many participants. The hindrances include lack of resources for maintaining the gardens (including a poor supply of water, a vital resource) and lack of gardening education. Water is the most important resource for community garden projects after land; vegetables need to be watered at regular intervals to ensure growth and quality of the product. The narratives of the participants show that the people in the Macekane area are suffering when it comes to basic services such as running water. Water is provided by municipal water trucks, which come inconsistently.

The participants indicated that the home food gardens had the potential to make an appreciable difference to food security if they were planned and implemented properly. Most of the participants' comments suggested that the project had been poorly conceived, since seeds (of poor quality) had been given out somewhat haphazardly and no training had been included. The lack of know-how about horticultural production and garden maintenance constituted an additional challenge.

5.2.2 What is the significance of home food gardens for poverty alleviation?

The findings of this study show that home food gardens have the potential to contribute to the livelihoods of the members of Macekane community. The greatest weakness in the project was its piecemeal approach, with lack of necessary supports to ensure that the distributed seeds had a chance to yield large crops.

The participants said that the success of the crops depended on rain; when rain fell, the crops grew more rapidly than usual. Different crops were cultivated and/or harvested at different times during the year. Consequently, crops produced by households and community gardeners were not adequate to meet livelihood needs throughout the year. Most of the participants indicated that the seeds they had received were not enough to produce food to sustain a family. Participants had limited access to services and opportunities, which may have been affected by their sense of being voiceless and powerless.

Despite these factors, the findings indicate that when garden are established and maintained, even if not fully, they can play a big role in poverty alleviation and food security. Food gardens can provide poverty-stricken communities and households with direct access to nutritious vegetables that are not readily available or within their financial reach (Faber et al, 2015). Hunger was a reality in the households of some of the participants. However, some were not aware of the effects that food gardens could have on their households. For these people, the emphasis was on finding jobs rather than on alleviating their situation through working in the food garden. Some, however, acknowledged that home food gardens played an important role in easing their hunger.

5.2.3Do home food gardens play a role in poverty alleviation?

The overall objective of the research was to find out whether or not the youth-led food gardens programme had alleviated the poverty of people in Macekane. The participants' comments suggest that while food gardening does not entirely alleviate poverty, the consumption of home-grown vegetables does save money on groceries. The food gardens also contributed to their levels of nutrition, which is a valuable contribution to overall health and wellbeing. Assan (2021) states that home food gardens are an important source of food and nutrition, and that gardening should be promoted as an adaptation strategy to the increasing food insecurity caused by climate change.

Assan (2021) also maintains that the geographic distribution of home gardens, their setup, management and effects on nutrition outcomes have not been fully described. The findings of this study seek to go some way to filling this evident gap in the literature.

Some participants indicated that they did not spend as much on groceries as they used to do. This suggests that food gardens do not take away the need to buy groceries but do reduce the grocery bill. The study has shown that food garden projects in Macekane have not yet alleviated poverty, but they have reduced hunger and have the potential to reduce poverty if properly planned and supported.

5.3 Recommendations

It is evident that food insecurity and poverty is a multifaceted phenomenon. The findings of this research also show that poverty is multidimensional and needs to be tackled from many angles. For food garden to have any effect as part of this multi-pronged approach, food garden project managers need to consult more closely with the community to create a collaborative approach in which more community members take ownership of the project. Community members working in greater collaboration could mobilise resources so that the objectives of the project are achieved.

The majority of Macekane participants indicated that water accessibility was the biggest hindrance to the success of their home gardens. Inconsistency in the water supply needs to be addressed as a matter of urgency, not only in Macekane but in all communities where access to water is limited. When planning home food garden projects, it is imperative that the organisers determine the availability of water before implementation begins.

It is recommended that community garden projects focus a lot more on leadership and the style of the leaders. The success of community garden projects depends on leaders who are democratic, enthusiastic, helpful and collaborative in approach. Community members also need leaders who encourage and guide them. It is imperative that leaders are exemplary in this regard.

It is recommended that food garden project leaders have extensive skills in horticulture before attempting to initiate community garden projects.

It is evident that some of the participants were not aware of the benefits of home food gardens. Therefore, it is important that project managers provide training to ensure that all the members of the community are well educated before they start their gardens.

The Department of Agriculture could also empower community gardeners by providing training in areas such as water harvesting and soil conservation.

5.4 Recommendation for future research

The limitations of this were briefly discussed in Chapter Three. One of the limitations was the sample size. The sample of the research initially comprised 20 participants but five withdrew, leaving a small sample of 15. The views expressed by15 participants may not represent those of all the Macekane households involved in food gardens. The small number of participants may limit the validity of this research. There is a great need for further research involving a much bigger sample that will be more representative of the given population.

The data collection method of this research – phone calls and WhatsApp messages – was a further limitation of the research, in that the researcher was unable to build a strong rapport with the participants. This might have been more possible with in-person interviews. Therefore, there is a need for extensive research, where more in-depth data about people's perspectives and experiences of home food gardens is gained through face-to-face interviews.

This research was also limited by a lack of contribution from the Department of Agriculture and officials from the Umhlathuze Municipality. These bodies were also part of the food garden initiative, and their voices may have added valuable facts and insights.

Further research is also necessary on the ways in which stakeholders and community can collaborate more effectively to form successful social development interventions.

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APPENDICES

CONSENT FORM
UNIVERSITY OF CAPE TOWN

Faculty of Humanities, Department of Social Development

Request for participation and consent form

Date:

Name of Researcher: Snenhlanhla Lugagu

Student number: LGGSNE001

This research forms part of the qualification for a master's degree in the Department of Social Development at the University of Cape Town

Title of Study: Home food gardens and poverty alleviation in the rural area of Macekane, KwaZulu-Natal

Objectives of the Study:

- To explore if food gardens support food security.
- To assess if home food gardens play a role in poverty alleviation
- To assess the youth home gardens campaign as a poverty alleviation strategy in Macekane

Please read the following and sign if you agree to participate in this study.

Research Procedures: I understand that I will be participating in an interview process to explore the role of home gardens in alleviating poverty. The interview will last approximately one hour and will be recorded with your permission using a digital recorder or by taking notes. The recording will be transcribed and the notes, the recorded information and the transcripts

will be kept in a secure place. Once the research has been completed, this material will be only be used for academic purposes and the transcripts will be destroyed.

Risks and Harm: There are no foreseen risks or harm in participating in this research. However, in the event of any emotional distress by a participant, the researcher will make a referral for appropriate assistance.

Benefits/Incentives: I understand that this research will not benefit me directly and that I will not be paid for agreeing to do this interview. However, through my participation, the information gathered will provide important information on the experiences and challenges that you have encountered in having food garden in your household.

Participant's Rights: I understand that I am free to withdraw from participating in this study at any time, without giving any reason and that there are no consequences should I decide not to participate at any stage.

Confidentiality: I understand that the interview process will be kept strictly confidential and that information will be available to the researcher and the supervisor. Extracts from the interviews will be included in the final research report without anyone being able to link my quotes to my identity. The final report will be examined by an external examiner and the findings will be made available to participating agencies. Under no circumstances will my name be revealed in the report or any other publications related to this research.

I understand that if at any time I would like any additional information about this research, I can contact my research supervisor, Dr.Somaya Abdullah telephonically at 021 650-4219 or by email at somaya.abdullah@uct.ac.za

I confirm that I have read this consent form or the researcher has read it to me and that the study has been explained to me. I voluntarily participate in this study

Name of Participant

Signature of Participant Date (dd/mm/yyyy)

Signature of Researcher Date (dd/mm/yyyy)

Name of Researcher Signature of Researcher Date

APPENDIX A: INTERVIEW GUIDE

Department of Social Development, **University of Cape Town**
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Researcher: Snenhanhla Lugagu

Telephone: 0798489094

E-mail:Lugagus@gmail.com

INTERVIEW GUIDE

Title: Home food gardens and poverty alleviation in the rural area of Macekane, KwaZulu-Natal

Demographic information

Name

Age

Gender

Race

Employment status

Sources of income

Household circumstances

Describe your home circumstances / living arrangements?

How many contributes to your household?

How many people in your house are employed? Explain types of employment

Do you receive basic service, like free water or electricity?

General questions about the home garden project

- Did you receive seeds from the youth leader? When did you receive these?
- What seeds did you receive?

- Have you been able to maintain a food garden? Do you have enough resources for maintaining the garden?

To explore if food gardens support food security

1. Were the seeds you received enough to set up your food garden?
2. Are you able to produce enough food for your home gardens?
3. What are the benefits of having your home food garden?
4. Are you able to produce enough food for your household from your food garden?
5. How has your food garden contributed to your circumstances?
6. Has your food garden produced reduced hunger in your home?

To assess if home food gardens play a role in poverty alleviation

1. Have you always had enough food before food gardens?
2. Before having a food garden how, did you to feed your family?
3. How often do you produce from the food garden?
4. Do you think you produce enough produce from the garden?
5. Have the monthly food expenses reduced since you started a garden?

To assess the youth home gardens campaign as a poverty alleviation strategy in Macekane, KwaZulu-Natal

1. Did you receive any training to start the food garden?
2. What challenges you have encountered and how have you dealt with them?
3. What role do you think the food garden has played in your household?
4. Do you think the garden has helped you with substantial food production?
5. How has this project helped with hunger reduction?
6. Do you think there the program can be improved? Explain
7. Do you think the community has benefited from the project?

Closing

Thank you for participating in this study.

Is there anything that you want to know, or do you have any questions before we wrap up?

How has this interview been for you?

APPENDIX B:TRANSCRIPT OF AN INTERVIEW

Title: Home food gardens and poverty alleviation in the rural area of Macekane, KwaZulu-Natal

Demographic information

Name	Thobeka
Age	29
Gender	Female
Race	Black
Employment status	Employed full time
Sources of income	Corporate job

Household circumstances

Interviewer: Describe your home circumstances / living arrangements?

Participant: We are a family of six: Two grandparents, mother two siblings and myself. We have always had a food garden as tradition from my great grandparents. We plant vegetables and grains (beans and mealies) on a yearly basis. Water has been a challenge because we rely mostly on water that is fetched from the local tanks and the rainfall is our area is hardly sufficient.

Interviewer: How many contributes to your household?

Participant 6: Two.

Interviewer: How many people in your house are employed? Explain types of employment

Participant 6: There are three. I am an agronomist, my brother is a teacher and my mother is a security officer.

Interviewer: Do you receive basic service, like free water or electricity? Participant 6: We receive free water

General questions about the home garden project

Interviewer: Did you receive seeds from the youth leader? When did you receive these?

Participant 6: Sometimes the local department of agriculture supplies us with seeds which are generally not the best quality and sometimes I buy seed from shops, do a seed bed and exchange with neighbours.

Interviewer: What seeds did you receive?

Participant 6: Spinach, beetroot and carrot

Interviewer: Have you been able to maintain a food garden? Do you have enough resources for maintaining the garden?

Participants 6: Yes, we don't have enough resources we do the best with what we have but there is definitely room for improvement.

To explore if food gardens support food security

Interviewer: Were the seeds you received enough to set up your food garden?

Participant 6: Yes

Interviewer: Are you able to produce enough food for your home gardens?

Participants 6: No

Interviewer: What are the benefits of having your home food garden?

Participant 6: You eat healthy food and there is significant difference on the total amount spent on groceries.

Interviewer: Are you able to produce enough food for your household from your food garden?

Participant 6: It depends, some years yes and some no. This is due to the limitation of water accessibility

Interviewer: How has your food garden contributed to your circumstances?

Participant 6: Yes, lots of cash savings

Interviewer: Has your food garden produced reduced hunger in your home?

Participant 6: Yes

To assess if home food gardens play a role in poverty alleviation

Interviewer: Have you always had enough food before food gardens?

Participant 6: Yes

Interviewer: Before having a food garden how, did you to feed your family?

Participant 6: Getting vegetables from neighbour's gardens and sometimes buying

Interviewer: How often do you produce from the food garden?

Participant 6: Quarterly basis, with spinach and green pepper its all-year round

Interviewer: Do you think you produce enough produce from the garden?

Participant 6: No

Interviewer: Have the monthly food expenses reduced since you started a garden?

Participant 6: Yes

To assess the youth home gardens campaign as a poverty alleviation strategy in Macekane, KwaZulu-Natal

Interviewer: Did you receive any training to start the food garden?

Participant: No

Interviewer: What challenges you have encountered and how have you dealt with them?

Participant 6: Water is a challenge, I tried water harvesting which barely works .

Interviewer: What role do you think the food garden has played in your household?

Participant 6: Healthy habits and saving money

Interviewer: Do you think the garden has helped you with substantial food production?

Participant 6:No

Interviewer: How has this project helped with hunger reduction?

Participant 6: Hasn't helped much

Interviewer: Do you think there the program can be improved? Explain

Participant 6: no, they could supply quality seeds and seedlings instead of giving out of date items

Interviewer: Do you think the community has benefited from the project?

Participant 6: Not really

Closing

Thank you for participating in this study.

Is there anything that you want to know, or do you have any questions before we wrap up?

How has this interview been for you?