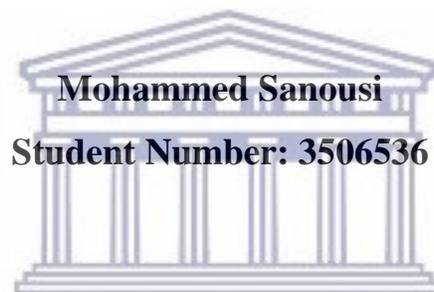




**The Expected Effects of the National School Nutrition Programme:
Evidence from a Case Study in Cape Town, Western Cape**



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A mini-thesis submitted in partial fulfilment of the requirements for the degree of
**UNIVERSITY of the
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ABSTRACT

School feeding programmes have become a worldwide poverty reduction strategy that are designed to enhance human capital, i.e. nutrition and education. In South Africa, the National School Nutrition Programme (NSNP) began in 1994 and it was designed to enhance learning capacity, to support nutrition education in schools and to promote school gardens. The purpose of this study is to explore whether the expected impacts (nutrition and education) of the NSNP in Cape Town have been achieved.

The study used the theory of change as an attempt to explore the expected impacts of the programme and it involved a qualitative research approach. The data was collected using semi-structured interviews. Note-taking and observations of non-verbal behaviour techniques were also used to capture any relevant information. The respondents were 4 school principals, 4 teacher coordinators, 4 food handlers, 4 members of the School Governing Body and one staff member from the Department of Basic Education (DBE) of the Western Cape.

Findings from the global literature show that the impacts of school feeding programmes are quite mixed (between nutrition and education). This study has found that the NSNP in Cape Town has improved food security, i.e. reduced short-term hunger (but not necessarily nutrition) and it gave energy to the learners that helped them to actively participate in learning. It also eliminated some negative class behaviours and it functioned as an additional meal to some poor learners. On the education front, it enhanced school attendance, class participation and possibly improved learner performance.

However, the programme has also experienced some challenges, i.e. the food quality and quantity, targeting system (the quintile system) that excluded some poor learners from receiving NSNP meals and food gardens were not producing sufficient food because they were small and poorly maintained. This study recommends that rigorous impact evaluation of the NSNP in Cape Town is required in order to address the challenges that were identified as well as to enhance the programme so that it can achieve the desired impacts.

KEY WORDS

Children, education, nutrition, participation, school feeding programme, theory of change.



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DECLARATION

I hereby declare that this research project is my own original work. It is submitted for the degree of Masters of Development Studies (coursework and research project) at the University of the Western Cape. It has not been submitted and will not be submitted to any other university for a similar or any other degree award. I further declare that I have acknowledged all the sources used in this work appropriately by referencing.

Mohammed Sanousi.

January, 2019.



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DEDICATION

I would like to dedicate this research project to my beloved parents, Abaker Ahmed Sanousi and Fatima Mohammed for your role that you have played in raising me since my formative years, helping me to create a vision for my future life, encouraging me to learn and excel. Your life will always be a source of inspiration to my future careers endeavors. I would like also to thank my brothers and sisters for your unlimited support that you have given me. Lastly, a big thank you to all friends and colleagues who made this journey bearable.



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Special thanks are also extended to my lecturers at the Institute for Social Development (ISD) for their unlimited support and close guidance. My sincere thanks also go to my parents Abaker Ahmed Sanousi and Fatima Mohammed as well as my brothers and sisters for their continuous encouragement and generous support.

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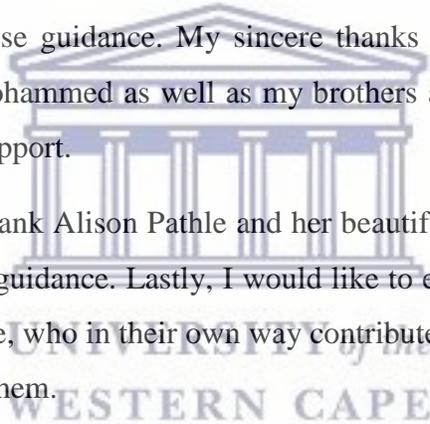


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LIST OF ABBREVIATIONS AND ACRONYMS

ECD	Early Childhood Development
FH	Food Handler
INP	Integrated Nutrition Programme
JAM	Joint Aid Management
NSNP	National School Nutrition Programme
PSFA	Peninsula School Feeding Association
PSNP	Primary School Nutrition Programme
RDP	Reconstruction and Development Programme
SFP	School Feeding Programme
SGB	School Governing Body
SP	School Principal
SHNSA	Stop Hunger Now South Africa
SDGs	Sustainable Development Goals
TC	Teacher Coordinator
ToC	Theory of Change
TBF	Tiger Brand Foundation
UK	United Kingdom
UP	United Party
US	United States
WFP	World Food Programme
WHO	World Health Organization



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CHAPTER ONE

INTRODUCTION

1.1. Introduction

Education can help children and their families to move out of poverty. Yet even with free tuition, the possibility for poor children to attend school, especially in developing countries remains uncertain. Therefore one way to attract children from poor households to attend school and keep them in classes is to provide food as an incentive (Ahmed and Babu, 2007).

This chapter discusses the research background of the school feeding programmes (SFPs). In other words, it provides general perspectives of SFP, such as its impact on school attendance, class participation and short term hunger. It further presents various definitions and rationale of school feeding programmes. More specifically, why are school feeding programmes designed and implemented in most developing countries?

The chapter also discusses the theory of change as a theoretical approach for analysing why and how school feeding programmes are designed and implemented, as well as whether the intended outcomes of the programme have been achieved. It also presents the general plan of the study, namely the statement of the problem i.e. the knowledge gap that the study seeks to fulfil, the research question; what did the school feeding programme achieve in Cape Town, and the purpose of the study; whether the expected impacts of the SFP in Cape Town have been achieved. The chapter also provides the research objectives as well as the outline of the thesis.

1.2 Research background

There is a worldwide growing concern for millions of children today where hunger is considered as one of the pervasive damaging social problems to the society. It causes negative effects on the development of both individuals and nations. For children, it disables them to develop their physical and cognitive wellbeing (World Bank, 2012).

Further, the World Food Programme (WFP) (2006) has explained that hunger affects the progressive development of the brain and children and impedes their actual chances of educational

progress later on. Similarly, the Department of Health of South Africa (2007) noted that hunger, poverty and poor education are interdependent social issues. This is to say that when children are hungry, the chances of attending schools are very limited, and without better quality education, their real opportunities to break the poverty cycle are unpredictable.

Studies have shown that both acute and chronic hunger affect children's continuation or access to school, their attention span and behaviour in the class as well as their academic achievements. More specifically, the school-going children who are suffering from short-term hunger, have challenges concentrating in class and performing complex tasks (Department of Basic Education, 2010 and Department of Health of South Africa, 2007).

In the same vein, the World Bank (2012) adds that poor nutrition of children can cause attention deficiency, sensory impairment and poor school attendance. Furthermore, the same study has shown that learners' attention span is improved if they are provided with a better nutrition system prior to and during the school day. Thereafter, it could be argued that the school feeding programmes worldwide are mostly introduced into the areas of disadvantaged communities, and they are assumed to reduce hunger, enhance the cognitive ability and improve the education of poor school-going children. Along similar lines, Sanfilippo et al (2012) indicated that hunger is a negative barrier, as previously noted, to learning. Therefore, the introduction of SFP globally, has successfully managed to attract children to school, by offering them freshly cooked food, nourishing snacks or take-home rations. Bundy et al (2009) assert that its ultimate goal is to alleviate short-term hunger that would enable school-going children to actively participate in class and improve their academic performance.

This may lead to the holistic understanding that school feeding programmes are considered as effective intervention programmes within the paradigm of theory of change, as they are designed to achieve a certain set of goals. For instance, to reduce short-term hunger, to increase school enrolment as well as to improve learner performance (Devereux and Roelen, 2015).

A study that was conducted in Stellenbosch has indicated that school meals reduced short-term hunger, increased class attendance as well as participation in class. In the same study, a teacher explained that some learners do not have food to eat during the weekends and many of them go

hungry. Therefore, this programme has decreased the dropout rates and increased the school attendance (Berg, 2011).

However, Devereux and Roelen (2015) have argued that the aforementioned intended impacts might not be achieved due to programme design or implementation modality. This is because sometimes, the introduction of the school feeding programme without supplementing it with the supply side, might produce unintended outcomes. For instance, if the number of the school-going children increases without increasing the number of teachers, textbooks and classrooms, the quality of education might deteriorate.

This dissertation aims to explore the expected impacts of the National School Nutrition Programme (NSNP) on nutrition and education in Cape Town. The study interviewed the stakeholders of the NSNP in four different local schools in Cape Town. These stakeholders are, four different school principals, four teachers, four School Governing Body (SGB) members, four food handlers and one staff member from the Department of Basic Education of the Western Cape. This was done because the researcher found that there were no adequate studies that were conducted in Cape Town to rigorously explore the perceptions on the expected impacts of the NSNP (nutrition and education). It is this knowledge gap that the dissertation seeks to fill. The following section discusses definitions of school feeding programmes, its rationale and the theory of change.



1.3 Definitions of school feeding programmes (SFPs)

A school feeding programme is the provision of a meal or a snack at school, to be eaten by the school-going children. It can also include the provision of take-home rations to the families who have enrolled their children at schools. This is to expect better nutritional and educational improvement of school-going children (WFP, 2007).

The three types of programmes that are explained by the World Food Programme (2006) are, firstly, a school meal that is provided in a school in the form of a freshly cooked food or a snack. It usually consists of a mixed food basket and staple food such as wheat, maize, sorghum as grain or flour, or fortified blended food. The second type is ready-to-eat snacks, to be consumed at school during the school day and they generally include fortified biscuits. They are made in lower

nutritional value compared to freshly cooked food. The third type of SFP is take-home rations. This type provides food transfer to the child's household. It also functions as an incentive for consistent school attendance by reducing the opportunity costs associated with education.

1.4 Rationale of school feeding programmes

Many studies have shown that SFP is justified as a direct development intervention that contributes to the achievement of the first Sustainable Development Goal (SDG)¹ which is about the eradication of poverty and hunger. It is then considered as the actual realisation of human rights to an adequate standard of living, because it improves the health and socioeconomic wellbeing of people (Uduku, 2010).

The WFP (2007) also noted that the school feeding programmes have brought about a positive impact on hungry school-going children, such as reduction of short-term hunger. They were also observed to increase school enrolment, attention span and participation in class.

Similarly, studies on SFP and child development have shown that the primary objective of the school meals is to improve the education and nutrition of school-going children. In other words, the programme basically aims to enhance performance and reduce malnutrition or short-term hunger of poor learners (WFP, 2005a, 2005b; DoH, 2007; World Bank, 2012). It is worthy to note that school meals are resources that are designed to reduce short-term hunger and to improve the performance of poor school-going children.

In South African, the Department of Health (2007) explains that the National School Nutrition Programme (NSNP) is designed to consistently provide vital nutrients for many poor school-going children, with the intent of reducing short-term hunger and enhancing the learning ability of the learners (Department of Basic Education, 2010).

In nutshell, it could be argued that the rationale of SFP globally is that it induces parents, especially poor ones to send their children to school, it reduces short-term hunger, it assists learners to participate and concentrate in class. It may also help learners to improve their performance. In

¹ Sustainable Development Goals are a collection of 17 global goals set by the United Nations General Assembly in 2015. Prior to the SDGs, there were the UN's Millennium Development Goals (MDGs).

South Africa, the programme is framed to alleviate short-term hunger, to increase school attendance, to improve participation in class and possibly to enhance their performance.

1.5 Theory of Change

Many studies have shown that any development intervention aims to achieve a set of positive improvements in the lives of the people who receive the programme benefits (Devereux and Roelen, 2015). These positive improvements are fully embodied and demonstrated in the Theory of Change (ToC). Devereux and Roelen (2015) define the theory of change as an approach that is used to design and evaluate social development programmes. Others define it as a paradigm that is used to find solutions to the social problems and set a solid roadmap for sustainable socio-economic growth (Stein and Valters, 2012).

Stein and Valters (2012) also noted that the notion of the Theory of Change approach emerged first in the United States in 1990s. It is designed and developed to improve the content of Evaluation Theory and Practice in the field of community development initiatives. Therefore Devereux and Roelen (2015) note that the people's wellbeing might be constrained by the specific deficit in the resources (lack of food). Hence the provision of certain resources (such as the school meals) will alleviate the challenges that people are facing, such as malnutrition, food shortage etc. The question of the ToC would then be, does school feeding as a development intervention programme actually improve the wellbeing of poor school-going children as expected?

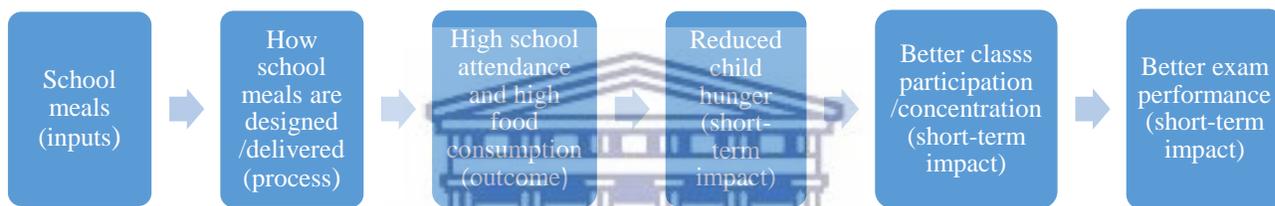
The literature shows that the appropriate way to find out if the desired impacts of the SFP are achieved is to examine nutritional and educational impacts (selected key indicators). These indicators include, increased school attendance and participation, improved academic performance, reduced malnutrition and stunting and improved cognitive ability. If there is an improvement in these pre-determined sets of indicators then this intervention is successful and it validates the Theory of Change (Bundy et al, 2009).

Therefore, it could be argued that school feeding programmes (as a theory of change intervention programme) have positive impact on the reduction of short-term hunger and the improvement of academic performance (Ramadhani, 2014). However, Devereux and Roelen (2015) argue that it is

possible for school meals to improve the nutrition and education of learners during this period, but it might be related to the other factors as well. These factors include, the living conditions of learners, access to clean drinking water, adequate sanitation, quality of teaching, availability of and learning resources.

This study is designed to explore the expected impacts of the NSNP in Cape Town. More specifically, it asks, what are the perceptions of the NSNP stakeholders on the educational and nutritional impact of the programme? This is based on Devereux and Roelen’s (2015) argument that the desired impact might not have been achieved, due to the way in which the programme was designed and delivered or that the ToC could be flawed.

Figure 1: The Theory of Change of a school feeding programme



Adapted from: Devereux and Roelen (2015).

1.6 Statement of the problem

The literature shows that the provision of meals in schools would ostensibly attract poor children to schools and improve their learning performance. As stated above, the World Food Programme explained that SFP is an incentive for vulnerable households to send their children to schools to improve their education and nutrition (WFP, 2008).

Empirical research that was conducted in Limpopo, South Africa shows that the school meals indeed have a significant impact on learners, especially on their behaviour in class, i.e. they actively participate and concentrate in class. The school principal clarified, “The learners’ behaviour in class before the NSNP was introduced in the school, showed lack of concentration and learners complained of stomach aches and dizziness” (PSC, 2008, p. 31).

This research found that a few studies that were conducted on the impact of NSNP in the Western Cape have vaguely discussed the nutritional and educational impacts from the perspectives of

NSNP stakeholders. Some of these studies have merely focused on nutrition impact, i.e. the alleviation of short-term hunger, but they have not explored the detailed perceptions of the programme stakeholders. Therefore, as previously mentioned, this dissertation is aimed at exploring the expected impact of the NSNP in four local schools in Cape Town. The following section discusses the National School Nutrition Programme (NSNP) in the Western Cape.

1.7 The National School Nutrition Programme in the Western Cape

The current National School Nutrition Programme was established in September 1994. It was one of the leading development programmes on Nelson Mandela's presidential list. The programme was initially named as the Primary School Nutrition Programme (PSNP) and it was housed by the Department of Health (DoH). In 2004, the overall responsibility was shifted to the Department of Basic Education (DBE) and it was renamed as the National School Nutrition Programme (Bastia, 2007).

The Department of Basic Education (2008) explained that the programme was renamed because the secondary schools were included in the feeding system and the programme was also implemented in those schools. Subsequently, its primary objective was shifted from nutritional improvement to educational improvement. The report released by the Department of Basic Education (2014) explained that the NSNP is designed, firstly to enhance learning capacity of school-going children, secondly to promote healthy lifestyles through nutrition education and thirdly to support the enhancement of food gardens.

The Department of Basic Education (2008) stated that in the Western Cape, the programme has shown some positive impact, especially in school attendance, punctuality and class participation. It added that despite the implementation challenges, 98% of the NSNP schools have successfully fed the learners. In 2005 and 2006 most schools were 100% compliant with the provincial required number of feeding days and the prescribed food menu. However, their compliance with the prescribed feeding time (10h00) in 2005 was 80% and 60% in 2006. The reasons, the Department of Basic Education explained, were generally related to the actual time of serving which was determined by the school, and teachers were reluctant to change the timetable.

Furthermore, the Department of Basic Education, (2014) also clarified that the Western Cape has managed to provide a significant amount of resources to quintiles 1, 2 and 3, which are classified as the poorest schools. The provincial menu shows that two meals are served per day (breakfast and lunch), whereas all the other 8 provinces serve only one meal per day. It has also shown that the cost of the meals in the Western Cape is R2.71 per learner per day at primary school and R3.58 at secondary school, while in all other provinces the cost is less than the Western Cape amounts.

However, the programme has also faced some challenges in implementation, mainly related to food quality and delays in delivery. In addition, there were some design issues related to the quintile system. For instance, the current targeting system classifies schools based on their geographical location and resources (library, laboratories, textbooks etc.). Yet there are some schools that are classified as non-poor schools (quintiles 4 and 5) that have learners from poor areas, such as Langa, Gugulethu, Khayelitsha, etc. Thus, this targeting approach excludes them from the benefits of the programme (Kallman, 2005). Bastia (2007) suggested that the criteria of the quintile system must be reviewed so that a larger number of poor learners could receive the benefits of the NSNP. The review could involve not only looking at the school location and resources, but also by looking at the socio-economic context of the learners.

Additionally, there are limited evaluations that show if the desired impacts (nutrition and education) of the NSNP in the Western Cape were achieved. Therefore, more impact assessments are required in order to thoroughly identify implementation and design issues of the NSNP in the Western Cape. Thus, the suggestions and recommendations of this research study might be taken into consideration, in order to improve the programme that could achieve the desired impacts.

1.8 Research question

This study sets out to answer the following research question: Based on the perceptions of the school principals, teacher coordinators, food handlers, members of the School Governing Body and the staff member of the Department of Basic Education, did the National School Nutrition Programme achieve the expected impacts?

Sub-questions

- What are the nutritional and educational impacts that were observed?
- What are the challenges of the NSNP that might have inhibited the expected impact?
- In what ways can the NSNP be improved?

1.9 Purpose of the research project

The main purpose of this study is to find out whether the expected impacts of the NSNP on nutrition and education have been achieved in Cape Town. It also aims to find out the challenges that might have hindered the implementation of the programme. Furthermore, this study endeavours to suggest ways in which the NSNP could be improved.

Thus, in order to explore whether the intended impacts of the NSNP were observed or not, the study interviewed the following research participants:

School principals, teachers, food handlers, members of the SGB and one staff member from the Department of Basic Education of the Western Cape.



1.10 The objectives of the research project

The research project is guided by the following four objectives:

- To find out whether the predicted impacts of the NSNP were achieved or not.
- To identify factors that might have inhibited the desired impacts of the NSNP.
- To provide a general understanding, guidance and recommendations that might be useful for policy makers, programme administrators and institutions of child development.
- To identify the areas that might require further impact evaluations.

1.11 Chapter outline

This study is presented in six chapters.

Chapter 1: provided the introduction of the research background, problem statement, purpose and objectives of the research, data collection methods, data analysis, ethics statement and the research outline.

Chapter 2: provided the literature review and theoretical framework. The chapter presents a global, regional and local historical overview and rationale of the SPF. It also discusses the theory of change.

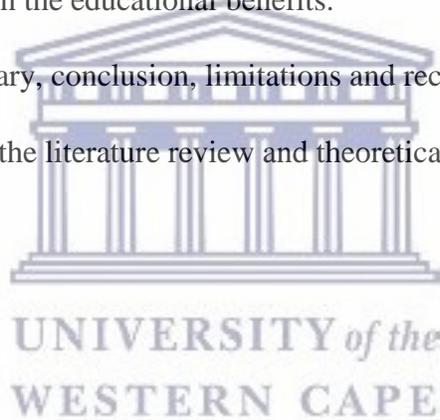
Chapter 3: discussed the research study's methodology; it explains the research design, data collection methods, sample size and pre-criteria used to select the sample.

Chapter 4: provided the data analysis and the presentation of the research findings on hunger and nutritional benefits.

Chapter 5: provided findings on the educational benefits.

Chapter 6: provided the summary, conclusion, limitations and recommendations.

The following chapter presents the literature review and theoretical framework of the study.



CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

In many countries, school feeding programmes are evidence of state intervention in child development and community upliftment through adequate provision of resources and investment in skills development (Langsford, 2012). As Langsford further explains, these programmes emphasize that education and good academic performance are key to breaking the cycle of poverty in poor families as well as a means of national development. Therefore learners are provided with food at school in the hope that their nutrition, school attendance and performance can improve.

This chapter reviews literature related to the research question: what are school feeding programmes trying to achieve globally, and in the South African context in particular? Did the NSNP achieve the intended impact? This chapter also provides the theoretical perspectives of school feeding programmes (SFPs), comprising the historical background of school feeding programmes and their rationale. The review will further consider where these programmes were first initiated and why they were initiated. It will then discuss the global, regional and local perspectives of SFPs, the objectives, the various impacts and challenges that were experienced in different countries. Finally it presents the theoretical framework of the study. This is to test the assumptions of the theory of change that are considered to lead to expected impacts of SFP.

2.2 History of school feeding programmes

Research shows that the early historical development of the school meal is related to some countries in Europe (FAO, 2009). The same study has shown that in 1790 the convergence of two programmes, teaching and feeding hungry learners were introduced in Munich (Germany) and in 1867 in France. In Norway, the Oslo Breakfast was established in 1897, and it consisted of a half pint of milk, whole bread, cheese, a half of an orange and an apple. All these food programmes, FAO explained, had similar objectives, i.e. to attract learners to schools and to improve their performance.

Similarly, Gunderson (2011) noted that in the USA, the Children's Aid Society of New York, began serving lunches to children at a vocational school as far back as in 1853. In Philadelphia the Star Centre Association began serving penny lunches in one school in 1894. The FAO (2009) also explains that some countries entrenched the school feeding scheme in their domestic constitutions. For instance, in 1900, the Netherlands was the first country to adopt a national legislative act that provides school meals.

Pelletier et al (1995) also indicated that in 1946, school lunch programmes were introduced across USA and the government decided to constitutionalise them. Subsequently, the Child Nutrition Act (CNA) of 1966 was approved to take control over the Breakfast and Special Milk Programme, the Summer and Childcare Programme as well as the Maternal and Infant Feeding Programme. The main objective of that act was, "...in recognition of the demonstrated relationship between food and good nutrition and the capacity of children to develop and learn, based on the years of cumulative successful experience under the national school lunch programme with its significant contribution in the field of applied nutrition research, it is hereby declared to be the policy of Congress that those efforts shall be extended ... to safeguard the health and wellbeing of the Nation's children ... to meet more effectively the nutritional needs of our children" (Pelletier et al, 1995, p. 477).

In Switzerland, Gunderson (2011) explained that a debate around a school feeding scheme resulted in a national decision being passed in 1903, making it compulsory for every municipality to provide food for needy school-going children. That led to the authorisation of state funds in 1906. In 1905, the Education Provision of Meals Act was passed in England, and it was aimed at providing school meals for poor school-going children. In 1914, almost 50 Italian cities also started large forms of school feeding schemes, aiming to increase school attendance and learners' outputs (Bundy et al, 2009).

In Mexico, the programme was launched in 1929, and it was aimed at improving the nutrition of poor school-going children (Drake et al, 2016). In Brazil, the programme was incepted in the 1940s with the objective of promoting healthy eating habits through educational actions and the supply of healthy meals that covered at least 20% of the nutritional needs. Chile started its SFP in 1952, however it was only constitutionalised in 1964, and it was found that the school enrolment had

increased as well as the class attendance (Gunderson, 2011). In Ecuador, the programme started in 1999, with a similar rationale as well as to reduce repetition and dropout rates (Drake et al, 2016).

The Asia-Pacific Economic Cooperation (APEC) (2012) has shown that Thailand commenced its School Lunch Programme in 1992, with the intention of alleviating nutritional problems among school children, enhancing food security as well as promoting desirable eating habits. In Bangladesh, Ahmed (2002) explained, the Food for Education Programme was launched in 1993, and it provided a free monthly ration of wheat or rice to the poor families who sent their children to primary school. The goals of the programme were similar to other countries that were mentioned earlier. In India, Drake et al (2016) noted that the programme started in 1995, and it was aimed at inducing poor children to attend school more regularly, to help to concentrate in class as well as to provide nutritional support to children who reside in drought affected areas. As many Asian governments were trying to introduce SFP in their countries, the Philippines also followed a similar route and it introduced its Breakfast Feeding Programme in 1997, with the goal of addressing a short-term hunger syndrome among public school children. As the programme progressed, it shifted its goal from just addressing short-term hunger to addressing more serious issues of under-nutrition, as well ensuring 80-100% school attendance among target beneficiaries. Therefore, significant increases in school enrolment and participation in class were noticed (APEC, 2012). The following section presents school feeding programmes in Africa.

2.2.1 School feeding programmes in Africa

In a similar trajectory, many African countries, some in a collaboration with the WFP have also introduced school feeding programmes, with a particular focus on improving school attendance and the local economy, especially among smallholder farmers (Fellers, 2015). In Ghana, the programme was launched in 2005, with the aim of reducing short-term hunger, increasing school enrolment, as well as improving the domestic food production (Drake et al, 2016).

In Nigeria, the programme was launched in 2006 and it was designed in a way that has similar objectives as the Ghanaian SFP, including the improvement of the nutritional and health status of school children (Drake et al, 2016). In Mali, Drake et al explained, the programme started in 2009 and it was aimed at promoting education, especially for girls, as well as to improve market access

for smallholder farmers. By the same token, Cote d'Ivoire launched its programme in 1989 and it was aimed at supporting and strengthening education access.

Cape Verde inceptioned its SFP in 1979. Its focus was to encourage school attendance and provide a safety net to poor families. However, the objectives were reviewed with a greater emphasis on nutrition and the improvement of food rations and the promotion of the local agriculture. This shows that the programme, among others, has an implicit tenet of local economic growth (Drake et al, 2016).

Ethiopia started its SFP in 1994, with an initial pilot project covering 40 primary schools, in four different regions. The programme was designed to “raise and maintain school enrolment with a particular focus on the demand side of education of chronic food insecure and vulnerable children” (Dheressa, 2011, p. 2). Dheressa explained that in 2007 the total beneficiaries of the programme reached 653,036 in food insecure areas of six regions and more than 1,000 schools were assisted. In Kenya, the programme was initiated by the Ministry of Education, Science and Technology and the World Food Programme (WFP) in 1980. The programme focused on supporting smallholder farmers, by scaling up their agricultural products and providing nutritious meals to school children. The findings show that the programme had a positive impact on school enrolment, learning and cognition and nutrition as well as small-scale farmers (Ministry of Education, Science and Technology et al, Kenya, 2016).

The Tanzanian Food for Education Programme started since 1956, during the colonial era, but was strengthened shortly after the independence in 1961, especially under the local governments. The programme included the provision of mid-day meals and health services (first aid). Its focus was to improve the learning capacities of boys and girls as well as to reduce the dropout rates (Ramadhani, 2014). The programme assumed that a significant impact was realised on some aspects of nutrition and education. A study conducted in Tanzania exploring the views of the programme stakeholders on the observed impact of the programme, has shown that the SFP reduced short-term hunger, as well as it improved academic performance (Ramadhani, 2014).

In Malawi, the School Meals Programme (SMP) was also launched as a pilot programme in 1996 by the WFP at the request of the Government of Malawi (GoM). Among others, the programme was designed to promote regular attendance, as well as to enhance learning ability (Fellers, 2015).

Fellers has revealed that in 2011, the SMP reached approximately 642,000 primary school children, with a positive impact on the attendance.

The Botswana Institute of Development Policy Analysis (2013) indicated that in Botswana, the programme was initiated in 1966. That was when the first President of Botswana, Seretse Khama, pleaded with the United Nations (UN) Family to assist his country with food, following the 1965 famine. The most affected group at that period, were the children who walked long distances to school without food. The WFP then provided food commodities to both schools and health facilities from 1966 to 1997. In 1998, the Government of Botswana took over the programme and incorporated local food into the school menu. The programme was framed among others, to boost domestic food production.

The Namibian School Feeding Programme (NSFP) was established in 1992. Its rationale was to address a short-term hunger for needy pre- and primary school learners, to provide better nutrition to orphans and vulnerable children, and to increase community participation in management activities (Drake et al, 2016). A study conducted by the Ministry of Education of Namibia (2012) revealed positive impacts of the NSFP on children, i.e. the elimination of absenteeism and improved concentration and passing rates.

In Lesotho, the programme was launch in 1961. It started with a project that was supported by Save the Children Fund. Initially 10 schools were included in one district. In 1965, the WFP provided support to the Lesotho SFP and expanded school feeding to all 10 districts. In 1990, the Government of Lesotho launched the School Self-Reliance projects, with the aim of taking over the programme from the WFP, but that was unsuccessful. In 2014 the National School Feeding Policy (NSFP) was developed, with the aim of procuring food from local farmers (Devereux et al, 2018).

Devereux et al (2018) explained that the focus of the programme was to reduce hunger and malnutrition, to increase school enrolment, to promote local food production as well as to provide jobs for communities around the schools. The same study has shown that more than 350,000 children were fed, at least one meal a day at school, over 3,000 community members were employed as cooks, caterers or transporters, and more than 200 farmers benefited, by supplying maize, beans and vegetables to the programme.

2.2.2 Impact of school feeding programmes

The impacts of school feeding programmes are mixed between nutritional benefits and educational benefits and sometimes are not very clear (Bundy et al, 2009). With regard to nutritional benefits, a study was conducted by Ahmed (2004) in Bangladesh assessing the impact of school feeding programme on primary school children aged between 6 and 12. The study compared learners who received the programme with learners who did not receive the programme. One of the objectives was to test children's nutritional status, measured by Body Mass Index (BMI). The study found that the SFP has a statistically significant positive impact on children's nutrition status with a coefficient of 0.619. The study indicated that the average BMI of SFP participating learners is 0.62 points higher than the average BMI of the learners in control group. This represents a 4.3 percent increase from the average BMI of learners in control group.

A similar study was carried out by Prista et al (2003) in Mozambique. The study was aimed to identify the prevalence of anthropometric indexes (stunting, wasting and overweight) among children who received SFP. The study sampled 2316 learners (n=1094 males, 1222 females) aged 6-18 and the learners were selected from 5 schools from different regions of Maputo. The findings show that, the prevalence of rates for males and females, respectively in nutritional status were 3.0% and 2.3% (stunted group), 21.9% and 10.0% (wasted group), 3.0% and 7.7% (overweight group). The result also indicated that, with control for age, socioeconomic status and maturity stage, the overweight group performed significantly worse on fitness tests compared to the other groups.

Another study was conducted by Gray et al (2006) in Central Honduras. The study was designed to investigate the association between stunting, chronic malnutrition, and food insecurity among school children who received SPF in rural areas. The findings show that there was a correlation between stunting and food insecurity. In other words, the stunted growth was related to malnutrition, which revealed poor nutritional status of the children. A similar study in Huaraz, Peru has also shown that children who received breakfast at schools, their dietary intake of energy increased by 2 percent, protein by 28 percent, and iron by 4 percent compared to the control group (Jacoby & Cueto, 1996). In Jamaica, a study was done by Powell et al (1998) using a randomized

controlled trial of giving breakfast to undernourished school children. The study has shown positive impact on treatment group compared to the control group. It found that both height and weight were improved significantly in the breakfast group.

A qualitative study was conducted in Swaziland by Nsibande (2016), where (3) primary school and (3) high school teachers were interviewed on the significance of SFP. The two key aspects that were noted are; the SFP helps learners to be attentive and it gives them energy to participate in class and sports. The primary school principal explained that “The programme is very helpful for them, if you teach a child who has had a meal, the child becomes positive, the child enjoys learning, even in the sports they participate better but if they are hungry or weak they cannot participate” (ibid, p. 28). A secondary school teacher noted that “Before the meal the learners would be sleepy, un-attentive and would not engage in classroom activities” (ibid, p. 29). A female teacher in a primary school also explained that “Until you get to understand why they behave this way, you are not going to like it obviously, though you are not going to ask each and every one why are you sleeping inside class, you are angry with them. You actually don’t enjoy these lessons, but when they have had their meal, they are quite attentive they are eagerly waiting for what you want to tell them, they respond quite openly, you do not have to poke them...that makes me love my job” (ibid, p. 29).

However, Bundy et al (2009) argued that evidence on the impact of school feeding programme on child’s nutritional status are limited. This is partly due to the cost and complexity of obtaining accurate and reliable anthropometric and food intake data, and partly to methodological challenges in isolating the effect of food intake from other factors that are affecting nutritional status. In other words, SFP solely may not improve children’s nutritional status unless it is supplemented by other related factors, such as clean drinking water, adequate sanitation, nutritional knowledge of eating healthy diet, food quality etc.

In Ethiopia, Pelletier et al (1995) also found that, the availability of food in schools had limited effect on the differences observed in children’s nutritional status. This is because children’s nutritional status is not only the function of the quality and quantity of the diet but also a function of morbidity, child caring, feeding practices and household variables (income, level of education etc.).

With regard to educational benefits, impact evaluation was conducted by Adair et al (2016) in Morocco, using mixed method. The study introduced lunch programme for one year as an addition meal to regular mid-morning meal. The evaluation found that schools that received mid-morning meals and lunches have improved their school enrolment, class attendance and performance compared to schools that received only mid-morning meal. The study indicated that a total of 3 percent increase for both sexes in enrolment. The enrolment among girls across all treatment schools has increased by 8% and decreased by 2.6% in control schools, while among boys the enrolment has increased by 6.6% compared to 0.2% decrease in control schools.

In terms of school attendance, 83% of girls and 81% of boys were regularly attending classes. The reason was sometimes boys help their families in the other activities that are not related to school. The study also found that there were no statistical differences between treatment schools and control schools for absence in the impact survey. Although learners in schools that were receiving both mid-morning meals and lunches were less likely to be absent at both periods, morning and afternoon. With regard to performance, there were no specific indicators (increase in pass rates, reduction in failure rates, high grades etc.) that show the programme has improved the performance. However, the study has mentioned that the learners were more attentive and participating in class, and if there was any improvement in performance, it might have been related to a combination of other factors as well (quality of teaching, school resources, environment etc.).

A similar study was conducted by Gelli et al (2007) on 32 sub-Saharan African countries. The study has shown that, the enrolment in the schools that were funded by the WFP, has increased by 28% for girls and 22% for boys. However, the same study has indicated that, after one year from the introduction of the programme, the enrolment pattern has shown some variations depending on the type of school meal (i.e. whether it's in-school meal or take-home rations or both). In other words, it found that schools that received in-school meal and take-home rations, the absolute enrolment kept on increasing by 30%, whereas schools that received only in-school meals just recorded increase in an absolute enrolment that was the same prior the programme intervention.

It is important to note that this study is not designed to discuss the take-home rations or difference in enrolment rates between boys and girls. But just to explain the point that school meals (whether

in-school or take-home rations) increase school enrolment and class attendance as well as they may improve learner performance.

With regards to learner performance, a positive impact was shown in a study that was conducted by Ahmed (2004) in Bangladesh. The study tested 1648 grade five learners from the treatment group to find out the impact of school meals on academic performance. Ahmed explained that since the learners had not completed grade 5 at the time of the study, all learners were tested using the grade 4 test. The test was based on 3 subjects, namely English, Bengali and Arithmetic. The study found that the total test marks had improved by 15.7% in the treatment group, with Arithmetic improved by 28.5%, English by 22.2% and Bengali scores had increased but were statistically not significant.

A similar study was done by Adroque and Orlicki (2013) in Argentina which explained the impact of school meals that were introduced to grade three learners as the treatment group. It found that the programme had increased language scores by 0.15%, but there was no significant effect on mathematics scores. Lawson (2012) also explained that in Kenya the study randomly assigned 555 grade one learners for 21 months for school meals. It found that the children who received supplementary meat or energy diets statistically performed better in arithmetic compared to children who did not receive the meals.

In Nigeria, a qualitative evidence from the study that was conducted by Taylor and Ogbogu (2016) has shown that, SPF has increased enrolment and class attendance as well as performance. The one of the head teachers explained that “There has been a steady increase in enrolment and school attendance is regular. Even if pupils are sick, they like to come back to school to collect their meals” (ibid, p. 45). The study also explained that “44% of the respondents strongly agreed that there is improvement in the performance of pupils’ both in curricular and extra-curricular activities” (ibid, p. 45).

A study was conducted by Ramadhani (2014) in Tanzania and it has revealed similar impact that was found in Nigeria. However, a few schools have noticed static in terms of school enrolment and attendance due poverty, long distance and poor negative attitude towards education. One head teacher noted that “Children who are hungry never used to attend classes regularly, but after the introduction of school feeding, class attendance became quite regular” (ibid, p. 35). A parent

explained that “They were late to enroll their pupils in school in order for them to reach the age where they could manage to walk long distances to and from the school and home as it was on their own without risk” (ibid, p.34). Other parents stated that “Contributing salt, firewood and money for the cook’s salary, discouraged pupils from poor families to attend school regularly” (ibid, p.36).

In Ethiopia, Dheressa (2011) has found that it is not only SPF that affects school enrolment and class attendance, but other factors as well. These factors include child labour, cost of schooling, availability of schools and distance. A farmer household head noted that “...my elder children are studying... but I have not enrolled their younger siblings yet because I cannot afford to work alone by enrolling all of my children to school...if all my children go to school, nobody will help me in farm works” (ibid, p. 31).

2.2.3 Challenges of school feeding programmes

Bundy et al (2009) argued that the introduction of school feeding programme alone without considering other related factors may not improve nutrition and performance of learners. These factors include, food quality and quantity, delivery, sanitation and supply side. They further explained that, the quality and quantity of food that is provided have different impacts on learners’ nutrition status and cognitive development or performance. A study was conducted in Kenya by Whaley et al (2003) revealed that, learners who received meat for 21 months have performed better than learners who received milk or energy snack.

Another study was done in Tanzania by Oganga (2013) has shown that learners consumed expired food and it caused them stomach-ache. A parent reported that “...one day, my child who is in grade four, came back home claiming that she was not feeling comfortable with her stomach. I asked her what she ate on that day and she told me that she only ate food at school. She expressed to me that sometimes food at school are not well cooked or have expired. ...this is not a secret because most of the parents know this” (ibid, p. 66).

With regard to food delivery, a study was carried out by Nsibandé (2016) in Swaziland and it explained that, the delivery of the food supplies would sometimes take longer than expected. This

has resulted in the school having to stop the SFP until the supplies were delivered. Similarly, school principal reported that “When food is not cooked that day, (bangs table)...me and my partner have to fork out money because some of the children will tell you, they will have nothing to eat for the whole day, and any other day if the school does not give them food. They will have nothing to take to their siblings if the school has not provided. Because some are elders at home and you can see how stressed they are if the feeding programme is not running for those days” (ibid, p. 33).

In the same study, another school principal noted that “Sometimes the food supplies come too early, and you know this is food. The amount of food we have to cook is often not enough for the children. These are high school children, they eat. So we often use up the food supplies and we run short of food before the end of the year” (ibid, p. 34).

Another study was done by Kedze (2013) in Ghana and it explained that, SFP may deteriorate the quality of education if it has not been supplemented by the supply side. A school principal clarified that “Yes the numbers have increased but in this school we have decided to keep a maximum of fifty (50) pupils in a class so we usually have to turn away prospective students but I know of other beneficiary schools where classroom population ranges from seventy (70) to eighty (80) pupils’ (ibid, p. 28). Another respondent noted that “Classroom population makes it difficult for us to give out assignments frequently to the pupils and also to monitor the study progress of pupils who need special tutelage’ (ibid, p. 28). Similarly, a head teacher stated that “Getting another classroom block would be the best thing, at least with that the number of students in the classrooms will reduce and more teachers can be employed too” (ibid, p. 32). In the same vein, another teacher explained that “For teachers who teach certain subjects like science and Information Communication Technology, computers are really needed to aid in research and also to make the children understand better what they are been taught” (ibid, p. 32).

2.3 The School Feeding Programme in South Africa

The SFP, currently known as National School Nutrition Programme (NSNP) was introduced in the late 1940s and was providing milk to learners. However, it was not universally designed, i.e. it was not designed to include every school-going child. The programme was primarily targeting schools of specific social groups (White, Indian and Coloured) (Tomlinson, 2007).

However, another study shows that the commencement of the SFP in South Africa can be traced back to 1916. That was when the Transvaal Provincial Executive Committee realised the need to provide a fund to feed hungry learners (Department of Basic Education, 2014). Consequently, three feeding schemes were established between 1937 and 1939: the Milk and Cheese Scheme, the Dried Fruit Scheme and the Citrus Fruit Scheme. The prime objective of these schemes, Kallman (2005) noted, was to provide food for poor schools.

In 1943, the Department of Basic Education (2014) explained that the United Party (UP) officially introduced the SFP and it was framed in a way that integrated with global trends. In other words, the objectives of the programme were similar to other countries. The UP therefore premised its arguments on the Smith Report, which specifically requested the need for a large-scale nutritional, educational and communal feeding programme for all poor school children. Subsequently, a wide-ranging school feeding programme was launched and it provided one free meal to all learners irrespective of their race.

During the apartheid era, the fund for school meals of 'native' schools (black) was reduced. Consequently, the existing feeding schemes were abolished in 1951. In 1957/8 all government-led feeding schemes for 'native' schools were discontinued. However, some charitable organisations (such as African Children Funding Scheme, Grahamstown Areas Distress Relief Association and Cape Flats Distress Association) continued to fund the SFP (Kallman, 2005).

Furthermore, in 1958 a new NGO was established, namely the Peninsula School Feeding Association (PSFA). The PSFA delivered food to needy schools and schools that were denied receiving meals from the apartheid government. The PSFA's mission statement explains that the programme was designed "to combat the prevalence of hunger in children attending school and other educational institutions, through school feeding and other developmental initiatives", whereas their vision is, "no more hungry school children" (PSFA, 2016, p. 2).

In the post-apartheid era, the SFP was supported by the late President Nelson Mandela in 1994. It was one of the leading programmes on the presidential list. Its immediacy was noted and it was implemented within 100 days after the country's first democratic elections. Data shows that initially R477.8 million was provided for the scheme by the Reconstruction and Development Programme (RDP) office. Subsequently, the Primary School Nutrition Programme (PSNP) was

established and it was basically aimed at reaching all poor school-going children (Department of Basic Education, 2013).

Moreover, Kallman (2005) noted that the programme was not only financed by the periodical funding, but it was solidly enshrined and grounded in the Constitution of South Africa. More specifically, the Act 108 of 1996, stipulates that all South Africans have “the right to have access to sufficient food, as well as basic nutrition and education for children” (Department of Basic Education, 2013, p. 11).

The following were the specific objectives of the PSNP when it was first launched in 1994:

- To improve education by enhancing active learning capacity, school attendance and punctuality by providing an early morning snack.
- To improve health through micro-nutrition supplementation.
- To improve health through parasite control/eradication.
- To improve health through providing education on health and nutrition.
- To enhance broader development initiatives especially in the area of combating poverty.

Source: Child Health Unit, 1997, cited by Bastia (2007).



The literature has shown that in the beginning the programme was considered as a nutritional programme (Bastia, 2007; Devereux and Roelen, 2015). However, Wildeman and Mbebetho (2005) and Bastia (2007) have indicated that the impact of the programme on the nutrition was barely observed. That could be, Devereux and Roelen (2015) explained, due to the theory of change which could have been flawed or blurred, such as whether the programme was designed to achieve nutritional or educational impacts, or due to the constraints in implementation as well as monitoring and evaluation.

These factors, Bastia noted, might have contributed to the shift of the theory of change, i.e. from nutritional impacts to hunger alleviation. In 2004, Kloka from the Department of Health (cited by Bastia, 2007, p. 9) stated, “... the PSNP was primarily designed to provide direct services to

primary school learners to reduce hunger and alleviate the effect of malnutrition on their learning capacity and not to improve the nutritional status of the learners.” Bastia has also explained that after the shift of the theory of change, from nutrition to hunger alleviation, there was no clear evidence to show that the alleviation of hunger resulted in improved nutrition or education. However, the programme increased school enrollment as well as participation in class.

This agrees with an argument that was made by Devereux and Roelen (2015) that if the intervention was aimed at alleviating child hunger, then children’s nutritional status must be assessed prior to and after the intervention. If children’s nutrition (stunting, overweight etc.) was improved over this period of intervention, then the programme must be declared successful. However, the children’s nutrition may improve but it might be related to other factors. Hence, a control group of children with similar characteristics, except that they do not receive the programme, must also be assessed, so any net difference between these two groups would be declared as the impact of the intervention.

In 2004, the programme was shifted from the Department of Health (DoH) to the Department of Education (DoE). It was then renamed from the Integrated Nutrition Programme (INP) to the Primary School Nutrition Programme (PSNP). Yet the objectives of the PSNP remained similar to the INP. However, they were slightly modified with a specific focus on hunger alleviation (Department of Basic Education, 2014). The reasons for the PSNP shift from the Department of Health to the Department of Education were:

- ❖ Limited monitoring and evaluation capacity by the Department of Health.
- ❖ Very expensive to provide a nutritional meal, i.e. nutritional objectives were difficult to attain and also very difficult to measure and evaluate.
- ❖ The programme moved from nutritional objectives to hunger alleviation.
- ❖ The Department of Education has more infrastructures to implement the programme.

(Du Plessis, personal communication, 2007, cited by Bastia, 2007).

The PSNP was renamed again to the National School Nutrition Programme (NSNP). This new paradigm shift, Bastia (2007) explained, was designed to cover a large number of needy schools. Therefore, in 2009, the programme extended its coverage to include secondary schools that fall under the quintile 1 to 3. This was implemented under the guidance of the new objectives that are presented below.

- ❖ To feed learners at designated schools to enhance their learning capacity.
- ❖ To enhance nutrition education through the curriculum.
- ❖ To enhance the implementation of food gardens in schools.
- ❖ To design and improve programmes for orphans and vulnerable children (Department of Basic Education, 2004 cited by Department of Basic Education, 2014).

2.3.1 The impact of the National School Nutrition Programme in South Africa.

The impact of the NSNP is quite mixed between hunger alleviation and performance and sometimes is unclear (Kallman, 2005). A study exploring the perceptions of the programme stakeholders, i.e. school principals, teachers and food-handlers, on the impact of the NSNP in the Eastern Cape and Limpopo provinces revealed that, "... there has been an increase in the school attendance, concentration levels and social and physical participation by learners in school-related activities. The level of absenteeism by learners has dropped among the schools participating in the programme in both provinces" (PSC, 2008, p. 10).

A similar research was conducted by Dei (2014) in Magog Primary School in KwaZulu-Natal (KZN). The research evaluated the potential impact of NSNP on the learners. The study used a mixed research methodology. The views of principals, teachers and others were explored to reveal the impact of the programme. The findings show that the programme probably improved attendance, attention span and cognitive development. Additionally, the nutrition and health of the children have reached acceptable levels, making it potentially possible for the children to participate in learning and perform as required. A teacher responded, "It helps us to teach without distraction because children concentrate after being fed" (Dei, 2014, p. 74). In the same vein, a

learner explained, “I come to school almost every school day and I am able to listen to my teacher after the food” (ibid, p. 75). Another learner responded, “I become strong when I eat the food” (ibid, p. 72).

A similar impact was shown in the study conducted in Limpopo by Muvhango (2016), evaluating the perceptions of school principals, teachers and learners on the impact of the NSNP. A school principal noted, “Learners are coming to school in numbers since the inception of the NSNP” (ibid, p. 96). This view is also supported by another principal who stated that, “... the programme has considerably decreased the rate of absenteeism at the school” (ibid, p. 98). The learner was also asked how s/he felt when s/he had food. The response was, “I become strong when I eat the food” (Muvhango, 2016, p. 98). By the same token, a study conducted by Govender (2016) in KwaZulu-Natal on the efficiency of the NSNP and its impact on lessening child poverty in selected schools, has revealed similar impacts found in the Eastern Cape and Limpopo.

Another study conducted by Graham et al (2015) in the Eastern Cape assessed the impact of the Tiger Brands Foundation (TBF) Breakfast Programme in the school that received the programme. The findings show that, “... schools receiving only the NSNP are more likely to have children who are stunted than the schools receiving both interventions” (Graham et al, 2015, p. 26). Furthermore, “learners receiving two meals, despite being from arguably poorer backgrounds, have lower stunting levels than children receiving only one meal” (Graham et al, 2015, p. 26).

The conclusion was that the school-going children who were exposed to an additional school meal had lower stunting rates than those receiving only the NSNP. However, the study notes that without conducting a study that explicitly accounts for stunting levels before and after the intervention of the TBF Breakfast Programme, it could not be stated with certainty that the programme has contributed to the reduced stunting levels in the treatment schools. With regard to the educational impact, Graham et al (2015) explained that the school children who received the NSNP and the TBF Breakfast Programme had significantly higher marks compared to those in the control schools. However, the improvements in the learner performance cannot necessarily be attributed to the combined nutrition programmes. This is because learner performance is shaped by other factors that are closely related to education compared to nutrition. Below are some responses from the stakeholders and beneficiaries of the programme.

A principal from a control school explained that, "... they are mostly encouraged by the food. The food that they get, makes us to get few absentees" (Graham et al, 2015, p.38). A principal from an NSNP school stated, "The numbers [of children coming to school regularly] have increased since the introduction of the food programme" (ibid, p. 38). A principal from a TBF-sponsored school noted, "They are performing better ... and we have enough time to teach them. There is a difference. Now the work, we can do it thoroughly" (ibid, p. 37).

On a similar note, an educator from a control school responded, "They seem happier, they are always happy and they are physically fit, so you will see the fitness of the children when they are playing outside" (ibid, p. 37).

A learner from an NSNP school responded to the question if s/he liked the food and s/he replied, "Yes, because it gives me energy" (ibid, p. 36). Another learner from a control school stated that, "... because sometimes we don't get food and get hungry, we were not able to participate in class, so that is why we like it" (ibid, p. 36). That view was also supported by another learner from a TBF school who explained, "... we don't get hungry like before. We don't sleep in class when we've eaten. We like breakfast. It makes me excited" (ibid, p. 37).

It could be assumed that these responses from all schools, i.e. control, NSNP and TBF-sponsored schools suggest a positive impact of the programme on the alleviation of short-term hunger as well as improved performance. However, Bundy et al (2009) argue that if the right quality of food is not delivered as well as supplementary supply side is not provided (teachers, books etc.), the programme may not achieve the intended impact.

The literature has also shown that there are other benefits beside nutrition and education, i.e. that the programme boosts the local economy as well as it generates job opportunities for local communities around the school (Sumberg and Sabates-Wheeler, 2011). A positive impact was noticed in the study carried out by Zwane (2014) in the Jozini Local Municipality of KwaZulu-Natal (KZN). The study investigated the current role of the school feeding scheme as a vehicle for improving market access for smallholder farmers. It found that the NSNP does have the potential to be a reliable and stable market, but that the current NSNP procurement modality differs from some provinces to others. For instance, Limpopo, Mpumalanga, Gauteng and the Western Cape use a centralised procurement system. The North-West, Free State, Eastern Cape and Northern

Cape use a decentralised procurement system. For instance, Kallman (2005) explains, the Western Cape uses middle-men or a contract system. This procurement modality does not facilitate the inclusion of smallholder farmers in the supply chain. Kallman clarified that only three (2.8%) of the smallholder farmers had sold foodstuffs directly to the NSNP, while 97.2% had not delivered any agricultural produce to the programme. However, the programme does provide job opportunities such as cooks, caterers and transporters, to local communities around the schools.

2.3.2 The challenges of the National School Nutrition Programme in South Africa

(A) Delivery problems

The literature has shown that sometimes food is not delivered in the required time, and it results in irregularity in the feeding system (Kallman, 2005). The Public Service Commission (2008) noted that in the Eastern Cape and Limpopo, issues of non-delivery and delays of food delivery and poor quality were reported. The same problems are also noted by Dei (2014) at Magog Primary School, Port Shepstone Education District, KwaZulu-Natal. Dei stated that, "... the suppliers were also found to be unreliable in terms of the time that foodstuffs have to be delivered and the quality of these foodstuffs" (Dei, 2014, p. 84). Furthermore, Ellia (2017) explains that between October 2014 and December 2015 in Vhembe and Mopani districts, Limpopo, 38034 learners did not receive their food, and it was revealed that the suppliers did not deliver the food items on time, as well as the required quality.

The food handler noted, "Sometimes we do not prepare food because the suppliers always fail to give us food in time and as a result, learners will not eat" (Ellia, 2017, p. 91). In the same vein, the programme coordinator at the same school explained, "We always have confrontations with suppliers in terms of inadequate food delivery, delivery failures and the delivery of expired products; these are major problems surrounding this programme." The supervisor also reported that, "... we have witnessed a failure in delivering adequate food in time" (ibid, p. 91).

(B) Targeting problem

Targeting is defined as a method or tool that is used to identify the beneficiaries of any development programme. In other words, it is the way in which the beneficiaries are identified and reached (Slater and Farrington, 2009). The NSNP uses a quintile system to identify the beneficiaries. It is a system that categorises schools from quintiles 1 to 5, based on certain criteria, such as school location, school resources and environment. The schools under quintiles 1 to 3 are regarded as the poorest schools and are qualified to receive provisions from the NSNP programme. However, some schools which are classified as quintiles 4 and 5 in rural areas also receive the NSNP provisions. This is because these schools have a great number of poor pupils (Bastia, 2007).

The critique of this targeting approach pointed out that the classification of some schools does not appear in line with the poverty level of the communities in which schools are located. In other words, some schools might be classified under quintiles 4 or 5, based on their location, but they might have a great number of learners who come from poor areas. Consequently, these learners may not benefit from the NSNP (Department of Basic Education, 2014). Therefore, it was suggested that the criteria under which schools are classified should be reviewed. For instance, the programme should not look at only the school location and resources, but it must also look at the socio-economic context of the learners (household income, living environment, sanitation, etc.) (Bastia, 2007; PSC, 2008; Dei, 2014; DPME and DBE, 2016).



(C) Monitoring

The lack of continuous monitoring is also one of the problems that was indicated by Bastia (2007). The literature defines monitoring as an ongoing process by which stakeholders of a certain programme obtain regular feedback on the progress and improvement (UNDP, 2009). The Department of Basic Education (2008) indicates that while there are basic systems for monitoring and evaluation for all nine provinces, they vary in the level of development, context and effectiveness. This is because the programme policy mandates each province to design its own tools and methods of monitoring.

The Department of Basic Education (2012) has indicated that the monitoring of and communication with suppliers in many provinces are not efficient enough to identify and rectify the under-performance of some schools. For instance, the Department of Basic Education (2012)

explained that the Western Cape has experienced some challenges in delays in delivery of supplies, inadequate quality and quantity of food and substitution of menus.

Another report has shown that in the Eastern Cape the monitoring is done on a monthly basis. However, 34% of union representatives and 43% of members of SGBs indicated that they were not pleased with the way monitoring was conducted. That was because monitoring was conducted less frequently than required by the NSNP guideline. Additionally, a number of challenges such as delays in delivery, menu substitution, etc. would go unnoticed and very limited actions were taken to resolve those problems (Department of Basic Education, 2014).

(D) Food safety

Food safety is also raised as one of the challenges that can undermine the nutritional impact of the programme. The literature reveals that insufficient food safety awareness and poor skills of caterers can result in unsafe food handling procedures and cross-contamination in food services (McGill et al, 2015, cited by Sibanyoni et al, 2016). Stats SA (2013) noted that in 2011, 2560 outbreaks of food-borne diseases were reported of which the majority (1700) were prevalent in primary and secondary school learners. In 2014, three learners in the Gauteng and Limpopo provinces were reported to have died after consuming contaminated meals provided by the NSNP (Nzimande, 2014).



2.3.3 The National School Nutrition Programme in the Western Cape

The literature shows that between eight to nine million school-going children in both primary and secondary schools in South Africa receive school meals through the NSNP (Department of Basic Education, 2014). The Government of the Western Cape – Department of Basic Education (2018) indicates that the programme currently feeds more than 471 000 learners in 996 schools. This is in addition to over 76 000 learners in 309 quintile 4-5 schools, as well as over 26 000 children in the after-school programme. Subsequently, the programme expands its coverage every year. The programme has resultantly doubled its budget since 2009/2010. The budget that has been allocated for the programme's 2018/2019 financial year is just over R357 million ([Government of the Western Cape](#), 2018). The number of beneficiaries continuously increase every year. This is

because there is an increased number of people migrating from rural areas to the Western Cape, seeking both job opportunities as well as better learning environments for their children (Department of Basic Education, 2012, 2014; PSFA, 2016).

The province provides two meals per day for both primary and secondary schools that are under quintiles 1 to 3. However, in 2018, the programme also served the poor children who are in quintile 4 and 5 schools ([Government of the Western Cape](#), 2018). The number of feeding days in both secondary and primary schools is 187. The menu shows that, it's only the Western Cape that provides two meals (breakfast and lunch) to the learners in South Africa. Five freshly cooked meals are served during the five days of school every week. Further, the cost of the meal for each primary school learner is R1.80 and R2.35 for each secondary school learner, which is higher than other 8 provinces (Department of Basic Education, 2014). This may suggest that, the Department of Basic Education explained, the programme is more likely to improve nutrition of the learners.

From Monday to Friday, cooked maize and mabele porridge are provided to the learners during the breakfast. These cereals provide nutritional diet such as, carbohydrate, energy as well as micronutrients (vitamin E and zinc). Whereas during the lunch, pilchard and lentil stew, cooked rice and butternut and sugar bean stew are served as well as cooked samp, whole fruit, soya mince gurry, cooked carrots and cabbage. All these food products provide rich protein, vitamin and starch (fiber, minerals and vitamins) (Department of Basic Education, 2010). This balance nutritional meals, the Department of Basic Education explained, are designed to provide energy for the brain that can help for mental and physical activities and to make the learners alert and receptive during lessons. In addition, these meals can assist in physical growth of learners.

However, the literature shows that it is not only the NSNP that provides food for schools in the Western Cape, but that there are other NGOs that also provide meals to the learners, such as the Peninsula School Feeding Association (PSFA) (Department of Basic Education, 2012). As mentioned earlier, the PSFA was established in 1958. It provides meals to the schools that are not qualified for the NSNP (quintiles 4 and 5), as well as where the need exists, such as in pre-schools, early childhood development (ECD) centres, etc. This practice is based on the PSFA's mission and vision, which states that, "you can't teach a hungry child" and its commitment to "no more hungry school children" (PSFA, 2016).

The PSFA's main objectives are to reduce short-term hunger, enhance children's ability to learn and increase school attendance (PSFA, 2017). In 2017, the PSFA fed 260,000 learners in 458 NSNP schools, 30,000 learners in 160 PSFA schools, 26,000 learners in 196 after-school programmes, and 2,000 each in 52 early childhood development (ECD) centres and 7 further education and training (FET) institutions (Devereux et al, 2018). The PSFA indicated that a positive impact was noticed in the alleviation of short-term hunger, attendance and participation (PSFA, 2016).

Another organisation that works in a similar area, in the Western Cape and other provinces, is Stop Hunger Now South Africa (SHNSA). It was founded in 1996, and driven by a vision of a world without hunger. Its mission is to end hunger in our lifetime by providing food and life-saving aid to the world's most vulnerable people. It supports school meals and orphan centres. It provides meals for five days a week to over 55,000 children throughout South Africa via its early childhood development centres. It also partners with other NGOs in the Western Cape such as the PSFA and Ikamva Labantu (SHNSA, 2016).

Ikamva Labantu is a community-based NGO that primarily provides support to ECD centres in townships, in Cape Town. They specifically offer a nurturing and educational start to all children (Ikamva Labantu, 2016). Both SHNSA and Ikamva Labantu, in their annual reports of 2016 have indicated a similar impact that was mentioned above.

Joint Aid Management (JAM) is another NGO, which was established in 1984. Its mission is "Helping Africa help itself." It currently operates in Angola, Mozambique, Rwanda, South Sudan and South Africa and it provides food to more than 1.4 million people every day (Devereux et al, 2018). In South Africa, it supports pre-school children by providing porridge every school day to children at JAM ECD centres. The programme is centred in Limpopo, Gauteng, KwaZulu-Natal, Eastern Cape and the Western Cape, and it reached over 40,000 beneficiaries. The programme has significantly induced many families to send their children to ECD centres and it improved the performance of the children (JAM, 2015).

The intervention of these NGOs might indicate that the gap which is not covered by the NSNP, is being filled. Therefore, it may justify the assumption that the provision of food to children may

reduce the risk of malnutrition and stunting as well as enhancing their chances of better academic performance.

Moreover, the studies that show the impact and challenges of the programme in the Western are very limited. Similarly, as previously mentioned, the impacts are quite mixed between hunger alleviation and performance. A study conducted in Stellenbosch shows that for many poor school children, the school meal is the only meal that they get during the day and many children go to bed hungry. An old woman working on the wine farm in Stellenbosch explained that, "... less fortunate children, together with many others are going to bed with empty stomachs" (Berg, 2011, p. 48). A school principal also noted, "The food is really important, because the children don't have any food at home and their parents work on the wine farms and some do not work at all ... before a child can learn, he/she must get food"(ibid, p. 50).

A woman who completed her matric 5 years ago also remembers the importance of food that has positively affected her school performance. She stated, "If a person is hungry they can't concentrate, you are just thinking about how you can get food. I was lucky to have something to eat and we used to share our food with others who still were hungry. The food is important. Without it you can't think, concentrate and work in a class room when you have an empty stomach" (ibid, p. 50).

However, Berg (2011) noted that among other challenges that were previously mentioned, stigma is also associated with the NSNP. In other words, some learners do not eat the food, because they feel ashamed, and they will regard one who eats the food as a poor child. A teacher explains, that by eating in the cafeteria, they hear, "oh, you are poor" and "you don't have food at home" (ibid, p. 51). A learner observed, "We don't eat the food at all because it is for the children who don't have anything" (ibid, p. 51).

2.4 Theoretical framework

The literature shows that any development intervention is designed to achieve a pre-determined set of positive impacts on the lives of programme recipients. It embodies an implicit or explicit theory of change (Stein and Valters, 2012). Stein and Valters further explain that the Theory of

Change (ToC) in development domain, is also known as a roadmap, a blueprint, engine of change and theory of action. However, this study adopts the term theory of change throughout. Theory of change is defined as an articulation of how and why a given intervention will lead to specific change in the targeted group. In other words, it understood as a set of assumptions that explain both the pathways that can lead to a long term desired goal and the connections between these activities and the outcomes of the designed intervention (Stein and Valters, 2012). In a similar way, Jameel (2014) defined a theory of change as ongoing process of reflection to explore change and how it happens and what that means in a particular group i.e. beneficiaries. Mayne (2015) gave a similar perspective and described it as a causal pathway from activities to outputs to a sequence of outcomes to impacts. This explains the causal assumptions and hypotheses that show why and under what conditions the different links in a causal pathway are expected to work, so that it can achieve the desired impacts.

In the same route, Devereux and Roelen (2015) defined the theory of change (ToC) as a theory that consists of a set of ideas and hypotheses people and organisations have about how change should happen in a particular group. This point is also emphasized by Taplin et al (2013) and they explained that the main purpose of the theory of change is to provide a working model against which to test hypotheses and assumptions about what actions will best bring the intended outcomes. Therefore it is usually implemented when people's wellbeing is impaired by certain resource deficits. The basic assumption is that the provision of these resources, such as school meals to children, will enhance their wellbeing. Thus, the theory of change is used to conduct an impact assessment, with purpose of testing whether school feeding programme has improved the wellbeing of learners as predicted. Subsequently any observed impacts will be identified as indicators of successful programme intervention.

In this regard, literature shows that, the most effective way of finding out whether the intervention has actually improved the predicted wellbeing, is to identify relevant indicators of wellbeing and to measure these indicators before and after the intervention is introduced (Devereux and Roelen, 2015). For instance, if a programme such as school feeding aims to improve children's nutrition, then its impact on stunting, underweight and obesity must be evaluated by measuring these indicators pre- and post-programme intervention. If there is any improvement in the determined indicators over the intervention period, then the programme will be regarded as successful and the

theory of change is validated. It is aforementioned that, in Bangladesh Ahmed (2004) has found that the SFP has a statistically significant positive impact on children's nutrition status, with a coefficient of 0.619. This suggests that Ahmed (2004) explained, the average BMI of SFP participating learners is 0.62 points higher than the average BMI of the learners in control group. This represents 4.3% increase from the average BMI of school children in control area.

In a similar way, if the programme such as a SFP aims to enhance educational performance, then pass and failure rates as well as dropout rates should be assessed pre- and post-intervention. Again, any improvement in these indicators relative to a control group over this period will be declared as the impact of the programme. It is also previously explained that, Lawson (2012) has found that children in Kenya who received supplementary meat or energy diets at school statistically performed better in arithmetic compared to children who did not receive the meals.

However, Bundy et al (2009) explain that it is possible that children's nutrition and education will improve during an intervention period for unrelated causal pathways. Therefore, a control group of learners with similar characteristics, except that they do not receive school meals, must also be evaluated during the same period. Hence, the net difference between treatment and control group will be declared as the impact of the programme.

In the case of a school feeding programme, the theory of change shows that there are three key reasons why countries may choose to implement a SFP, namely, "to address social needs and provide a social safety net during crises; to improve learning and education outcomes; and to enhance nutrition" (Bundy et al, 2009, p. 13).

This paper focuses on the last two reasons, i.e. education and nutrition. The theory shows that giving school-going children from disadvantaged households free meals at school is expected to generate enhancements in food consumption and education. The positive assumption is that higher food consumption will enhance learners' nutrition and increased school attendance will improve learners' academic performance. Devereux and Roelen (2015) added that there is a high potential that children will further succeed at all their academic levels, i.e. primary, secondary and possibly tertiary education. Hence, they will do better in exams and they are more likely not to fail or drop out of school.

Therefore, there is a clear synergy between nutrition and academic performance. Better nourished learners can concentrate better in class and will perform better than hungry learners in class tests and final exams. So in theory, school meals are expected to enhance both the nutrition and education of hungry school-going children, i.e. to enhance their human capital and improve their chances of earning sufficient or higher income in the labour market.

However, the literature shows that in practice, school meals might not achieve the aforementioned desirable impacts. This is because of a range of related factors and implementation modalities, such as, either the method of the intervention is framed and delivered or the ToC is flawed (Bundy et al, 2009). For instance, school meals (such as NSNP) are served for only five school days in a week. Weekends and holidays are excluded. Hence it could be a design problem. In this regard, Bundy et al (2009) noted that nutrition deficits in the first 1,000 days of a child's life have permanent effects for physical and cognitive growth. The SFP therefore intervenes too late to reverse the damage caused by maternal and early childhood malnutrition. The literature also shows that school meals fail to significantly lessen the damage of malnutrition among beneficiaries; this could either be that the food provided in school is insufficient in quality, quantity or other related issues, i.e. food safety, menu etc. (Kallman, 2005; Nzimande, 2014).

Similarly, Devereux and Roelen (2015) and Drake et al (2016) argue that school meals are positive incentives for poor children to attend and stay in school, but if there are inadequate educators or educators who are not properly trained, then increased attendance may not result in improved performance in exams. Hence, increasing the demand for education without investing in the supply side, Nsibande (2016) argues, will even create negative synergy.

Ahmed (2004) asserts that school meals often precipitate a surge in school attendance. Such an increased school attendance or enrolment may undermine the quality of education if learner-educator ratios rise above optimal levels. It will also undermine the quality of education if teachers and administrators are diverted away from their key functions such as teaching and managing school activities and resources (Ahmed, 2004).

Bundy et al (2009) noted that a study done in India discovered that the responsibilities of school meals took educators 2 to 3 hours away from teaching every day. This proves that more

disadvantaged children may have access to education, but if the quality of education deteriorates, they may perform worse in exams and failure rates will rise.

In a nutshell, it could be concluded that any successful development intervention should have a pre-determined set of impacts that are designed to be achieved. The intended impacts therefore must be measured to determine if they were achieved. If not, why were they not achieved? Was it a design problem or is the theory of change flawed?

2.5 Conclusion

This study discussed the historical development and the rationale of the school feeding programme, in USA, Europe, Latin America, Asia and Africa. It further explained the historical progress of the NSNP in South Africa, including the Western Cape, such as its objectives, impacts and challenges. The chapter also discussed the theoretical framework of the study.

A wide range of global literature has shown that the main objectives of the SFP are to induce poor parents to send their children to schools, to alleviate short-term hunger of learners and to improve their performance.

In South Africa, the programme has been designed to alleviate short-term hunger, enhance learning ability as well as performance. A few studies have indicated that the programme, including in the Western Cape, has reduced short-term hunger, improved school enrollment and class participation. However, the impact might not be directly attributed to the NSNP alone. This is because there are other factors that may significantly play a role in improved participation and performance, such as school resources, teachers, etc. Moreover, the programme has also faced some implementation and design problems, which might have undermined the intended impact of the programme. The following chapter presents the research methodology.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methods that were used to collect the data. The chapter also provides justifications for the choice of research design i.e. a qualitative research design. Furthermore, it explains the data collection methods as well as the research sampling strategy. The study used purposeful sampling i.e. the researcher selected a particular group of participants to explore whether the expected effects of NSNP in Cape Town were achieved. These participants are school principals, teachers, members of school governing body, cooks and one staff member from the Department of Basic Education of the Western Cape. It also discusses data analysis, such as coding, categorizing and thematic analysis, in addition to ethical considerations; confidentiality, anonymity and informed consent. Finally, it explains the limitations; interruptions during the interviews and the non-availability of some participants.

3.2 Definitions of key terms

School principals [SPs]

School principals are the managers who are responsible for the entire management of school activities including the school feeding scheme.

Teacher coordinators [TCs]

These are the educators who are appointed to coordinate the National School Nutrition Programme (NSNP) activities at school level. Their role is focused on following up on the programme implementation, i.e. how efficiently and effectively the programme is implemented.

Members of School Governing Body [SGB]

A school governing body is an integral part of the management of the NSNP. The SGB members are important sources of information, both as parents and as members of the school governing body that manages school matters, including the NSNP.

Food handlers [FHs]

These are the people who are responsible for catering and serving the food to school-going children. They play an important role in an efficient and effective programme implementation. They are often parents who come from local communities. Hence, they provide significant information from the community perspective, i.e. how the local community perceives the role of the NSNP in improving their children's wellbeing.

3.3 Research design

The research design is the complete plan that provides answers to research questions (Sekeran, 2005, cited by Ramadhani, 2014). Babbie and Mouton (2011) define research design as a detailed plan that is used to conduct the study. This research study is based on a qualitative research approach. Cohen et al (2007, p. 415) define a qualitative research approach as “an approach which attempts to understand human behaviour and the meaning people attach to their settings.” Gay (1992) clarifies that this approach allows for more diversified responses as well as the capacity to adapt new developments or issues during the research process. This researcher used this approach to understand the perceptions of the school principals, teacher coordinators, SGB members, food handlers and the official from the Department of Basic Education, regarding the impact of the NSNP in Cape Town.

3.4 Research methodology

The research methodology refers to a scientific way of studying a certain research problem (Babbie and Mouton 2011). Similarly, Rajasekar et al (2013) define it as a complete study of methods by which the knowledge is gained. Creswell (2013) describes it as a means for explaining and understanding the meaning that individuals or groups ascribe to any social problem. Therefore, it can be regarded as an instrument used to understand any social phenomena under study from particular participants' perspectives. This study used semi-structured interviews as well as secondary data to explore the impacts of the NSNP in Cape Town.

The primary advantage of these data collection methods is that it allows the researcher to get in-depth information as well as to provide a comprehensive perception of stakeholders on the theory of change of the NSNP (its nutritional and educational impacts). Similarly, an opportunity is provided to the interviewees to express their views. Yet interviews are not restricted only to the questions that the interviewer has already framed. In other words, other questions might come up during the interviews that would seem relevant to be posed to the participants. Therefore, an interactive face-to-face engagement between the researcher and the participants is required (Dei, 2014). However, Biggam (2008) notes that this approach is time consuming.

3.5 Data collection

As mentioned above, the researcher used individual semi-structured interviews to collect the required information. He made appointments for interviews by sending emails and making phone calls to meet the participants and engage in face-to-face conversations. Longhurst (2010) argues that, "... using semi-structured interviews enables the interviewer to get clarity on responses that may seem vague from the interviewee" (Longhurst, 2010, p. 103).

The advantage of this data collection method is that it assisted the researcher to rephrase and explain specific concepts where responses might have been blurred. However, some scholars such as McMillan and Schumacher (2010) note that there might be a few problems that come with the use of semi-structured interviews. For instance, a participant might be unwilling to give true answers because he/she fears to be judged by an interviewer. Additionally, the interviewee might feel uneasy and adopt avoidance tactics or be reluctant to respond to some questions.

Therefore, to encourage research participants to give relevant information, this interviewer explained to interviewees that there was no right or wrong answer, i.e. all answers would be accepted and appreciated. They were also informed that all responses given during the interviews would be highly considered and recognised.

The interviews were guided through questions the researcher formulated beforehand and that kept him on track. The questions were open-ended as well as close-ended, which encouraged the participants to give in-depth and substantive insights. Although the interviewer tried to avoid 'yes'

or 'no' question-answers, they emerged as follow-up questions from open-ended questions. However, in some instances they were necessary because they provided answers that related to the research question which open-ended questions would not have provided.

The researcher used research tools such as an audio-recorder and note-taking because they provide an appropriate setting for the researcher to fully engage in conversation with research participants (McMillan and Schumacher, 2010). Furthermore, McMillan and Schumacher explain that an audio recording ensures the capture of the entire conversation which assists a researcher to refer to it during his/her data analysis and findings. Thus, audio recording interviews enabled this researcher to freely observe the respondents and he was also able to note the messages expressed through body movements, facial expressions as well as change in tone while the respondents were responding to questions.

Leedy and Ormrod (2010) argue that these body messages would be missed if the researcher focuses on jotting down every piece of information that participants give. Therefore, this researcher realised that relying only on note-taking could have resulted in missing some important information that participants gave. The use of the audio-recorder was primarily necessary to capture in detail every single bit of information in a more reliable way. Thus, specific research sampling that provides in-depth analysis was chosen for purposes of this research.



3.6 Research sampling

McMillan and Schumacher (2006) define research sampling as a representation of a small and unique group of 'rich information' that enables the researcher to clearly understand a certain social phenomenon in-depth. Similarly, Best and Khan (2003) and Kothari (2004) refer to it as a process of obtaining information about the entire population, by examining only a part of it. Therefore the study of sample elements and understanding of properties or criteria makes it possible for us to generalise such criteria or characteristics (Sekaran, 2005).

This study used purposeful sampling, because it enabled the researcher to select participants who would yield most insights on the subject matter that was under investigation (Leedy and Ormrod, 2010). Before the schools and participants were selected, the researcher wrote a letter of

application to the Department of Basic Education of the Western Cape, requesting permission to conduct research in a few local schools in the Western Cape (See Appendix C & D). When the letter of permission was granted, the researcher intentionally selected certain participants, i.e. NSNP stakeholders. That was because they were more likely to have in-depth information on the entire activities of the programme. The participants were invited through formal contacts. Formal emails requesting permission to conduct research at schools were sent and phone calls were also made to school principals and NSNP employees. Furthermore, a formal letter explaining the nature of the research, i.e. the letter outlining the purpose and aims of the study was hand-delivered or emailed to school principals and the Department of Basic Education of the Western Cape (See Appendix C).

The schools from which the participants were invited were from different areas of Cape Town. However, the study did not aim to compare or contrast the programme, but interviewing different stakeholders from different schools and areas could yield richer findings.

3.7 Semi-structured interview

The interview is a mode of data collection. It involves presentation of oral verbal stimuli and reply of oral verbal responses (Kothari, 2004). This study used semi-structured interviews, i.e. the researcher asked questions to interviewees in face-to-face contact. This method was flexible in the sense that in all interviews the researcher started with self-introduction. He explained and assured them that would be no right or wrong answers to the questions being asked. Whatever responses they gave to the researcher, would be acceptable and useful.

That was also eased by the fact that the interviews were conducted in their natural settings, in the schools and offices where participants worked. Each interview lasted 20 to 30 minutes. However, the interviews with some food handlers lasted less than 20 minutes. It could be due to limited questions that were posed to them or they were less confident to expand their responses.

The semi-structured interview method is deemed to be informative. This is because it provides an opportunity to the researcher to deeply and attentively observe physical and facial responses that related to questions asked (Babbie and Mouton, 2011). Moreover, it enables the researcher to

“probe for more specific answers, while at the same time helping the researcher to repeat a question when the response indicated that the respondent misunderstood the questions” (Ramadhani, 2014, p. 19).

Additionally this technique also provides an opportunity to observe non-verbal behaviour of the participants during the interviews and on the field (Ellia, 2017). In other words, the researcher learns aspects that some participants might be unwilling to discuss in an interview, or they might feel uncomfortable to share some information which may reflect badly on them. That was shown by one of the research participants (FH) that the researcher interviewed. The interviewer asked her whether the food sometimes got lost or went missing. Her reply was, “No, never”, with her face going pale and the researcher assumed that it was expressing, “How could you ask that question?”

However, when the researcher asked the same question of a teacher coordinator of the same school in a separate interview setting, she responded, “We sometimes get reports that the food is getting lost or missing but we never had evidence. We pack them in the boxes then we find two or three boxes are missing.” In those two different interview settings and responses, the researcher observed different non-verbal behaviours and facial expressions that made him suspicious about the efficient monitoring of food in schools. It might also indicate the existence of some elements of corruption.

However, the disadvantage of this method, as mentioned earlier, is that it is time consuming. The researcher is expected to spend long periods of time in the field site. Hence, it is not practical for most applied research studies, which usually require a short period of data collection. It might also be challenging for the researcher to write down every piece of information.

It therefore requires the researcher’s memory and personal discipline to write down and expand the non-verbal behaviour. In this case the memory might quickly fade and it could lead to loss or inaccurate recording of data. It might also lead to objective or subjective findings. In other words, reporting or describing what a researcher has observed might be more objective than interpreting what he has observed (subjective).

3.8 Data analysis

The data was analysed using qualitative data analysis methods. Creswell (2013) notes that data analysis is a process whereby the researcher prepares and organises the information for analysis, then reduces the information into themes. It could be through a method of condensing the codes and finally representing the information in a form of discussion, tables or figures. Similarly, McMillan and Schumacher define qualitative data analysis as “a systematic process of coding, categorising and interpreting data to provide explanation of a single phenomenon of interest” (McMillan and Schumacher, 2010, p. 367, cited by Nsibande, 2016).

Therefore, the data of this study was accurately and carefully analysed through thematic analysis, nutrition and education benefits of the NSNP as well as its challenges.

3.9 Ethical considerations

The researcher applied for ethical clearance from the Faculty of Economic and Management Sciences at the University of the Western Cape to conduct the study. He also applied for the letter of permission to the Department of Basic Education of the Western Cape to carry out the research in a few local schools in Cape Town. A letter was also written to school principals requesting permission to conduct the study in the schools.

It was previously stated that the researcher sent emails and made phone calls to further clarify the purpose and objectives of the study. He informed the rest of the study participants verbally and in written form. The written form also clarified that their participation would be voluntary, the responses they gave would be kept confidential and personal information would not be revealed. Similarly, they had the right to withdraw from the participation at any given time with no adverse effects.

In a similar vein, confidentiality was ensured, which is the way in which a researcher respects the participants’ right to privacy. This aspect ensures that no one has access to participants’ information, except the researcher.

Furthermore, anonymity was assured. In other words, the participants were assured that what they said, could not be directly traced back to them. In this regard, McMillan and Schumacher (2010)

postulate that anonymous data is the data that does not show a link between what was said and who said it. In an attempt to ensure anonymity, the researcher did not use research participants' real names in the data analysis. He used pseudonyms when referring to the study participants. For instance, SP was used for school principal, TC was used for teacher coordinator, SGB was used for the member of a school governing body and FH was used for food handler.

In a similar vein, informed consent was sought. In other words, the participants were informed that they were invited and not forced to participate in the study.

3.10 Limitations of the study

According to Kombo and Tromp (2006), this is the section that indicates the constraints expected or faced by the researcher during the study. This researcher faced challenges in interviewing NSNP employees. Many emails were sent to them explaining the purpose and objectives of the study and how vital their participation was in the project. However, only one NSNP employee responded, explaining that he had been newly appointed and had limited information about the programme. His response was, "Dear Mr Sanousi, I hope you are well too. Unfortunately I am not in a position to help you with your research since I am a new appointee on this job, I am just a month in this job. I hope the person who referred you to me will find another person to help you. Kind regards."

This indicates that the person might have been unwilling to participate in the study, due to the sensitivity of the programme in the Western Cape or he/she had inadequate information, as he indicated. I kept emailing NSNP staff but there were no answers. Alternatively, I interviewed one official from the Department of Basic Education of the Western Cape.

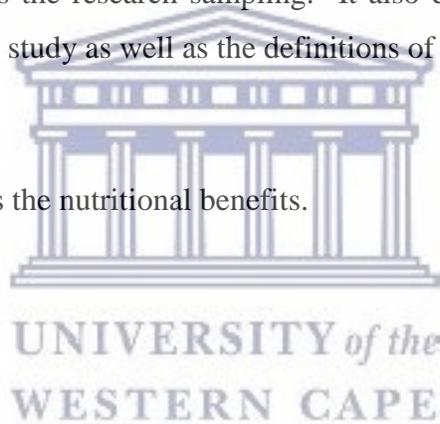
Another challenge was that while interviewing some principals in their offices, there were frequent interruptions whereby the principals would have to respond to telephone calls or answer some enquiries that secretaries brought into the office. Those interruptions resulted in the principals struggling to recapture their trend of thoughts on a particular point that had been the matter of discussion. Additionally, one participant was rushing to the class stating, "I hope your interview won't take a long time because I have a class." However, the participant gave sufficient information in that limited time.

A language barrier was also experienced. One participant was unable to speak in English and neither could the researcher speak her language. Hence, a language assistant was appointed for limited hours. This may have caused some important aspects of her inputs not having been captured in the translation. Another challenge was the use of only the qualitative method, therefore no rigorous impact assessment was possible, only indicative findings. Despite these limitations, the researcher was not deterred from collecting the required information.

3.11 Conclusion

This chapter discussed the research design and methods that were used to collect the data. It thoroughly provided justifications for the choice of research design, data collection methods, semi-structured interviews as well as the research sampling. It also discussed data analysis, ethical consideration, limitations of the study as well as the definitions of key terms.

The following chapter discusses the nutritional benefits.



CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION; Nutritional benefits

4.1 Introduction

It was discussed in detail in chapter two that initially the NSNP was designed to improve the nutritional status of school-going children. Subsequently, its aim shifted from nutrition impact to hunger alleviation. This was because the Department of Health which was housing the NSNP had faced constraints in monitoring and evaluation to measure whether children's nutrition had improved. The programme is currently under the custodianship of the Department of Basic Education (Bastia, 2007).

This chapter discusses the first domain of this study, which is observed nutritional benefits of the National School Nutrition Programme (NSNP). It looks at the nutrition impact – not necessarily stunting, overweight etc. but the reduction of short-term hunger and the energy that school meals gave to learners. Furthermore, the chapter presents the challenges of the programme such as problems of food quality, delays in delivery and the quintile system. It is the system that the Department of Basic Education uses to classify schools that can qualify for the NSNP. School 1, 2 and 3 are classified as poor schools, whereas school 4 and 5 are listed as non-poor schools. The chapter also provides possible solutions to the problems that were identified.

4.2 Nutrition function

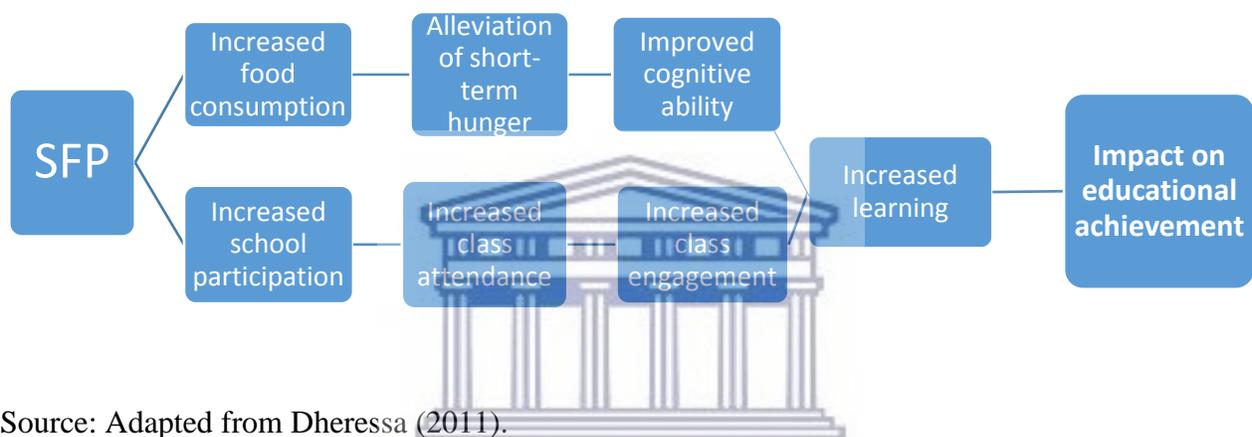
It is shown in chapter two that, one of the key objectives of the school feeding scheme theory of change is to enhance learners' nutrition, which will assist learners to actively participate in class. Therefore, as it has explained in the menu that, the NSNP in the Western Cape provides five cooked meals which contain protein, starch, vitamins and carbohydrate.

Thus the synergy between nutrition and education can be generally perceived in three causal pathways. First, nutrition and health influence the children's learning ability and their academic performance. In other words, poor nutrition among school-going children affects their cognitive function, hence it reduces their ability to participate fully in learning activities at school. Second,

school-going children who are malnourished, are unable to attend school regularly and they perform poorly in exams. Third, hungry school-going children encounter challenges to concentrate and perform complex tasks compared to well-nourished ones (Kazianga et al, 2012).

In sum, the following figure demonstrates causal pathways through which SFP may improve children’s nutrition and enhance their learning activities, class participation and academic performance.

Figure 2: Potential impacts of a school feeding programme



Source: Adapted from Dheressa (2011).



4.3 Observed impacts

Many research participants have indicated that there were some behaviour changes in classrooms among learners who received food. In other words, after meals were served, learners were observed to be more engaging, concentrating better and were more attentive in class. The programme was also observed to eliminate some negative class behaviours (such as fighting over food). Additionally, it also functioned as an additional meal to some poor children.

A member of the School Governing Body (SGB) who is also a parent of two learners at the same school was asked what she observed when children consumed food. She reported that, “... children are now happier and outgoing...they are interacting and not lazy anymore...they are more vibrant...sometimes they are out of control and giving the teachers trouble in class.” This point is

also supported by the school principal and he observed, “If children are hungry, they feel tired, they yawn, feel sleepy and don’t concentrate in class.”

Moreover, a school teacher explained, “...yesterday there was a child in my class, she said she was hungry and I could see that she was lazy...lying on the table and she didn’t want to do her work. Just after we had food, she started working. If they don’t eat, I hear my stomach is paining.”

Another school principal observed, “Children who have not had a meal/breakfast in the morning, are a bit slow in the class...this is my own experiences as a teacher, but after they had meal, I can see that they are able to do their work in class. I can also see better participation; they are more awake and satisfied. I could see that in their eyes.” A similar point is also made by a food handler, who reported, “You cannot teach a hungry child; they cannot sit and listen to you in the class. So if the tummy is full, they pay attention; so no attention if they are hungry.”

Therefore, it is clear that the first observed impact of the NSNP is that learners who received school meals, were concentrating, participating and attentive in class. A similar impact was indicated by the study done by Berg (2011) (chapter two) in the Western Cape that, there are better chances of class participation and performance after learners have received meals.

The second impact that was observed was that the programme eliminated some negative class behaviour, such as no more fighting over food. Sometimes learners fight if they see that some of their classmates have food and they do not have any.

The school principal commented, “If there is fighting among each other, maybe because some learners have something to eat and others don’t have and it results in fights especially during break periods, they see someone is eating his/her sandwich and they don’t have, they just jump and grab someone’s food. So we received many cases of fighting in our offices and when we asked them they told us that they fought because they were hungry. So the programme eliminates these types of behaviours in the school.”

These observations align with similar findings that are shown in a study conducted by the Public Service Commission (2008) in Limpopo and Eastern Cape. It found that well-fed learners developed healthy and vibrant minds. It also indicated that the programme eliminated some negative behaviour in class, which enhances class performance.

The third impact that was noticed was that the NSNP did not only help learners to do their schoolwork in class but it sometimes functioned as an additional meal to many poor families. In other words, the programme contributes to household food security especially to the families who do not have sufficient food at home. An SGB member said, “My children are not nagging at home anymore – that ‘Mummy, mummy, we are hungry, we need food’ – sometimes they even bring bread home.” A food handler noted, “The extra food is given to the needy ones, to take it home.”

It is plausible to sum up that the above observations indicate a periodic impact of school meals. In other words, the programme helps learners to get energy and not to sleep in class. It also eliminates negative class behaviour as well as functioning as additional meals. Hence, it could validate the theory of change, i.e. the immediate behavioural change in class after a meal has been received.

However, the programme also has many limitations that could undermine the nutrition impact of the programme and these limitations need to be thoroughly addressed. As indicated earlier in chapter two, regarding the theory of change, the SFP’s limitations could be either because the theory of change is flawed or is related to implementation issues.

One limitation which is related to implementation is that the NSNP is not continuous. It provides meals for only five days a week, i.e. Saturdays, Sundays and holidays are not included and supplies might also be interrupted or inadequate even during school terms. Bundy et al (2009) argue that since the programme is not continuous, it may not improve the nutritional status of learners.

Moreover, the WFP (2008) asserts that the nutrition deficits in the first 1000 days of life have permanent consequences for physical and cognitive development. Thus it could be argued that the feeding scheme intervenes too late to reverse the damage done by maternal and early childhood malnutrition, except to a marginal extent.

A school teacher commented, “You can see after the school holiday, some children come back to school looking really very thin and run down. I have noticed that in previous years, among many children, and you will see things going well again during the school period.” A food handler supported this view and stated that, “In the beginning of the year, they were very thin, but now you could see them shining. I noticed as a parent, this one when he came to school, he was thin and drawn, but now he is shining because I put a lot of vegetables in the food. This plate they get at school is very nutritious.”

The same food handler was asked if the children like the food. She responded, “Yes, children enjoy the food very well, you can see when they are eating, they shake and move their legs. They really like the food because it is tasty, warm and smells nice and also because it’s a different menu every day.” A school principal added, “The learners enjoy the food. I have a problem with some learners – they’re always crowding the kitchen in the afternoon, looking for leftover food.”

In chapter two, Bundy et al (2009) argued that children’s nutrition improvement does not only depend on the provision of school meals but also on other factors, such as sanitation, clean drinking water, eating of healthy food, etc. But the programme does have short-term impacts, e.g. it alleviates short-term hunger, provides energy to learners that helps them to actively participate in learning.

Similarly Ellia (2017), Devereux and Roelen (2015) and Bundy et al (2009) argued in chapter two that, SFP alone without considering other related factors, is inadequate to improve the nutritional status of school-going children. These factors, among others, are food quality and quantity, food safety and sanitation.

A school principal was asked if she had experienced any problems of food quality in her school and she stated, “Yes, food quality becomes a problem. Sometimes, like two weeks ago, the coordinator of the NSNP phoned to ask us to check the quality of the samp² that we received, because some schools had phoned him already, complaining about the quality of the samp.”

The same school principal added, “I remember in 2015 we had to stop the cooking, and we had to change to the sandwich programme. The company that had the tender to deliver bread, peanut butter and jam for us ... the quality of bread was bad and became a problem...yoooh...yoooh, sometimes the bread was baked with cockroaches in it!”

Similarly, a food handler observed, “The problem is that sometimes they supply us with cheaper food which is not of a good quality, like rice or soya, it is not nice. Our learners tell us that the food does not taste nice and they eat less. The learners come to us and complain about food, they know exactly when it tastes different. They ask, ‘What’s wrong with the food today?’ This shows

² Samp: dried corn kernels.

that they supplied us with the wrong quality. Sometimes they also don't supply us with fresh fruits and vegetables

Another food handler of a different school said, "Sometimes we don't get what we need or what is required; sometimes we get a different quality and quantity of food."

One school had also experienced delays in food delivery. A school principal said, "The only problem that we experienced here, since I came, was two weeks ago, when the delivery was not made on the promised date. There was a little bit of a rushed situation and delay, because they needed food for the next day." At the same school, a food handler explained, "There was a delay in the delivery and when we reported the problem, the food was immediately delivered. There was an incident where, for the whole week, there was no food and the school bought bread from its own resources. So the principal had to buy food from school resources, and this was caused by the delay in delivery. She added, "They told us the truck was on the way, but it never came. They said the truck had been delayed but we didn't understand. So the children were given just bread, bread, bread for whole week and there was nothing to add to the bread."

The argument is that if the required quality of food is not delivered or the delivery is not made on the required date, it makes it difficult to observe the desired impact (nutrition and cognitive). This is because they eat smaller amounts of food and it could not be nutritious as well, if the food is not supplied regularly.

Another issue that also affects nutrition improvement is the amount of food that is consumed by learners. It has previously been shown that if learners are served with inadequate quantities of food, it could undermine the desired nutrition ends. Sometimes that food reduction might be caused by the people who are involved in the programme.

A school teacher who was also a programme coordinator commented, "Sometimes food gets lost. We saw the other day that the food in the store-room was missing; the cook always finds something missing, but we never saw any proof." At the same school, a member of the SGB also added, "We hear a lot of stories about food items taken to home and sold in neighbourhoods, but we have never seen it and I asked people to bring us the proof, but they never brought any proof that shows that food is missing or stolen."

Another challenge that can also reduce the food amount and undermine nutrition improvement is the size of food gardens in schools. Production of food in school gardens is the third component of the NSNP (Department of Basic Education, 2014). However, many schools that the researcher visited, found that their gardens are not sufficient or poorly maintained to produce adequate food that can supplement the main meals.

A school principal asserted, “Our food garden stopped because of water restrictions that we have, it’s not well done. I mean, it has not completely stopped but it’s on small scale now.” Likewise, a school teacher who is also an SGB member, added, “There is a food garden, but it does not produce sufficient food, it might be sufficient for a particular meal that is cooked for that day, because it’s a small garden.” Another school principal made a similar argument and he stated, “We have a garden, but it’s not very successful, it produces limited food; in my opinion it’s not worthwhile. This is because the soil is very poor and now with the water restrictions it will be worse.”

Another factor that can also exclude poor learners from nutrition wellbeing is the targeting approach. The Western Cape Province uses a quintile system (it is defined in chapter two) to target needy schools. However, it was found that this system excludes some poor children from receiving the school meals, because they attend schools that are classified as quintiles 4 and 5, which are not considered as poor schools. Therefore, this study suggests that this targeting system must be reviewed.

A school principal commented, “Our school is in a predominantly white area, but there is not a single white child in this school. It’s unfair that we have been classified as quintile 5 comparing us with schools in Rondebosch, Newlands, Claremont and other rich areas. We should be reclassified to quintile 3 because most of our learners come from areas such as Khayelitsha, Gugulethu, Langa and Philippi. I even talked to some officials from the Department of Basic Education last year to reconsider the classification of our school.”

A teacher from the same school observed, “I do think that our school should be reclassified as quintile 3, because there were times school fees were not paid regularly. If we are in quintile 3, we would get more resources to help our poor children. Quintile 3 will be highly subsidised and we will get more attention from the government. We are classified as the same schools in Rondebosch,

Newlands and other rich areas; these children are definitely not the same in terms of family background.”

A different school principal whose school is classified as quintile 3 also explained that she needs her school to be reclassified to quintile 2 or 1, because it has more poor children from different areas. She asserted, “I think it will be a brilliant idea to be reclassified, because there are many learners coming from poor areas. Our learners are not only from the area where the school is located, but from much poorer areas as well.”

A participant from the Department of Basic Education of the Western Cape indicated, “The quintile system has its value, but recently we have realised that there are some problems attached to the quintile system. Therefore, it’s under review at the moment. You will find that some schools in Mitchell’s Plain and Retreat are quintile 5 schools, but the average salary of parents are R3000 to R8000 a month. It is a contradiction and that is why it’s under review.”

The above arguments may suggest that the classification of poor schools should not only be based on location and school resources, but it should rather be based on the social background of learners, the level of family income and living environment or the combination of both (school resources and location and social background of learners). This is because many learners could be living in much poorer areas compared to where their schools are located. In other words, children might be living in poor areas but they are attending schools that are located in rich areas. The review of quintile system, by considering more criteria, will expand its coverage, i.e. many school children from poor families will receive school meals.

4.4 Conclusion

As it has shown in chapter two that, a well-designed SFP should be reflected in improved cognitive, improved stunting level and improved overweight. However, this study was not designed to measure the abovementioned anthropometric measures, but it has found that the NSNP in Town Cape has some positive impact on hunger alleviation.

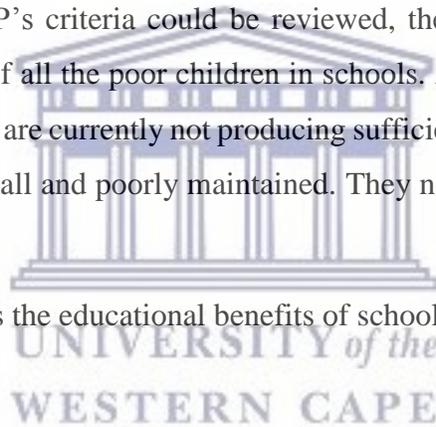
This study observed that the programme reduced short-term hunger and gave learners energy, which assisted their concentration in class. Further, it helped them to participate not only in class

but also in other school activities. It also eliminated some negative class behaviour, as well as functioning as an additional meal to many poor children.

Although some positive impacts have been observed, the programme may not improve learners' nutrition without addressing a number of other challenges, such as the problem of implementation, food quality and quantity and delays in delivery. This study has found that in some schools, the right quality of food was not delivered. So if the right quality of food is not provided, there might not be good chances of children's nutrition improving and it may even cause diseases in learners. Therefore, adequate food quality and quantity needs to be delivered in order to achieve the intended nutritional impacts. The issue of delays in food delivery also needs to be addressed.

Another challenge is the issue of the targeting system (quintile system). This system, as suggested by many respondents, needs to be reviewed, because it excludes some poor learners from the programme benefits. If the SFP's criteria could be reviewed, there would be a high chance of covering the nutritional needs of all the poor children in schools. A further area of improvement, is food gardens at schools. They are currently not producing sufficient food to supplement the main meals because they are very small and poorly maintained. They need to be expanded, with better resources.

The following chapter discusses the educational benefits of school meals in Cape Town.



CHAPTER FIVE

DATA ANALYSIS AND DISCUSSION; Educational benefits

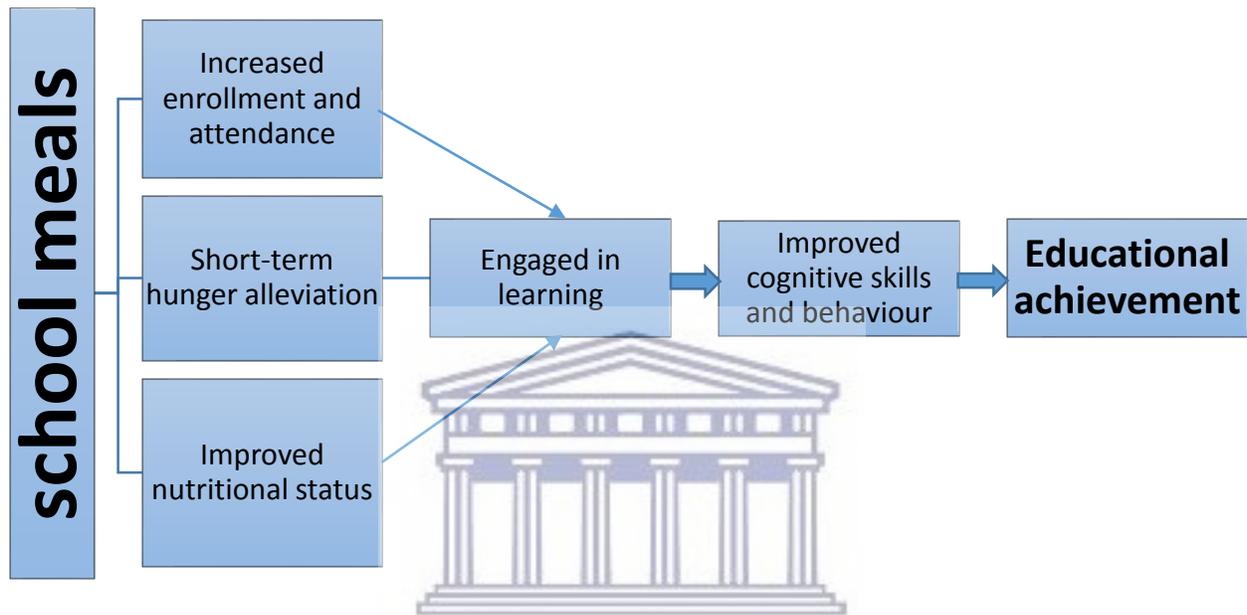
5.1 Introduction

The National School Nutrition Programme (NSNP) shows that, the key objectives of the SFP theory of change, is educational achievement (DPME and DBE, 2016). It was shown in chapter two that, the simplest way to find out whether the SFP has improved the educational achievement is by assessing certain indicators pre- and post-intervention, such as enrolment rates, pass and failure rates as well as the reduction of absenteeism or dropout rates. Thus, any net difference in these indicators between treatment and control groups will be assumed as an impact of programme intervention (Devereux and Roelen, 2015). It is also possible that, Ahmed (2004) explains, educational achievement may not improve because of other unrelated factors. A SFP increases the demand for education, but it does not improve the supply side, notably the quality of education. A SFP could even have a negative impact on educational outcomes, either by distracting teachers away from teaching or by causing class sizes to increase and learner/teacher ratios to increase above 40 or 50. This chapter discusses the second domain of this study, which is observed educational benefits of the National School Nutrition Programme (NSNP), such as increased school attendance and participation and possibly improved performance.

It's mentioned in chapter two that, one of potential impacts of school meals is to increase learners' educational performance in order to improve their potential future productivity and income. According to Lawson (2012), improved educational achievement occurs through three causal pathways, as shown in Figure 3 below. Firstly, school meals increase school enrollment and attendance by lowering the opportunity costs of attending school. More time is spent in school and towards learning skills of reading, writing, etc. The second pathway is through the alleviation of short-term hunger which improves learners' cognitive functioning and attention span. The third pathway is through the improved nutritional status of learners, for instance, by providing them with added calories and nutrients to supplement their regular diet. Buttenheim et al (2011) explain that this will lead to better health and increased resistance to infection of diseases that can keep children away from attending classes.

It could therefore be argued, as it's explained in chapter four that, there is a synergy between nutrition and educational achievement. In other words, nutrition indirectly improves educational performance by increasing school attendance and participation in class. The following figure shows the relationship between school meals and their potential educational impact.

Figure 3: Relationship between school meals and potential educational achievement.



Source: Adapted from Lawson (2012).



5.2 Observed impacts

In terms of the educational domain, the study has found some positive impacts, especially in school attendance, class concentration and possibly improved learner performance.

With regard to increased attendance, one SGB member observed, “Now all kids in the neighbourhood are at school; no child walks and begs on the streets.” A school teacher who was also a programme coordinator, was asked what the indicators of a successful programme were. She noted, “The attendance of the children at school, because if there is food, more children will come to school, because they know that there is food.” A school principal added, “Our success indicator is that attendance at school is much better, especially during the winter time. Kids will come early

in the morning and stay in the class, because they know that there will be a good meal. So, good attendance and better results show that the programme is successful.” Similarly, it was found that parents were encouraged to send their children to school because of the availability of good food. A different school principal explained, “There are children from other areas, but parents send their children to our school because we feed them better.” Another school principal noted, “The parents are very happy with our programme. They send the learners to school earlier, because they don’t want them to miss the breakfast.”

An official from the Department of Basic Education of the Western Cape explained that the school attendance has improved. The ultimate goal of the programme is to improve the academic performance. He noted, “The programme is trying to achieve two things, firstly to provide nutrition to poor children, because there is a relation between nutrition and cognitive development. We are also trying to keep poor children in school. So the food is an incentive as well. Ultimately we want to improve our educational outcomes; the overall outcome is that we have achieved improved attendance at schools. We are currently looking at the performance and whether it made a difference.”

This is clear evidence that some children were not able to attend classes because of food shortages at home. This validates the argument made by Oganga (2013) that school meals function as a ‘magnet’ that attracts school children to attend schools and consistently stay there. The same argument is supported by Nsibandé (2016) who asserts that school meals were the main inducements for many children to attend school.

In terms of concentration, a school principal commented, “If you have children who did not eat, they tend not to concentrate in the class. Our goal is to have well-nourished children and then they can absorb the information.” In the same vein, a teacher noted, “From an educational perspective, you cannot teach hungry children; they cannot concentrate; some of them will be quiet and not participate in class. They are not there, they sit there but their attention is not there and some of them get sick, telling me they are tired.”

Similarly, a teacher who was also a member of SGB was asked, what the impacts of the programme were. He responded, “The impact is on both aspects, education and nutrition. It is like you cannot

learn on an empty stomach, so the sooner the learners are fed, the better they can absorb whatever they are taught in the class. Also, the level of absenteeism has dropped.”

A different school principal stated, “When you have something in the stomach, you concentrate more. When our children have food, they participate better, because there is something in their stomachs.”

This point was also emphasised by another school teacher who was also an SGB member. She reported, “I can see that the benefits of food is that a good job is done in class, and there is better class participation and more ability to understand the work taught in class.” Similar evidence (chapter two) was found in the study conducted by Hochfeld et al (2016) in Alexandra, Johannesburg.

As previously shown, the NSNP has improved school attendance, class concentration and participation. Some participants have also indicated that the programme had improved learners’ performance in the exams, but some had not noticed that improvement.

A school principal explained, “The perspective is that our result must also show some of the improvement, which we have noticed. There are both nutritional and educational improvement.” In the same vein, a different school principal added, “When we started the cooking programme, the result went up, because now they are more energetic than before, some of them are more vibrant and participating.” Another school principal reported, “Our school was in a lower result level in school systems, but now it is much better.” A different school principal also added, “The attendance is really good and the results are also showing some improvements.”

However, a teacher who was also an SGB member explained, “I have not really noticed the impact on results, other than perhaps better class performance of children who had a meal. I can see that the benefit of food is that a good job is done in class, there is better class participation and an increased ability to understand the work taught in class.”

A similar view was also noted by the Department of Basic Education of the Western Cape. The participant indicated, “What we have achieved is that our school attendance has improved, but whether the result has improved, we have no clear evidence. We have not done a thorough investigation to show that.”

When the researcher asked some participants whether the NSNP was designed to achieve nutritional or educational impacts, a school principal responded, “The programme is trying to improve both nutritional and educational outcomes as well as other social values that have been embedded into programme. For example, we tell our learners to pray before they eat and not to talk while they are eating.” A school teacher who was also a programme coordinator explained, “I think the programme is trying to feed children who don’t have food at home. A child cannot learn if he or she is hungry. If children are hungry, you get nothing out of them. They cannot concentrate, cannot work and they won’t have energy. So I think the programme is trying to achieve nutritional outcomes.” This synergy was reiterated by the member of an SGB, and she stated, “Food helps learners to concentrate in class. You cannot think or learn on an empty stomach. So the programme is trying to keep the stomach full, so that mind can work and focus in class. It’s kind of 50/50.”

However, Bundy et al (2009) argued in chapter two that, a school feeding scheme is a major factor in most developing countries, for increased school attendance and better class participation, but school meals alone without supplementing them with internal factors (such as quality of teaching, availability of text books, etc.) are unlikely to improve educational outcomes. In other words, helping children to be available to learn, will not enhance educational achievement unless it is matched by the delivery of quality education.

Similar arguments have been made by Ahmed (2004) and Devereux and Roelen (2015), that increasing the demand for education without investing in the supply side, could even create a negative synergy. For instance, if there are insufficient teachers or teachers are not well trained, then increased enrolment (positive impact) might not result in improved performance in final exams (negative impact). Hence, it is important to note that school meals often precipitate a surge in attendance and they can undermine the quality of education if the learner-to-teacher ratio is above optimal levels.

5.3 Conclusion

In sum, the findings have shown that the NSNP in Cape Town has increased school attendance, improved class participation and concentration and possibly the improvement in learner performance. However, some respondents have acknowledged the improved school attendance

and class participation but not the learner performance. This is because, as previously mentioned, the learner performance does not depend solely on the provision of school meals, but on other factors as well.

Therefore, it could be argued that the programme addresses some educational aspects, such as bringing more children to school and helping them to learn and participate in class. Hence, these factors could be evidence for some elements of the NSNP theory of change. Nevertheless, it could not be assumed that the programme alone without supplementary supply-side would improve learner performance.

The following chapter presents the summary, conclusion, limitation and recommendations of the study.



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CHAPTER SIX

SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents the summary of the study; the purpose, the objectives, research design, sampling, method of data collection and analysis as well as the theory of change. It also provides conclusions on observed nutritional and educational impacts as well as the limitations of the study. The chapter also provides recommendations, i.e. what should be done to improve the NSNP in Cape Town in order to achieve the desired impacts.

6.2 Summary of the study

The purpose of this study was to explore whether the expected impacts of the National School Nutrition Programme (NSNP) on nutrition and education have been achieved.

The study used the theory of change to investigate the general perceptions on the observed nutritional and educational impacts. In other words, did the NSNP in Cape Town achieve the desired impacts?

The study was guided by four objectives. First, was to find out whether the expected impacts of the NSNP were achieved or not. Second, was to identify factors that might have inhibited the desired impacts of the NSNP. Third, was to provide a general understanding, guidance and recommendations that might be useful for policy makers, programme administrators and institutions of child development. Fourth, was to identify the areas that may require further impact assessments.

The study involved a qualitative research design. The data was collected using semi-structured interviews. Note-taking and observation of non-verbal behaviour techniques were also used to capture some relevant information. The target population involved in the study included a sample of 4 school principals, 4 teacher coordinators, 4 food handlers, 4 SGB members and one staff member from the Department of Basic Education of the Western Cape. These categories were selected using purposive sampling techniques, because the researcher assumed that they were the

most relevant groups that have the required information. The data was analysed using categorisation of themes around two domains, namely nutrition and education.

Regarding nutritional benefits, this study has no evidence to determine whether there has been an improvement in anthropometry measurements (stunting, overweight, underweight, etc.), but the findings show that the NSNP in Cape Town has some positive impact on hunger alleviation. It reduced short-term hunger and gave learners energy that assisted them to learn, helped them to concentrate and participate not only in class but also in other school activities. It also eliminated some negative class behaviours (such as no fights over food in class). It also functioned as a substitute meal to many poor children.

On the educational domain, the study has not tested the final grades or pass/failure rates of the learners to determine their academic performance in final exams. However, the results showed that some participants believed that the NSNP in Cape Town had enhanced school attendance, class participation and possibly improvement in learner performance, while other participants noticed the improved school attendance and class participation but not the learner performance. That could be because the learner performance does not depend only on the provision of school meals, but on other factors as well, such as the quality of teaching, learning materials, etc.

Despite the positive impacts that the programme has shown, some implementation challenges were also uncovered that appeared to undermine the desired impacts of the programme. Those challenges include, the food quality and quantity and delays in food delivery. Some schools had reported that the required quality and quantity of food had not been delivered. It could therefore be argued that if the required quality and quantity of food is not provided, there might not be good chances of children's nutritional improvement and it may even cause diseases in learners. Similarly, the delay in food delivery, the study showed, resulted in some irregularity in food services and menu substitution.

The issue of the targeting system (the quintile system) was also raised and needs to be addressed. The data has shown that the current targeting system was found to be excluding some poor learners from programme benefits. This could be due to the criteria that are used to classify or target schools, only considering school location and its resources, instead of taking into account the learners' social context, including household income survey and living environment, or a

combination of both. Another challenge that was also raised, was that of food gardens. The participants explained that those gardens were not producing sufficient food to supplement the main meal because they were very small and poorly maintained.

6.3 Limitations

Firstly, this study was conducted on a small scale and included a total of four schools. In each school, four participants were interviewed plus one participant from the Department of Basic Education of the Western Cape. The findings of this study therefore cannot be generalised to the entire Cape Town.

Secondly, the study has only used qualitative methods. It can therefore be assumed that the qualitative responses might be biased or subjective. In other words, they might not reflect the exact impact of the programme. This could also be that some participants might have been influenced by the culture of worrying that if they said something negative about the programme, they may lose their jobs.

Thirdly, the study did not test the anthropometry measurements or pass rates and dropout rates, because these measurements will determine the statistical net-difference of the programme, such as the nutrition impact on treatment groups or changes observed after the programme intervention.

Fourthly, the resources and time also limited this study, i.e. the study was done in only four schools, with limited time. Consequently, limited resources affected the time spent in the field, time of reviewing literature, interviews and selection of the participants. This might have affected the study findings.

While the study has not provided generalised findings, it nevertheless provided insights on the benefits of the NSNP in Cape Town. In other words, the study found that the programme has reduced short-term hunger, given energy to learners that enabled them not to sleep or yawn in class. It also increased school attendance and participation not only in class but also in other school activities.

6.4 Recommendations

- The study strongly recommends that a well-designed monitoring system be put in place to ensure that the required quality and quantity of food is delivered and served to the learners. This may create better chances of nutrition improvement of learners.
- The targeting system (the quintile system) needs to be reviewed, by not only looking at the school location and resources, but also considering the learners' social context, i.e. household income, living environment, etc. That would guarantee that a larger number of poor learners receive the programme benefits.
- The food gardens require expansion, improved resources and better maintenance, in order to produce sufficient food to supplement the schools' main meals.
- There is an urgent need for further studies that rigorously evaluate the impact of the NSNP in Cape Town, using mixed methods. This is because there is no rigorous impact evaluation that has been conducted, that the researcher is aware of. Hence it could be assumed that what the NSNP is trying to achieve or has achieved, is hardly known. These studies are therefore expected to explore the possible impacts and identify the challenges that may undermine the nutritional and educational impact. The findings of this study are therefore hinting at the need for rigorous evaluation. That is because this was a qualitative study, without rigorous data. However, it has shed some light on some achievements that the programme has achieved, but it also identified the challenges that undermine the required impacts. Hence, what is lacking is an impact evaluation that actually shows what the impacts are. It could be similar to Hochfeld et al's (2016) study which evaluated the impacts of the Tiger Brands Foundation Breakfast Programme.

A future possible research question could be, how to achieve the best impacts on the nutritional and educational status of school-going children. One approach could be to reconsider all the other aspects that have been neglected, such as the enhancement of school gardens, the review of the quintile targeting system, the improvement of both the quality and quantity of food, and the provision of better learning resources.

6.5 Conclusion

As it has shown in chapter two that, the theory of change of SPF is to enhance the nutritional status of the school-going children, i.e. to reduce stunting, overweight, etc. and to enhance educational performance (to improve exam results).

On the other hand, the National School Nutrition Programme (NSNP) is designed to provide nutritious meals to the learners, which will enable them to actively participate in learning, to promote nutrition education and healthy food choices as well as to improve food production, natural resource protection and school meals.

Some studies (chapter two) have argued that if the desired impacts have not been achieved, this could be attributed to either the theory of change being flawed or due to implementation problems, such as the programme may not improve nutrition impacts without improving the supply side, for instance, hygiene, food quality, etc. On the educational side, the programme may also not improve educational performance without investing in the supply side, e.g. quality of teaching, availability of textbooks, conducive learning environment, etc.

However, evidence (chapter two) are quite mixed. Some sources show that the programme improves school attendance, class participation and concentration, but not the learner performance and that is because of the supply side. Sometimes there is improved learner performance.

On the nutrition side, it has also shown that the programme may not improve the nutrition of the learners, apart from reducing short-term hunger. However, some evidence (literature review chapter) from Graham et al (2015) and Hochfeld et al (2016) has shown that the programme reduced stunting levels, such as moving from severe stunting to stunting.

This study has found some qualitative evidence of improved food security, i.e. the alleviation of short-term hunger, but not necessarily nutrition. It also found some evidence of the improved performance that supports what Hochfeld et al (2016) and other scholars have found, such as, the programme improved school attendance, class participation and concentration as well as learner performance. However, on learner performance, the evidence is quite mixed, i.e. some show improvement while others do not.

Thus, it could be concluded that some studies show that the programme improves the nutrition and education of the learners. Others argue that the improvement may not be possible without investing in the supply side. Therefore, there is a necessity to understand the differences and why these differences occur. It is also essential to determine if this because of the theory of change being flawed or if there are other challenges of the implementation design.



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REFERENCES

- Adair, M., Keylock, J. and Berger, C., 2017. *Decentralized evaluation: Mid-term evaluation of McGovern-Dole-supported school feeding programme in Lao PDR*. Laos: World Food Programme.
- Adroque, C. and Orlicki, M., 2013. *Do in-school feeding programmes have impact on academic performance and dropouts? The case study of public Argentine schools*. Buenos Aires: University of San Andres-Conicet Argentina. Available at www.epaa.asu.edu/ojs/articles. Accessed on 23 March 2017.
- Ahmed, A., 2002. *Food for education programme in Bangladesh*. International Food Policy Research Institute (IFPRI). Available at www.researchgate.net. Accessed on 27 October 2017.
- Ahmed, A., 2004. *Impact of feeding children in school: Evidence from Bangladesh*. Commissioned by the United Nations University. Washington DC: International Food Policy Research Institute (IFPRI).
- Ahmed, A. and Babu, S., 2007. *The impact of food for education programs in Bangladesh*. Available at www.ifpri.org. Accessed on 27 October 2018.
- Asia-Pacific Economic Cooperation (APEC), 2012. *Research school feeding in APEC economies*. Singapore: APEC Subcommittee on Standards and Conformance, Ministry of Agriculture of Russia and Social and Industrial Food Service Institute, Russia.
- Babbie, E. and Mouton, J., 2011. *The practice of social research*. Cape Town: Oxford University Press.
- Bastia, T., 2007. *A desk review of the national school nutrition program: World Food Programme's home-grown school feeding project*. School of City and Regional Planning, Cardiff City: Cardiff University.
- Berg, S., 2011. *The national school nutritional programme and its effects on schooling for farm workers in South Africa*. Stockholm: Sweden University.
- Best, J. and Khan, V., 2003. *Research in education* (9th Ed). Boston: Allyn and Bacon.

- Biggam, J., 2008. *Succeeding with your Master's dissertation*. London: Open University Press.
- Botswana Institute of Development Policy Analysis, 2013. *Botswana National Primary School Feeding Programme: A case study*. Gaborone: Ministry of Local Government and Rural Development, Republic of Botswana.
- Bundy, D., Burbano, G., Grosh, M., Gell, A., Jukes, M. and Drake, L., 2009. *Rethinking school feeding: Social safety nets, child development and the education sector*. Washington DC: World Food Programme and World Bank.
- Buttenheim, A., Friedman, J. and Alderman, H., 2011. *Impact evaluation of school feeding programs in Lao PDR*. Washington DC: World Bank.
- Cohen, L., Marion, L. and Morrison, K., 2007. *Research methods in education* (6th Ed). London: Routledge.
- Creswell, W., 2013. *Research design: Qualitative, quantitative and mixed methods approaches*. London: Sage Publications.
- Dei, F., 2014. *A new evaluation of school feeding program: Case study of Magog Primary School*. Pretoria: University of South Africa.
- Department of Basic Education (DBE), South Africa, 2005. *Annual Report of National School Nutrition Programme*: Pretoria: Department of Basic Education.
- Department of Basic Education (DBE), South Africa, 2008. *National Report on Evaluation of the National School Nutrition Programme 2007/8*. Pretoria: Public Service Commission.
- Department of Basic Education, South Africa, 2010. *Annual report of National School Nutrition Programme 2009/10*. Pretoria: Department of Basic Education.
- Department of Basic Education (DBE), South Africa, 2012. *Annual Report of National School Nutrition Programme 2011/12*. Pretoria: Department of Basic Education.
- Department of Basic Education (DBE), South Africa, 2013. *Case Study of the National School Nutrition Programme in South Africa*. Pretoria: University of Pretoria.

- Department of Basic Education (DBE), South Africa, 2014. *Annual Report of National School Nutrition Programme 2013/14*. Pretoria: Department of Basic Education.
- Department of Health (DH), South Africa, 2007. *Integrated nutrition programme: nutritional status*. Pretoria: Department of Health.
- Department of Health (DoH), South Africa, 2013. *Roadmap for Nutrition in South Africa*. Pretoria: Department of Basic Education.
- Department of Planning, Monitoring and Evaluation (DPME) and Department of Basic Education (DBE), South Africa, 2016. *Report on the Implementation Evaluation of the National School Nutrition Programme*. Pretoria: Department of Basic Education.
- Devereux, S. and Roelen, K., 2015. *Evaluating the impacts that impact evaluations don't evaluate*. Chapter 7. Mixed Methods Research in Poverty and Vulnerability. 149-170. Available at www.link.springer.com. Accessed on 12 February 2017.
- Devereux, S., Hochfeld, T., Karriem, A., Mensah, C., Morahanye, M., Msimango, T., Mukubonda, A., Naicker, S., Nkomo, G., Sanders, D. and Sanousi, M., 2018. *School feeding in South Africa: What we know, what we don't know, what we need to know, what we need to do*. Paper 4. Food Security SA Working Paper Series. Available at www.foodsecurity.ac.za. Accessed on 2 October 2018.
- Dheressa, D., 2011. *Education in focus: Impacts of school feeding programmes on school participation: A case study in Dara Woreda of Sidama Zone, Southern Ethiopia*. Oslo: Norwegian University of Life Science.
- Drake, L., Woolnough, A., Burbano, C. and Bundy, D., 2016. *Global school feeding sourcebook: Lessons from 14 countries*. New Jersey: Imperial College Press. Available at <https://openknowledge.worldbank.org/handle>. Accessed on 12 January 2017.
- Ellia, D., 2017. *The effects of school feeding programmes in addressing food insecurity in the Mutale Municipality of Vhembe District, Limpopo Province in South Africa*. Pretoria: University of South Africa.

- Fellers, J., 2015. *Impact of Malawi's school feeding programme on primary school education*. Brighton: Boston College.
- Food and Agriculture Organization (FAO), 2009. *Declaration of the World Summit on Food Security*. Available at: <http://www.fao.org/docrep/003/w3613e/w3613e00.htm>. Accessed on 21 February 2017.
- Gay, L., 1992. *Education research: Competencies for analysis and application*. New York: Macmillan.
- Gelli, A., Meir, U. and Espejo, F., 2007. *Does provision of food in school increase girls' enrollment? Evidence from schools in Sub-Saharan Africa*. Available at www.researchgate.net. Accessed on 13 July 2017.
- Govender, P., 2016. *The implementation of the National School Nutrition Programme in addressing child poverty in selected schools within the Ethekwini Region*. Durban: University of KwaZulu-Natal.
- Government of the Western Cape, 2018. *School nutrition plays an important role in improving education outcomes*. Available at www.westerncape.gov.za. Accessed on 10 October 2018.
- Graham, L., Hochfeld, T., Swart, L. and Gent, M., 2015. *Evaluation study of the National School Nutrition Programme and Tiger Brands Foundation in-school breakfast feeding programme in the Lady Frere and Qumbu districts of the Eastern Cape*. Available at www.uj.ac.za. Accessed on 9 December 2017.
- Gray, V., Cossman, J. & Powers, E., 2006. *Stunted growth is associated with physical indicators of malnutrition but not food insecurity among rural school children in Honduras*. Available at www.academia.edu. Accessed on 10 October 2018.
- Gunderson, W., 2011. *The National School Lunch Programs: Background and development*. Washington DC: Department of Agriculture.
- Hochfeld, T., Graham, L., Patel, L., Moodley, J. and Ross, E., 2016. *Does school breakfast make a difference? An evaluation of an in-school breakfast programme in South Africa*. Available at www.elsevier.com/locate/ijedudev. Accessed on 9 December 2017.

- Ikamva Labantu, 2016. *Annual Report*. Available at www.ikamvalabantu.org.za. Accessed on 2 August 2017.
- Jacoby, E. and Cueto, S., 1996. *Benefits of a school breakfast programme among Andean children in Huaraz, Peru*. Available at www.grade.org.pe. Accessed on 23 December 2018.
- Jameel, A., 2014. *Theory of change*. Available at www.povertyactionlab.org. Accessed on 25 February 2019.
- Joint Aid Management (JAM), 2015. *Annual Report*. Available at <https://jamint.com>. Accessed on 26 July 2017.
- Kallman, K., 2005. *Food for thought: A review of the national school nutrition programme*. Cape Town: University of Cape Town.
- Kazianga, H., Walque, D. and Alderman, H., 2012. *Educational and child labor impacts of two Food for Education Schemes: Evidence from a randomized trial in rural Burkina Faso*. Oklahoma: Oklahoma State University.
- Kedze, S., 2013. *The distortive effects of Ghana's School Feeding Programme on primary education delivery: The Case of Adentan Municipality*. Hague: International Institute of Social Studies, Netherland.
- Kombo, D., and Tromp, D., 2006. *Proposal and thesis writing: An introduction*. Nairobi: Pauline's Publication Africa.
- Kothari, R., 2004. *Research Methodology: Methods and techniques*. New Delhi: New Age International Publishers.
- Lawson, T., 2012. *Impact of school feeding programs on educational, nutritional and agricultural development goals: A systematic review of literature*. Michigan: Michigan State University.
- Leedy, P. and Ormrod, J., 2010. *Research design and methodology*. Available at www.dspace.nwc.ac.za. Accessed on 22 March 2017.
- Longhurst, R., 2010. *Semi-structured interview and focus group*. Waikato: University of Waikato, New Zealand.

- Longsford, C., 2012. *Enough on our plate? The National School Nutrition Programme in two schools in KwaZulu-Natal, South Africa*. Available at www.wiredspace.wits.ac.za. Accessed on 31 October 2018.
- Mayne, J., 2015. *Useful theory of change models*. Available at www.evaluationcanda.ca. Accessed on 25 February 2019.
- Ministry of Education (ME), Republic of Namibia, 2012. *The Namibian school feeding programme transition case study*. Windhoek: Ministry of Education.
- Ministry of Education, Science and Technology (MEST), Ministry of Health (MH) and Ministry of Agriculture, Livestock and Fisheries (MALF), Republic of Kenya, 2016. *School nutrition and meals strategy for Kenya*. Nairobi: MEST, MH and MALF.
- McMillan, J. and Schumacher, S., 2006. *Research in education: Evidence-based inquiry* (6th Ed). Boston: Pearson Education.
- McMillan, J. and Schumacher, S., 2010. *Research methodology and design*. Available at www.dspace.nwc.ac.za. Accessed on 22 March 2017.
- Muvhango, T., 2016. *Learners' perceptions of feeding scheme programmes at secondary schools in the Nzhelele east circuit, Limpopo province*. Pretoria: University of South Africa.
- Nsibandé, S., 2016. *An evaluation of school feeding programmes as inclusive strategies*. Johannesburg: University of the Witwatersrand.
- Nzimande, B., 2014. *Suspected food poisoning kills three pupils*. Available at www.enca.com/suspected-food-poisoning-kills-three-pupils. Accessed 9 December 2017.
- Oganga, B., 2013. *Feeding students? Examining views of parents, students and teachers on the World Food Program's school feeding initiatives in Chamwino District in Tanzania*. Massachusetts: Center for International Education, University of Massachusetts-Amherst.
- Pelletier, D., Deneke, K., Kidane, Y., Haile, B. and Negussie, F., 1995. *The food-first bias and nutritional policy: Lessons from Ethiopia*. Available at www.ncbi.nlm.nih.gov. Accessed on 12 June 2017.

- Peninsula School Feeding Association (PSFA), 2016. *Annual Report 2015/16*. Available at www.psf.org.za. Accessed on 26 July 2017.
- Peninsula School Feeding Association (PSFA), 2017. *Who we are*. Available at www.psf.org.za. Accessed on 26 July 2017.
- Powell, C., Walker, S., Chang, S. and Grantham-McGregor, S., 1998. *Nutrition and education: A randomized trial of the effects of breakfast in rural primary school children*. Available at www.ncbi.nlm.nih.gov. Accessed on 26 July 2017.
- Prista, A., Maia, J., Damasceno, A. and Beunen, G., 2003. *Anthropometric indicators of nutritional status: Implications for fitness, activity, and health in school-age children and adolescents from Maputo, Mozambique*. Available at <https://academic.oup.com>. Accessed on 10 November 2017.
- Public Service Commission (PSC), 2008. *Report on the evaluation of the National School Nutrition Programme*. Pretoria: Department of Basic Education.
- Rajasekar, S., Philominathan, P. and Chinnathambi, V., 2013. *Research Methodology*. Available at <http://arxiv.org/pdf/physics/0601009.pdf>. Accessed on 27 April 2016.
- Ramadhani, J., 2014. *An assessment of the effects of school feeding programmes on school enrolment, attendance and academic performance in primary school in Singida District, Tanzania*. Dodoma: Open University of Tanzania.
- Sanfilippo, M., De Neubourg, C. and Martorano, B., 2012. *The impact of social protection on children. Working Paper, UNICEF Office of Research*. Florence, Italy: UNICEF.
- Sekaran, U., 2005. *Research methods for business: A skill building approach* (4th Ed). Illinois: Southern Illinois University of Carbondale.
- Sibanyoni, J., Tshabalala, P. and Tabit, F., 2016. *Food safety knowledge and awareness of food handlers in school feeding programmes in Mpumalanga, South Africa*. Available at www.elsevier.com/locate/foodcont. Accessed on 9 December 2017.
- Slater, R. and Farrington, J., 2009. *Appropriate, achievable, acceptable: A practical tool for good targeting*. London: ODI.

- Statistics South Africa (StatsSA), 2013. *Gender statistics in South Africa, 2011*. Available at www.statssa.gov.za/publications/report-03.../report-03-10-02011. Accessed on 9 December 2017.
- Stein, D. and Valters, C., 2012. *Understanding theory of change in international development*. The Asian Foundation. Available at www.jsrp.com. Accessed on 5 January 2017.
- Stop Hunger Now South Africa (SHNSA), 2016. *Annual Report*. Available at www.shnsa.org.za. Accessed on 2 August 2017.
- Sumberg, J. and Sabates-Wheeler, R., 2011. *Linking agricultural development to school feeding in Sub-Saharan Africa: Theoretical perspectives*. Available at www.elsevier.com/locate/foodpol. Accessed on 3 Jan 2018.
- Taplin, D., Clark, H., Collins, E and Colby, D., 2013. *Theory of change technical papers: A series of papers to support development of theories of change based on practice in the field*. Available at www.acknowledge.org/resources/documents. Accessed on 25 February 2019.
- Taylor, A. and Ogbogu, C., 2016. *The effects of school feeding programme on enrolment and performance of public elementary school pupils in Osun State, Nigeria*. Available at <http://dx.doi.org/10.5430/wje.v6n3p39>. Accessed on 23 December 2018.
- Tomlinson, M., 2007. *School feeding in East and Southern Africa: Improving food sovereignty or photo opportunity?* Discussion Paper No. 46, EQUINET: Regional Network for Equity in Health in Southern Africa. Available at www.pdfsemanticscholar.org. Accessed on 10 February 2017.
- Uduku, O., 2010. *School building design for feeding programmes and community outreach: Insights from Ghana and South Africa*. Available at www.elsevier.com. Accessed on 4 January 2017.
- United Nations Development Programme (UNDP), 2009. *Handbook on planning, monitoring and evaluating for development results*. New York: UNDP.

- Whaley, S., Sigman, M., Neumann, C., Bwibo, N., Guthrie, D. Weiss, R., Alber, S. and Murphy, S., 2003. *The impact of dietary intervention on the cognitive development of Kenyan school children*. Available at www.ncbi.nlm.nih.gov. Accessed on 4 January 2017.
- Wildeman, R. and Mbebetho, N., 2005. *Reviewing ten years of the school nutrition programme*. Available at www.idasa.org.za. Accessed on 12 March 2017.
- World Bank, 2012. *Orphans and vulnerable children in education sector programmes: School feeding programmes*. Available at www.info.worldbank. Accessed on 5 October 2017.
- World Food Programme (WFP), 2005a. *Feed minds, change lives: School feeding, the Millennium Development Goals and girls' empowerment*. Available at www.wfp.org. Accessed on 12 January 2017.
- World Food Programme (WFP), 2005b. *Home-grown school feeding: A framework to link school feeding with local agricultural production*. Available at www.wfp.org. Accessed on 12 January 2017.
- World Food Programme (WFP), 2006. *Global school feeding report*. Available at www.wfp.org. Accessed on 12 January 2017.
- World Food Programme (WFP), 2007. *Report of the thematic evaluation of WFP: School feeding in emergency situations*. Office of Evaluation, WFP, Rome. Available at www.wfp.org. Accessed on 10 January 2017.
- World Food Programme (WFP), 2008. *Impact evaluation of WFP school feeding in Kenya*. Available at www.wfp.org. Accessed on 12 March 2017.
- Zwane, M., 2014. *School feeding programme as a mechanism to improve market access for smallholder farmers in rural areas of South Africa*. Pretoria: University of Pretoria.

LIST OF APPENDICES

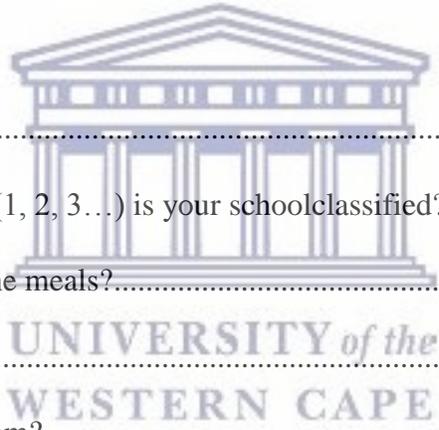
Appendix A: Questionnaire for the school principals/teachers/members of School Governing Body/food handlers/provincial and the NSNP staff.

A-Background information.

- 1-Name of the school [_____]
- 2-Gender of the participant M [] F [].
- 3-The position of the respondent (principal/teacher/member of SGB/food handler/provincial or district coordinator of the NSNP).
- 4-Highest level of the qualification graduate [] matric [] other [] none [].

B-The NSNP in each school

- 1-When did it start?.....
- 2-Under which quintile system (1, 2, 3...) is your schoolclassified?.....
- 3-How many children receive the meals?.....
- 4-What food do they eat?.....
- 5-Where does the food come from?.....
- 6-Who cooks the food?.....
- 7-Is there a school garden?.....
- 8-Do children get nutrition education?.....
- 9-How many meals do learners get every day?.....
- 10-Do learners eat the same food every day?.....
- 11-At what time do learners get their meals?.....
- 12-Does food sometimes get lost at the school?.....



13-What happens to the cooked food that is not consumed (left over)?.....

14-Do you have proper food storage?.....

15-Does food sometimes spoil in the storage?.....

C-The respondent's understanding of the NSNP.

1-Do children like the food? If yes, why? If not, why not?

2-Do learners sometimes go hungry without having food? If yes, why?

3-Does your school sometimes run out of food? If yes, why? If no, why not?

4-Do you sometimes get different types of food than what you should get in your school? If yes, why?

5-Did the NSNP staff receive training in your school? If not, why not?

6-What are the objectives of the NSNP?

7-What impacts have you observed since the inception of the NSNP in your school?

8-Please explain what the specific **nutritional impacts of the NSNP** are on the school children. For example, improved learning ability, reduced malnutrition or diseases, reduced hunger or increased children's attention in the class.

9-Please explain what the specific **educational impacts of the NSNP** are on the school children. For example, increased participation in the class, increased enrollment, increased learner performance, improved exam results, or reduced dropout rate.

10-How often do you attend NSNP meetings in the district and the province?

11-Do NSNP coordinators engage you in important discussions/decisions regarding NSNP? Or do you only receive the decisions that are already made by NSNP coordinators and then you fully implement them?

12-How often do the NSNP coordinators visit your school?

13-How often do you have meetings with teachers and communities regarding NSNP?

14-What problems did you experience in the implementation of the NSNP in your school/district/province?

15-What should be done to solve the problems you identified?

16-What must be done to improve the NSNP?



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Appendix B: Information sheet for interview.



University of the Western Cape

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone : (021) 959 3858/6 Fax: (021) 959 3865
E-mail: pkippie@uwc.ac.za or spenderis@uwc.ac.za

INFORMATION SHEET FOR INTERVIEW

Project Title:

The expected effects of the National School Nutrition Programme: Evidence from a case study in the Western Cape.

What is this study about?

This research project is being conducted by Mohammed Sanousi, a student at the University of the Western Cape. You are invited to participate in this project as school principals, teachers, operational staff of the NSNP, members of the School Governing Body and provincial and district coordinators of the NSNP. The main purpose of this research is to investigate the expected outcomes of the NSNP in a few local schools in Cape Town. Hence, in order to explore whether these intended impacts are observed or not, the views of above-mentioned groups would be examined.

What is the questionnaire about?

You will be asked to answer questions on whether the expected outcomes of the NSNP are observed or not. These include nutritional and educational impacts (increased attendance and participation, academic performance and health) on school-going children who received school meals.

Would my participation in this study be kept confidential?

All your personal information will be kept confidential and will remain anonymous, if that is your choice. You will be required to sign a consent form to protect your privacy and confidentiality while participating in this study. The researcher will not reveal the identity of the participants and will safeguard the confidential information obtained in the course of the study.

What are the risks of this research?

There are no risks involved in participating in this research project. From the beginning, aims and objectives will be clear.

What are the benefits of this research?

There are no material benefits for the interviewee but it will create an awareness and understanding of the interviewees towards the nutritional and educational impacts of the NSNP.

Do I have to complete the questionnaire and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to complete the questionnaire and to stop participating at any time you want. If you stop or decide not to participate, you will not lose anything.

How long will it take to complete the questionnaire?

The full questionnaire will take about 20 to 30 minutes to complete and may vary from participant to participant.

Is any assistance available if I am negatively affected by participating in this study?

There are no known negative effects that could happen from participating in this study.

What if I have questions?

This research is being conducted by **Mohammed Sanousi**, a student at the University of the Western Cape. His contact number is 0738732024.

If you have any questions about the research study itself, please contact the research Supervisor, Prof Stephen Devereux at the Institute for Social Development (ISD), University of the Western Cape, at +27 21 959 3853.

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

Dr Sharon Penderis
Director
Institute for Social Development
School of Government
University of the Western Cape
Phone numbers +27 21 959 3848 / +27 845 102 772.
Private Bag X17
Bellville 7535

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.

Appendix C: Letter of consent to complete the interview.



Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone : (021) 959 3858/6 Fax: (021) 959 3865
E-mail: pkippie@uwc.ac.za or spenderis@uwc.ac.za

Letter of consent: To complete questionnaire

I, have had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions, and any additional details I wanted.

I agree to take part in this research.

I understand that my participation in this study is voluntary. I am free not to participate and have the right to withdraw from the study at any time, without having to explain myself.

I am aware that the information I provide on the questionnaire might result in research which may be published, but my name may be/ not be used (circle appropriate).

I understand that my signature on this form indicates that I understand the information on the information sheet regarding the structure of the questions.

I have read the information regarding this research study on the National School Nutrition Programme.

I agree to answer the questions to the best of my ability.

I understand that if I don't want my name to be used that this will be ensured by the researcher.

I may also refuse to answer any questions that I don't want to answer.

By signing this letter, I give free and informed consent to participate in this research study.

Date:.....

Participant Name:.....

Participant Signature:.....

Interviewer name: Mohammed Sanousi

Interviewer Signature:.....



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Appendix D: Letter of permission from the Western Cape Government



Audrey.wyngaard@westerncape.gov.za

tel: +27 021 467 9272

Fax: 0865902282

Private Bag x9114, Cape Town, 8000

wced.wcape.gov.za

REFERENCE: 20170424 –194

ENQUIRIES: Dr A T Wyngaard

Mr Mohammed Sanousi
0204 Dos Santos
UWC Student Residence
Robert Sobukwe Road
Bellville
7530

Dear Mr Mohammed Sanousi

RESEARCH PROPOSAL: THE EXPECTED EFFECTS OF THE NATIONAL SCHOOL NUTRITION PROGRAMME: EVIDENCE FROM A CASE STUDY IN THE WESTERN CAPE

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **01 May 2017 till 30 June 2017**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services

**Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000**

We wish you success in your research.

Kind regards.

Signed: Dr Audrey T Wyngaard

Directorate: Research

DATE: 24 April 2017

Appendix E: Extension of the letter of permission.



Audrey.wyngaard@westerncape.gov.za

tel: +27 021 467 9272

Fax: 0865902282

Private Bag x9114, Cape Town, 8000

wced.wcape.gov.za

REFERENCE: 20170424 –194

ENQUIRIES: Dr A T Wyngaard

Mr Mohammed Sanousi
0204 Dos Santos
UWC Student Residence
Robert Sobukwe Road
Bellville 7530

Dear Mr Mohammed Sanousi

RESEARCH PROPOSAL: THE EXPECTED EFFECTS OF THE NATIONAL SCHOOL NUTRITION PROGRAMME: EVIDENCE FROM A CASE STUDY IN THE WESTERN CAPE

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

12. Principals, educators and learners are under no obligation to assist you in your investigation.
13. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
14. You make all the arrangements concerning your investigation.
15. Educators' programmes are not to be interrupted.
16. The Study is to be conducted from **01 May 2017 till 29 September 2017**
17. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
18. Should you wish to extend the period of your survey, please contact Dr A.T Wyngaard at the contact numbers above quoting the reference number?
19. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
20. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
21. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
22. The Department receives a copy of the completed report/dissertation/thesis addressed to:

**The Director: Research Services
Western Cape Education Department
Private Bag X9114
CAPE TOWN 8000**

We wish you success in your research.

Kind regards.

Signed: Dr Audrey T Wyngaard

Directorate: Research

DATE: 05 July 2017