

**THE PERCEIVED IMPACT OF THE NATIONAL SCHOOL NUTRITIONAL
PROGRAMME IN THE SELECTED RURAL AND URBAN PRIMARY SCHOOL IN
MAHWELERENG CIRCUIT**

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DECLARATION WITH REGARD TO INDEPENDENT WORK

I, Lebese Tenyeko Gladys identity number _____ and student number _____, do hereby declare that this research project submitted to the Central University of Technology, Free State for the Master of Education (Post Graduation Studies), is my own independent work; and complies with the Code of Academic Integrity, as well as other relevant policies, procedures, rules and regulations of the Central University of Technology, Free State; and has not been submitted before to any institution by myself or any other person in fulfilment (or partial fulfilment) of the requirements for the attainment of any qualification.

STUDENT SIGNATURE

15/02/2024

DATE

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ABSTRACT

Nutrition is a basic human right for all humans, including children, as stated in the Convention on the Rights of the Child and other human rights agreements. The government introduced this in 1994 to meet the nutritional needs of undernourished school learners. To date, the National School Nutrition Programme reaches almost all schools in the poorest quintiles nationwide. However, the COVID-19 pandemic has increased the demand for the National School Nutrition Programme in schools far beyond expectations, even in other schools outside quintiles 1, 2, and 3. The maintenance and improvement of the National School Nutrition Programme have become mandatory, hence the need to understand the impact of the National School Nutrition Programme in schools. The purpose of this study was to investigate the impact of the National School Nutrition Programme in the primary schools in Mahwereleng Circuit, Limpopo Province. Primary teachers' views on the impact of the National School Nutrition Program on schools were gathered using semi-structured interviews.

A qualitative study within an interpretive research paradigm was employed to explore the impact of the National School Nutrition Programme on schools in this study. Interpretive studies attempt to generate an understanding of the phenomenon under investigation by analysing the meaning provided by the participants in the study. Interpretive research is an investigation that relies heavily on researchers defining and redefining the meanings of what they see and hear. The researcher, through non-probability convenience sampling, selected a total of 12 primary school teachers from 4 primary schools in Mahwereleng Circuit. Data from semi-structured interviews was thematically analysed and interpreted to draw conclusions that answered the research questions.

Findings indicated that the National School Nutrition Program has a positive impact on learners' welfare and academic performance in schools. The National School Nutrition Programme motivates learners to attend school; however, teachers must take advantage of the presence of learners in the school to engage learners more in classroom learning. The study appreciates the prescribed measures of food for each learner by the Department of Education, as overeating at break time negatively affects learners'

concentration. Generally, teachers regarded the implementation of the National School Nutrition Programme in South African schools as successful, given that the Department of Education maintained the supply of food to schools. However, challenges of delayed food supply by contracted suppliers and poor quality of food items supplied to schools are some of the challenges faced in schools.

Key words: Impact, National School Nutrition Programme, nutrition, food handlers and school feeding programmes

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ACRONYMS

DBE	Department of Basic Education
DoE	Department of Education
FBDGs	The Food Based Dietary Guidelines
FH	Food Handlers
FSD	Food Specification document
GHS	General Household Survey
ID	International Development
IFAD	International Fund for Agricultural Development
ISHP	Integrated School Health Program
MDGs	United Nations Millennium Development Goals
MLGRD	Ministry of Local Government and Rural Development
NGO	Non-Governmental Organisations
NIDS-CRAM	National Income Dynamics Survey-Coronavirus Rapid Mobile Survey
NSNP	National School Nutrition Programme
OECD	Organisation for Economic Cooperation and Development
RDP	Reconstruction and Development Programme
SBP	School Breakfast Program
SGB	School Governing Bodies
SFP	Schools Feeding Programmes
THR	Take-home Rations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations International Children's Emergency Fund
UNSCN	United Nations System Standing Committee on Nutrition
USA	United States of America
WFP	World Food Programme
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION TO STUDY

1.1 INTRODUCTION

Despite South Africa being a food-secure country, household food and nutrition security have deteriorated since 2020 due to the COVID-19 pandemic. School-age children were particularly vulnerable, as around nine million South African children did not have access to the daily meals from the National School Nutrition Programme (NSNP) (Kruger, Legodi, Tsolekile, Browne & van Rensburg, 2020), while schools were closed in the early stages of the national lockdown in response to the COVID-19 pandemic. The NSNP is of great strategic importance in alleviating hunger for learners and is operating at a large scale in all nine provinces of South Africa. The NSNP is a multi-stakeholder programme led by the Department of Basic Education (DBE) and supported by a range of partners, which include government departments and non-governmental organisations in South Africa. The purpose of the NSNP is to promote quality education by ensuring that children operate in a healthy environment. However, given the disruptions in school feeding programmes during the COVID-19 pandemic, it became necessary to understand the impact of NSNP in schools. This study employed a qualitative study within the interpretive paradigm to investigate the impact of NSNP in primary schools in Mahwereleng Circuit, Limpopo Province.

1.2 BACKGROUND AND RATIONALE OF THE STUDY

The NSNP was conceptualised as a shared component of general education and health development, based on a conceptual framework for understanding how health and nutrition factors influence school achievement. This led to the introduction of the project in September 1994 as one of the Presidential Lead Projects and was administered by the Reconstruction and Development Programme (RDP) National School Nutrition Programme (NSNP) Office. The primary aim of the NSNP is to foster better-quality education by enhancing children's active learning capacity, alleviating short-term hunger, providing an incentive for children to attend school regularly and punctually, and

addressing certain micronutrient deficiencies. It gives children the opportunity to be physically active during school hours.

School nutrition programmes are not unique to South Africa (Mawela & Van den Berg, 2020), and in 2012, no less than 66 million children throughout the developing world, mostly in Africa, received food at school. Kruger et al. (2020) assert that school-aged children and adolescents need more nutrients than adults because they gain at least 40% of their adult weight and 15% of their adult height during this period. Inadequate dietary intake during this period can compromise cognitive development, delay sexual development, and slow linear growth. Woodside, Adamson, Spence, Baker and McKinley (2020) echoed that promoting the health and nutrition of the school food system can be seen as an essential activity that supports the goals of education. In South Africa, the NSNP is intended to reduce food insecurity and malnutrition among "nutritionally needy learners" by providing nutritious meals (Mumba & Kesa, 2020). The NSNP aims to foster a better quality of education by enhancing children's active learning capacity, alleviating short-term hunger, providing a positive incentive for learners to attend school regularly and punctually, and lastly, addressing micronutrient deficiencies (Hassanally, Naicker & Singh, 2020). A study by Kruger et al. (2020) noted that the 2016 evaluation of the NSNP did not assess the programme's impact on children's school attendance, performance, or nutritional status, hence the need for studies to investigate the impact of the NSNP in South African schools. However, this study focuses on primary schools in Mahwereleng Circuit in Limpopo Province because of a lack of capacity to carry out such a study at the national level.

1.3 PROBLEM STATEMENT

Devereux, Hochfeld, Karriem, Mensah, Morahanye, Msimango, Mukubonda, Naicker, Nkomo, Sanders and Sanousi (2018) contend that school feeding is an important social protection instrument and a component of South Africa's social protection system, but it receives far less attention than other programmes such as the Child Support Grant. Given the high human and economic returns that investments in child and adolescent nutrition bring (Food and Agriculture Organization, 2020) and the growing recognition of the right to adequate food, the global commitment to addressing malnutrition has intensified. A

hungry learner is more likely to face health- and nutrition-related problems. This, in turn, can affect academic performance, cognitive function, capacity to attend school, and ability to concentrate (Eluya, 2019); therefore, this study explores teachers' views to determine the impact of NSNP in primary schools.

1.4 RESEARCH AIM AND OBJECTIVES

1.4.1. Aim of the study

The study aims to investigate the perceived impact of the National School Nutrition Programme in the primary schools in Mahwereleng Circuit, Limpopo Province.

1.4.2. Research objectives

- To determine how the National School Nutrition Programme implemented in Mahwereleng Circuit primary schools.
- To understand teachers' experiences on the implementation of National School Nutrition Programme in primary schools.
- To determine the impact of the National School Nutrition Programme to learners' welfare and performance in schools.
- To establish the alternative strategies to improve the National School Nutrition Programme in primary schools.

1.5 RESEARCH QUESTIONS

1.5.1. Main research question

What is the perceived impact of the National School Nutrition Programme in the primary schools in Mahwereleng Circuit, Limpopo Province?

1.5.2 Research sub-questions

- How is the National School Nutrition Programme implemented in Mahwereleng Circuit primary schools?
- What are the teachers' experiences on the implementation of the National School Nutrition Programme in primary schools?

- What is the perceived impact of the National School Nutrition Programme to learners 'welfare and performance in schools?
- What are the alternative strategies to improve the National School Nutrition Programme in primary schools?

1.6 SIGNIFICANCE OF THE STUDY

A study by Kruger et al. (2020) noted that the 2016 evaluation of the NSNP did not assess the programme's impact on children's school attendance, performance, or nutritional status. In addition, the study by Eluya (2019) reported that some researchers have failed to document convincing evidence regarding the relationship between cognitive functioning, academic performance, and school feeding. This reveals a gap that exists in studies on the impact of NSNP in schools. The findings of this study may allow policymakers, teachers, school management, and fellow researchers to start collecting evidence on the impact of the NSNP in schools to better understand and appreciate the need for school food programmes and to create evidence-based solutions that can be implemented to maintain and improve the NSNP.

1.7 PRELIMINARY LITERATURE REVIEW

1.7.1 School food programmes in the global context

Before 2020, developing countries had made significant strides towards universal basic education. By 2019, primary school enrolment rates had reached over 90% in Latin America and the Caribbean and over 75% in Sub-Saharan Africa (Lichand, Dória, Neto & Cossi, 2021). Govender, Subban, and Wessels (2020) noted that various nations, both developed and developing, have subsidised a substantial sum of capital in school breakfast and luncheon agendas to improve and enhance school turnout, success levels, and learners' dietary status. The World Food Programme (WFP) (2020) reported that school feeding programmes covered about 370 million children globally before the COVID-19 pandemic, with the largest number of beneficiaries in India (100 million), Brazil (48 million), China (44 million), South Africa (9 million), and Nigeria (9 million). Globally, in 2020, an estimated 39 billion in-school meals will have been missed during school closures by the over 370 million children who were benefiting from school feeding

programmes before the pandemic (Borkowski, Jażdżewska-Gutta & Szmelter-Jarosz, 2021). There is a clear need to support vulnerable households during the COVID-19 crisis, where incomes and levels of food security are falling even further. School feeding, or rather, the lack thereof, can have a considerable impact on children in schools.

The economic and health shocks of the COVID-19 crisis have serious implications for both the present and future development of children, particularly those living in more vulnerable households (Asanov, Flores, McKenzie, Mensmann & Schulte, 2021) and in already fragile schooling systems (United Nations Educational, Scientific, and Cultural Organisation (UNESCO, 2021). Since the pandemic's onset, children have been put at greater risk of food insecurity (Nguyen, Kachwaha, Pant, Tran, Ghosh, Sharma, Shastri, Escobar-Alegria, Avula & Menon, 2021) and emotional health deterioration (Asanov et al., 2021). School closures due to COVID-19 disrupted the normal distribution channels through which school meal programmes operate, and many children may be without this vital source of food. School meals are a critical source of nutrition for millions of vulnerable children around the world (Alderman & Bundy, 2012). Borkowski et al. (2021) assert that schools play an important role in the direct provision of health and nutrition services in the first 8,000 days of a child's life that are critical for their development.

The prevalence of malnutrition is increasing at an alarming rate in many developing countries (WHO 2018). In 2018, for the first time ever, half of the world's learners in low- and middle-income countries were able to sit down and be provided with a meal at school. That relates to an estimated 370 million learners across the globe (Mumba & Kesa, 2020). The WFP (2019) reports that an estimated 310 million schoolchildren in low- and middle-income countries eat a daily meal at school, with about 18.3 million meals being provided through the WFP. Bain, Awah, Geraldine, Kindong, Siga, Bernard and Tanjeko (2013) also highlighted that the achievement of MDG 1, namely to eradicate extreme poverty and hunger, has been unsuccessful in Africa, although access to primary education (MDG 2) has significantly improved in many parts of the world. In its contribution to the significance of the feeding programme, UNESCO (2021) states that school feeding programmes contribute to all six Education for All campaigns contained in the Dakar

Framework for Action (2000), the Comprehensive Africa Agriculture Development Programme (2003), and the New Partnership for Africa's Development (2003).

1.7.2 The National School Nutrition Programme implementation in South Africa

1.7.2.1 The state of school nutrition in South African schools

The NSNP is operating on a large scale in all nine provinces of South Africa. Even before the pandemic, the 2018 General Household Survey (GHS) revealed that 77% of learners who attended public schools in 2017 benefitted from school feeding schemes. The 2018 GHS also revealed that 80% of learners aged 7 to 17 living in the poorest 40% of households (according to per capita income) received food through a school feeding and nutrition programme daily. Beneficiaries from the NSNP increased from 70% in 2010 to over 82% in 2018 and beyond (Shepherd & Mohohlwane, 2021). The Conditional Grant Framework (2019) reveals that R7.7 billion is channelled towards serving the huge number of learners from marginalised communities in the years 2020–2021. However, given the unforeseeable pandemic that started in 2020 to date, this allocation turned out to be insufficient. The NSNP is operating on a larger scale than the allocation. In April 2021, the need for access to food at schools increased significantly, according to the study of Shepherd and Mohohlwane (2021). The impact of COVID-19 on education caused more than a year of disruption. The 2021 National Income Dynamics (NIDS)-Coronavirus Rapid Mobile Survey (CRAM) revealed that much variation exists across provinces, and the average proportion of targeted learners receiving school meals in Gauteng and Limpopo exceeded 95% over the four DBE NSNP report cycles. The proportion of targeted learners fed in the Western Cape remained around 60%, while feeding in the Northern Cape declined from 80% to 34% over the two months, most likely due to increased learner absenteeism linked to rising infections in the province.

1.7.2.2 The challenges experienced in implementation of National School Nutrition Programme in South African schools

Govender et al. (2020) noted that the rollout of the school food programme has been a challenging one. Eluya (2019) echoes that School Feeding Programmes (SFPs) have been successful; however, the challenge lies in maintaining them so that they can reach as many learners and their families as possible. Several studies carried out in South African primary schools indicated that challenges seem to exist in the implementation of the NSNP. One is the absence of infrastructure. In South Africa, a study by Mafugu (2021) identified an absence of kitchens in the Eastern Cape and Mpumalanga schools. Berejena, Kleynhans and Vibetti (2020) reported an absence of storage, preparation, cooking, and eating facilities that meet health and safety standards in schools in South Africa. A study by Mafugu (2021) found that several South African schools that have kitchens also disregard the safety standards provided in the NSNP safety directory. In some of the schools, the gas cylinders were kept inside kitchens.

In a study by Berejena et al. (2020), it was found that food handlers and caterers in the Sedibeng West district of Gauteng and in the Fezile Dabi District in the Free State also reported their frustration with a lack of contractual continuity. These uncertainties frustrate suppliers, and it proves difficult for them to get employment elsewhere. Considering the high rate of unemployment in South Africa, the NSNP is economically alleviating the unemployment challenges. The Cabinet Resolution of 2002 mandated the NSNP to create job opportunities for the local people within its operations (DBE, 2016). The DBE employs the local parents as food handlers who prepare and serve meals in the programme. To date, more than 50,000 parents work as food handlers in the programme nationwide (Berejena et al., 2020). Occasionally, food handlers become reluctant to be involved in additional duties due to the frustrations they experienced in the past when the contract expiration date approached. Mafugu (2021) noted that food handlers and principals in the Eastern Cape felt that the NSNP was a burden to them. In addition, Kruger et al. (2020) and Mafugu (2020) found that the food handlers, who are mostly women, are supposed to be provided with training in food safety and hygiene,

preparation, and serving. But there is no evidence that this training has been successfully implemented in most schools.

A study by Mafugu (2021) identified food preference and culture as two of the challenges experienced in schools. There were also challenges with food preferences among schools. A product that may be good for one school might not be liked by another. The DBE has provided guidelines to establish healthy school tuck shops, but there is no monitoring in place to regulate implementation. Foods bought from tuck shops or vendors are mostly low in nutrients and high in energy, salt, fat, and sugar, such as biscuits, crisps, and sugar-sweetened beverages. This is concerning, as about 50% of school-going children in South Africa regularly buy food at school and do not pack lunch boxes (Kruger et al., 2020). A South African study showed that most urban adolescents consumed fast foods, sugar-sweetened beverages, and school tuck shop items on three or more occasions per week. Children in the lowest income groups had higher odds of an unhealthy dietary pattern than children in the highest socio-economic groups. The Birth-to-20 cohort study tracked the dietary habits of a large group of urban adolescents in Soweto, Johannesburg, over four years and showed irregular breakfast consumption, infrequent family meals, frequent consumption of fast foods, sugar-sweetened beverages, and energy-dense school tuckshop items. On the contrary, Hassanally et al. (2020) argued the benefits of snacks in school feeding programmes are well established, as they alleviate short-term hunger and micronutrient deficiencies, improve learning, and are cheaper and easier to distribute than meals.

A study by Kruger et al. (2020) reported that observation in the Eastern Cape reveals that vegetables such as cabbages are cooked long before mealtime, resulting in incidents of severe food poisoning. The NSNP provides guidelines on the basics of personal hygiene, food hygiene, food preparation, managing food waste, and preventing food poisoning. Yet the recent evaluation of the NSNP showed that almost half of the volunteers had not received training on kitchen hygiene, food safety, and pest control (Kruger et al., 2020). According to the World Health Organization (WHO) Report on Diarrhoea, Typhoid, and Cholera in Africa (2013), the cases of these diseases are a result of very poor hygienic standards in the preparation, serving, and consumption of food. On a more controversial

note, a study by Borkowski et al. (2021) reported that children who relied on nutrition services provided by schools may suffer from worsening health and nutritional status in the short and medium term.

1.8 THEORETICAL FRAMEWORK

1.8.1 The bio-ecological theory

This study is viewed through the lens of bio-ecological theory by Bronfenbrenner. Bronfenbrenner introduced the ecosystem theory to understand human development by focusing heavily on the contribution of the environment and the effects it has on this development process (Bronfenbrenner & Morris, 2006). The central point of his theory relates to the interactions created between the developing and active human organism and the nearer and wider social context that surrounds it and influences it directly and indirectly (Panopoulos & Drossinou-Korea, 2020). The theory regards human development as the set of processes through which the characteristics and properties of the active and evolving human organism and its environment interact to evolve the individual during his or her life. In this theory, child development is influenced by the context of the child; the relationship is interactive in such a way that the impact of an intervention in the life of the child should be realised inside the child and in various systems in the context of the child.

The theory explains that a child learns and grows in the context of multiple nested systems: the microsystem, mesosystem, exosystem, and macrosystem. These systems range from proximal to distal, from direct influences to indirect influences (Kim, 2018). Thus, people and experiences at different levels of the system influence the development of a child. For example, the family, teacher, and friends (microsystem), the school they attend, the relationship between family and school as well as teacher and parents (mesosystem), and social and cultural norms (macrosystem) could all uniquely influence the development of a child (Bronfenbrenner, 1992). At the centre of these systems is the individual. Each of these levels is embedded in its immediate next and is influenced by their distance to the central unit, the individual (Panopoulos & Drossinou-Korea, 2020). In addition to these four encircled layers of the system, there is another distinctive system,

which is the chronosystem; this is not within the encircled layers of the system but is laid over through one's lifetime, affecting him or her in relation to the chronological time or period.

1.9 RESEARCH METHODOLOGY

1.9.1 Research paradigm

This study falls under the interpretive research paradigm. Kivunja and Kuyini (2017) define a paradigm as a philosophical way of thinking. In the research context, Guba and Lincoln (2000) define a paradigm as a basic system or world view that guides the researcher. Okesina (2020) explains it as the researcher's thinking or philosophical orientation or perspective that influences what should be studied, how it should be studied, and how the results of the study should be interpreted. The interpretive paradigm focuses on how individuals make meaning of daily events in their environment based on their perceptions, views, and understandings (Cohen, Manion & Morrison, 2018). It attempts to understand phenomena through the meanings that people assign to them. Considering this, Creswell (2014) argues that interpretivist research tends to rely on the participants' views of the situation being studied and recognises the impact of the research on their own backgrounds and experiences. Therefore, interpretivism was considered suitable for this study as it focuses on gathering the views of teachers on the impact of the NSNP in primary schools.

1.9.2 Research design

A qualitative phenomenological study will be used in this study. A research design is better regarded as a plan for how the researcher will study and answer the research question at hand. McMillan and Schumacher (2014) elaborate that it is the plan according to which we obtain information from research participants or subjects, collect information from them, and describe what we are going to do with the data, with a view to reaching conclusions about the research problem, research hypothesis, and research questions. The purpose of a research design is to clarify and identify valid information that will assist in answering the research questions (McMillan & Schumacher, 2014). Creswell and Poth (2018) describe qualitative research as an effort to comprehend persons, groups, and

phenomena in their ordinary settings in contextualised ways. The central focus of qualitative research is to provide an understanding of a social setting or activity as viewed from the perspective of the research participants. To achieve this focus, the researcher gathers data directly from the participants.

A qualitative design encompasses procedures of inquiry such as phenomenology, narratives, ethnographies, and case studies (Creswell & Poth, 2018), and this study will employ a phenomenological study. A phenomenological study provides in-depth, contextualized, and open responses from research participants about their views, opinions, feelings, knowledge, and experiences (Tanwir, Moideen & Habib, 2021). Phenomenological studies examine the lived experiences of people who are experiencing the problem. The goal of phenomenological studies is to explore, describe, and analyse the meaning of individual lived experiences—how they perceive them, feel about them, judge them, remember them, make sense of them, and talk about them with others. This study intends to have a multi-perspective understanding of teachers' understanding of the impact of the NSNP on learners; hence, a phenomenological study was selected.

1.9.3 Population and sampling

Welman, Kruger and Mitchell (2011) explain that the population encompasses a total collection of all units of analysis about which the researcher wishes to draw specific conclusions. It refers to a complete set of elements, for example, persons or objects that possess some common characteristic the researcher is interested in. If a population is not properly defined, a researcher does not know what units to consider when selecting the sample. This study will be conducted in primary schools in Mahwereleng Circuit, Waterberg District, Limpopo Province. Basically, the circuit is urban, with a few rural primary schools. In Mahwereleng Circuit, there are a total of 14 primary schools with a total of 253 teachers. Six are urban, and eight are rural primary schools. This defines the population of this study, from which the sample will be drawn. Sampling is the process of selecting a few cases from a population to provide information that can be used to make judgments about a much larger number of cases. Yin (2011) echoes that sampling refers to the process of selecting a subset of cases to draw conclusions about the entire set. The process of selecting elements from a larger population is thus called sampling.

McMillan and Schumacher (2014) define the concept of sample as the number of individuals selected from a population for a study.

Non-probability sampling will be used in this study, particularly purposive sampling. Non-probability sampling is a sampling strategy in which the chance that an individual will be selected is unknown; hence, the researcher cannot claim that the sample is representative of the larger population (Flick, 2018). However, it is preferred because it is much less complicated and less expensive. Besides, the focus of qualitative research is not on generalisation but on a deeper understanding of the defined sample in the specified context (Sharma, 2017). In this study, the researcher will purposefully divide the schools into two pools, namely pool A of urban primary schools and pool B of rural primary schools. According to Maree (2015), qualitative research usually makes use of purposive sampling, and purposive sampling was used to select the schools for this study. Maree (2015) describes purposive sampling as choosing participants who can provide information that fulfils the required research objectives about the phenomenon.

The researcher will select two schools in pool A, which are the biggest school and the smallest urban school in the circuit. In pool B, the researcher will select the school with the largest enrollment and the smallest school in rural areas of Mahwereleng Circuit. That means four schools will be selected to make sure schools in different contexts of primary schools in Mahwereleng Circuit are captured. The actual participants will be selected through purposive sampling, as every teacher teaching in the selected schools is considered an information-rich participant. Taherdoost (2016) contends that convenient sampling selects the participants from those who are readily available to the researcher. The researcher will select three teachers per school. The researcher will meet the teachers first on the day she visits each of the selected schools to identify research participants. Those who show their willingness to participate in the study will be selected as participants in this study. A total of 12 participants will be selected from four schools, as the researcher considers the number reasonable to provide credible results.

1.9.4 Data collection

Sutton and Austin (2015) describe data collection as a process that involves the generation of large amounts of data. In other words, data collection is the gathering of raw data from people who are experiencing the problem being investigated using either standard or universal instruments or constructed instruments. The researcher adopted a qualitative approach for the study as an inquiry in which researchers collect data in face-to-face situations by interacting with selected people in their setting. In this study, data collection is interactive using interviews, particularly semi-structured interviews. Interviews produce in-depth, insightful, and detailed data that can be readily validated for understanding. Wahyuni (2012) contends that a semi-structured interview is a hybrid type of interview that lies between structured and in-depth interviews. Nieuwenhuis (2016a) emphasises that semi-structured interviews consist of specific and defined questions determined beforehand, yet at the same time allow some elaborations on the questions and answers. The use of predetermined questions allows for objectivity in the interviews when a researcher interviews a reasonably large number of participants. It keeps the interview discussions focused on the objectives of the study.

The semi-structured interviews will be conducted by the researcher alone during the school days, but outside of teaching time. The participants will choose the dates, times, and venues that are convenient and comfortable to them. The participants in each school will be interviewed on different days, but within the same week, meaning the researcher will take 4 weeks to cover the 12 participants in the selected 4 primary schools. A time of 45 minutes will be allocated for each interview. The researcher will hand out consent forms for signing by all participants to observe ethical considerations. The participants will be asked for permission to audio record the interviews. The consent forms indicate that their names, school names, and responses will be confidential and anonymous; codes will be used to protect participants' identities. The interview questions will be derived from the four objectives of the study, as provided in the interview guide. Open-ended questions will be used in the interviews to allow the participants to fully express their experiences.

1.9.5 Data analysis

Yazan (2015) defines data analysis as the steps to be used to make meaning from the generated data. On a more elaborate note, McMillan Schumacher (2014) regards data analysis as primarily an inductive process of organising data into categories and identifying patterns and relationships among categories. McMillan and Schumacher (2014) further argued that even though the analysis methods are different depending on researchers in general, their induction procedures and their techniques are the same. Wahyuni (2012) believes that qualitative data analysis is about reaching a conclusion based on evidence and reasoning from raw data and indicates that performing data analysis on qualitative data involves dismantling, segmentation, and assembling data to form meaningful patterns to draw inferences. Even though there is no prescribed method of data analysis in qualitative research, Orabah, Bijani and Ismail (2022) argue that qualitative methods lead to data that is analysed using thematic exploration. Thematic analysis will be used as the data analysis strategy in this study. Braun and Clarke (2017) argue that thematic analysis is an appropriate and powerful method to use when seeking to understand a set of experiences, thoughts, or behaviours across a data set. To shed light, Lochmiller (2021) shared that thematic analysis involves the identification of recurring patterns that are presented by researchers as overarching statements or themes. The most widely accepted framework for conducting thematic analysis involves a six-step process that was proposed in Braun and Clarke (2017): familiarising yourself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

1.10 TRUSTWORTHINESS

Trustworthiness is a means to support the arguments that the inquiry's findings were worth paying attention to. In other words, trustworthiness is required for researchers to produce authentic findings. De Vos, Campagnol, Romero-Vara, Deleu, Stappers, Binnemans and Fransaer (2014) elaborate that the critical aspects of trustworthiness are credibility, confirmability, dependability, and transferability. Credibility is the researcher's ability to demonstrate a true picture of the phenomena under investigation (Orabah et al., 2022). In this study, credibility will be ensured through member checking. Wahyuni (2012)

defines transferability as a validation of whether the information collected can work in other contexts. To ensure transferability, purposive sampling will be used to select participants who are information-rich. In addition, a thick, detailed report will be compiled. Petty, Thomson and Stew (2012) define dependability as procedures and processes carried out by the researcher to enable a judgement to be made by another. To ensure dependability, all steps in the research process and procedures will be explained. Confirmability is about how others confirm the findings to determine if the outcomes are accurate reflections of the participants (Wahyuni, 2012). In ensuring confirmability in this study, the researcher will use the audio recorder for the interview process to backup findings concerning the research topic.

1.11 ETHICAL CONSIDERATIONS

McMillan and Schumacher (2014) indicate that ethics are generally considered to deal with beliefs about what is right or wrong, proper or improper, good or bad. Ethical issues are considered necessary during all phases of the research process. All necessary steps will be taken to ensure that the participants understand the research requirements and that the key principles of informed participant consent, confidentiality, right to withdraw, anonymity, and avoidance of harm are upheld. To ensure that my research is ethical, several procedures will be followed. Firstly, the researcher will apply for ethical clearance from the University Ethics Committee. The researcher will obtain permission to gain access to sites for the research in Limpopo Province through the Limpopo Provincial Department of Education (DoE), the Circuit Manager of Mahwereleng Circuit, and the Principals of the four selected primary schools in Mahwereleng Circuit.

The participants will be free from harm (physical or mental) and exploitation, and they will be protected as agreed upon through the signing of the consent forms by the researcher and participants. The participants will be made aware that participation is voluntary. I will make sure that all the participants in this study receive disclosure of the nature of the study. Voluntarism will be ensured by observing the principles of informed consent and the right to withdrawal. The willing participants will be asked to sign informed consent forms after I explain the content of the form to them to indicate that their participation was informed and voluntary. The researcher will make sure that participation at any stage of

the research project is voluntary without any coercion by informing the participants that they are free to withdraw from the study. to ensure privacy, confidentiality, and anonymity will be upheld. The participants will be assured that the collected information will not be shared with any other person without their consent. Even the names of the schools and the participants will be hidden in the reporting of the results, and code names will be used.

1.12 LIMITATION OF THE STUDY

The study will be conducted using qualitative research with a full understanding of the limitations of qualitative research in terms of generalisation of the findings; however, the use of non-probability purposive sampling to effectively embrace the different geographical locations and sizes of the schools in the circuit in terms of enrolment was a measure to increase credibility and generalisation of the study.

1.13. KEY CONCEPTS OF THE STUDY

1.13.1 Impact

Impact is about making a difference, so there is action or activity that leads to change, but that change needs to be seen within a context that may be global, local, or even individual. Impact relates to the effects of research or its effects on an individual, a community, the development of policy, or the creation of a new product or service. It relates to the effect of research on our economic, cultural, and social lives (Arts and Humanities Research, 2010:1). In other words, it is the positive and negative changes produced by an intervention, whether these have been produced directly or indirectly (DBE and DPME, 2014). In this study, impact refers to the influence on the learners' learning in schools.

1.13.2 National School Nutrition Programme

The NSNP is a nationally funded scheme that provides a daily meal to learners in South Africa's poorest schools during the school term. It is a poverty alleviation strategy that aims to deliver a daily nutritious meal, providing at least 30% of the recommended dietary allowance for children over the age of 4 years to learners attending quintile 1, 2, and 3

schools. The NSNP aims to enhance learning capacity and improve access to education by providing a nutritious meal daily to learners at schools (DBE and DPME, 2014).

1.13.3 Nutrition

Nutrition is a source of nourishment or food. It is the process of consuming food, using it for growth, metabolism, and repairing worn-out tissues (Mpofu, 2015). In this study, nutrition refers to the food that is eaten by the NSNP to enhance their health and improve their learning capacity.

1.13.4 Food handler

A parent or community member, usually a female, who volunteered to offer services in the preparation, cooking, and serving of meals to learners in return for a monthly stipend (DBE, 2010).

1.13.5 Schools feeding programmes

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 THR to families who have enrolled their children in schools (WFP, 2020). This is to ensure the better nutritional and educational improvement of school-going children.

1.14 OUTLINE OF THE STUDY

This study is presented in five chapters.

Chapter One provides an introduction to the study. The background and rationale of the study were outlined. The chapter also contained the objectives and the research questions that underpinned the study.

Chapter Two provides the literature review and the theoretical framework that underpinned the study.

Chapter Three describes the research methodology employed to investigate the research problem in this study.

Chapter Four presents the analysis and the subsequent discussion of the findings.

Chapter Five gives an overview of the study through a summary, makes recommendations, and draws a conclusion.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter affords the reader a review of the literature pertaining to SFPs in the global and South African contexts. According to Dawidowicz (2010), a literature review is an examination of scholarly information and research-based information on a specific topic. Its goal is to create a complete, accurate representation of the knowledge and research-based theory available on a topic. It helps the researcher improve their understanding of the research problem being studied. It enlightens the researcher on what has been done by other researchers and identifies what still needs to be done. Through a literature review, the rationale or justification for carrying out research on an identified topic is assessed. The main purpose of this chapter is to bring out and evaluate the literature from different authors concerning the subject under research. It seeks to answer the various questions that are being asked about how the SFP is being implemented in schools and its impact on learners' welfare and performance in schools.

2.2. THE NATIONAL SCHOOL NUTRITION PROGRAMME

The NSNP is the government programme that provides one nutritious meal to all learners in primary and secondary schools. It is one of the strategic ongoing safety nets that were introduced in South Africa more than 20 years ago, providing daily meals to more than 10 million learners (Shepherd & Mohohlwane, 2021). Beneficiaries from the NSNP programme increased from 70% in 2010 to over 82% in 2018 and beyond. Devereux et al. (2018) explained that the NSNP is run by the DBE, working in partnership with other government departments, namely the Departments of Health and Agriculture, Forestry, and Fisheries. Private companies also assist with the breakfast programme, namely Tiger Brands Foundation, Pioneer Foods, and Economic Development Solutions.

2.3 RATIONALE FOR NUTRITION PROGRAMMES IN SCHOOLS

The world's population has drastically plunged into poverty over the last few decades. Childhood hunger and malnutrition remain global challenges that have direct and adverse consequences, as reported by the Food and Agriculture Organization, the International Fund for Agricultural Development (IFAD), the United Nations International Children's Emergency Fund (UNICEF), the World Food Programme (WFP), and the World Health Organization (WHO) (Eluya, 2019). Statistically, FAO (2020) and IFAD (2020) elaborated that in 2019, 690 million people, equivalent to 8.9% of the global population, were already undernourished, 135 million in 55 countries were in food crises or worse, and 2 billion people did not have regular access to safe, nutritious, and sufficient food. The COVID-19 crisis exacerbates these hardships and may result in an additional 121 million people facing acute food insecurity by the end of 2020 (WFP, 2020). There is a clear need to support vulnerable households during the COVID-19 crisis, where incomes and levels of food security are falling even further.

The international community has enshrined the aim of ending extreme poverty by 2030 in the Sustainable Development Goals (Govender et al., 2020). The most recent 2019 figures of the Organisation for Economic Cooperation and Development (OECD) indicate that child poverty averaged 13.1% across OECD countries and was below 5% in only two of them, namely Denmark and Finland (OECD 2019). The South African Demographic and Health Survey of 2016 found that 35% of household members received at least one grant, with the Child Support Grant being the most common type of social assistance (24%). Yet 29% of the poorest households still reported problems satisfying children's food needs (Kruger et al., 2020). Despite South Africa being a food-secure country, household food and nutrition security have deteriorated since 2020 due to the COVID-19 pandemic. School feeding programmes may be a critical part of encouraging children back to school and keeping them enrolled after the crisis. A study by Borkowski et al. (2021) reveals evidence to suggest that school feeding can increase enrolment and attendance rates for girls and the most disadvantaged children.

Nutrition is a basic human right for all humans, including children, as stated in the Convention on the Rights of the Child and other human rights agreements (UNICEF,

2004). While one of the most effective ways to address poverty is through a strong and robust economy, research has shown that effective poverty reduction also requires policies addressing the problem directly by giving the poor what they most urgently need (Saunders, Sim, Kingstone, Baker, Waterfield, Bartlam, Burroughs & Jinks, 2018). The United Nations Millennium Development Goals (MDGs, 2015) were focused on the eradication of severe deprivation and hunger, making it clear that all children should complete primary schooling (Govender et al., 2020). Through the MDGs (2015), school feeding programmes were used as a tool and safety measure to address poverty alleviation. Schools are convenient locations for various interventions targeting children, as the setting provides a unique opportunity to reach children on a large scale (United Nations System Standing Committee on Nutrition (UNSSCN), 2017). Schools play a crucial role in improving children's health and are an obvious setting for public health interventions. They provide easy, and almost universal, access to learners of various ages from across the social spectrum.

School feeding has been identified as a means of addressing the MDGs 1 and 2, which aim to halve the proportion of people suffering from hunger worldwide and to ensure universal enrolment in primary school education (Hassanally et al., 2020). UNDP (2012) agrees that learners spend most of the day at school, and SFPs can improve the nutritional status of children and school enrollment. School-aged children and adolescents need more nutrients than adults because they gain at least 40% of their adult weight and 15% of their adult height during this period (Borkowski et al., 2021). Besides their role in keeping children in school and being a direct nutrition and health intervention, SFPs are an entry point for introducing other safety nets to address chronic vulnerabilities in underserved or at-risk populations (WFP, 2020). Food provided in schools could have a major influence on children's diet quality and has the potential to reduce inequalities in dietary intake (Woodside et al., 2020). Kruger et al. (2020) assert that inadequate dietary intake during this period can compromise cognitive development, delay sexual development, and slow linear growth.

Mashiri (2017) posits that SFPs are meant to:

- to lessen short-term hunger in malnourished or otherwise well-nourished children. This helps to increase the attention and concentration of students, producing gains in cognition, function, and learning.
- Motivate parents to enrol their children in school and have them attend regularly, reducing absenteeism and promoting desirable educational outcomes, thereby reducing dropout levels and repeating grades.
- Address specific macronutrient deficiencies in school-going-age children, such as iodine and iron deficiencies.
- Increase community involvement in school programmes, particularly where programmes depend on the community to prepare and serve meals.

In brief, numerous governments in developing countries implement SFPs as a way of addressing the high prevalence of malnutrition, short-term hunger, school enrolment, absenteeism, and dropouts.

2.4 SCHOOL NUTRITION IN THE GLOBAL CONTEXT

Countries around the globe have adopted school feeding schemes in response to the different and varied needs of learners at school. Various nations, both developed and developing, have subsidised a substantial sum of capital in school breakfast and luncheon agendas to improve and enhance school turnout, success levels, and learners' dietary status (Govender et al., 2020). Prior to 2020, developing countries had made significant strides towards universal basic education: by 2019, primary school enrolment rates had reached over 90% in Latin America and the Caribbean and over 75% in Sub-Saharan Africa (Lichand et al., 2021). Since the beginning of the pandemic, UNESCO estimated that 1.6 billion learners in 199 countries worldwide were affected by school closures, with nearly 370 million children not receiving a school meal in 150 countries (UNESCO, 2020). In 2020, globally, an estimated 39 billion in-school meals will have been missed during school closures. WFP (2020) elaborated that children globally are estimated to have missed an average of 4 out of 10 in-school meals they would have regularly received, with children in some countries missing 9 out of 10 in-school meals. Statistically, Mumba

and Kesa (2020) reported that an analysis by the WFP and the Partnership for Child Development shows that India now feeds over 100 million learners, Brazil 48 million, China 44 million, and South Africa and Nigeria each feed 9 million of their learners. Some of the countries that have school feeding programmes are highlighted below.

In India, the Midday Meals Scheme (MDMS) has been shown to decrease calorie deficits in children by 30%. Data from the Indian Human Development Survey in 2005 and 2012 show that MDMS is well targeted to children that need it the most (Singh, Park & Dercon, 2014). Evidence from a persistent drought in India shows that “drought exerts a substantial negative effect on nutrition but that this negative effect is entirely compensated for by the MDMS” (Borkowski et al., 2021). In the time of the COVID-19 pandemic in India, Borkowski et al. (2021) took note that in response to the Supreme Court order and the absence of a federal response, states have taken very different alternative school feeding responses that include home delivery of meals (five states), THRs (five states), and cash transfers (two states).

Brazil introduced its SFP in the 1950s, funded through the United States Agency for International Development and the United Nations, respectively (Govender et al., 2020). At first, the feeding programme was centralised, but it presented severe challenges. Perishables and food were stocked in warehouses before being distributed to schools. The perilous and unsafe delivery and supply methods, especially within the interior areas, often resulted in food being damaged before it reached the children at the schools (Govender et al., 2020). A further challenge was that many schools in the interior did not receive food on a regular basis, which resulted in poor school attendance. Mafugu (2021) added that the SFP in Brazil had expensive logistical challenges with constant losses due to long distances. Brazil resorted to a decentralised system; the Local Schools Meals Councils coordinated the implementation of the SFP, as evidenced in the Report on the Evaluation of the NSNP 2008. Programa Nacional de Alimentação Escolar, the national school feeding program, was decentralised during the 1990s. The National Fund for Educational Development administers the programme (Govender et al., 2020). The decentralisation of the feeding programme displayed some advantages. Mafugu (2021) contends that it allows key stakeholders, for example, schools, learners, local

municipalities, service providers, and enterprises, to play a significant role in determining what meals learners consume.

In addition, food for schools is rapidly being acquired through domestic traders, organisations, teaching and learning, and local vegetable gardens. Vinueza, Lera, Salinas, Gonzá, Barrios and Vio (2016) indicated that school gardens are useful educational tools as they can be used to influence the eating habits and practises of learners. Furthermore, Soares, Silva, Santiago-Silva, Espitia, Gonçalves, Lopez, Miltz, Cerqueira, Vicente, Teixeira and Silva (2016) explored the use of food produced by family farms on school menus of the SFP in southern Brazil and established that family farms can be viewed as a source of healthy food in school meals. The authors further explained that family farms can help with the provision of fresh food to SFPs at limited transport costs, as the farms are often located in relative proximity to the school. In addition, family farms help with the provision of natural and organic foods, which promote good health (Soares et al., 2016). This has improved the quality of school meals, particularly the availability of fruits and vegetables. However, Mafugu (2021) contends that controlling and monitoring the implementation of programmes are major challenges. Poor sanitation was also observed as a challenge in the school nutrition programmes in Brazil.

In developed countries such as the United States of America (USA), which is globally ranked as one of the wealthiest countries, malnutrition and starvation persist as key concerns (Govender et al., 2020). In the USA, five major US Department of Agriculture programmes were aimed at alleviating child hunger before the pandemic, three of which supported meals provided in schools, namely the National School Lunch Program, the School Breakfast Program (SBP), and the Child and Adult Care Food Program (World Bank 2021). A school nutrition programme provides several meals per day to learners in public schools. In contrast, due to financial constraints, most developing countries can provide only one school meal per day to poor communities (Mafugu, 2021). The United States government has established a comprehensive strategy envisioned for young people residing in households where malnourishment and deprivation are extensive. The World Bank (2021) elaborated that more than 30 million children lost access to meals during periods of school closure. In response to the closure of COVID-19 schools in the

USA, the Pandemic Electronic Benefits Transfer programme was adopted, which provides families with funds equivalent to the cost of weekday meals that their children would have been eligible to receive at school. This mitigated hunger for 3 million children, representing 10% of children who lost access to school meals when schools were closed.

However, before the COVID-19 pandemic, Govender et al. (2020) revealed that the leading parts of these programmes, the National School Lunch Programme and the School Breakfast Programme, deliver food at a minimal charge for destitute learners for the duration of the school day. Gorski, Cohen, Hoffman, Rosenfeld, Chaffee, Smith, Catalano and Rimm (2016) added that schools in the USA served more than 12 million breakfasts and 32 million lunches every day, as well as multiple snacks and supper meals in some cases, mostly to address childhood obesity and improve children's health. Mafugu (2021) echoed that some of the challenges of feeding programmes in developed countries such as Finland and the USA include the need to reduce high-calorie foods to curb obesity and overweight. In addition, Mafugu (2021) identified taste preferences by some learners who would not eat some meals because they were not appealing to them as one of the challenges experienced by the USA SFPs.

In England, nutritional standards for school meals were first established in the 1940s but abolished in 1980. UK school food was deregulated in 1980, and between 2000 and 2013, each nation re-introduced school food standards across primary and secondary schools. These standards varied in content and timetable for implementation but are now compulsory in all nations since 2013, except for English academies founded between 2010 and 2014 (Woodside et al., 2020). Long, Danechi and Roberts (2021) hinted that research carried out in 2004 by the then Department for Education and Skills and the Food Standards Agency showed that while schools and caterers responded positively to the standards, in practice, children and young people continued to make unhealthy choices. The School Food Plan proposed revised food standards, intended to be easier to implement and enforce. When standards have been implemented, evaluations conducted in England (Woodside et al., 2020) found that the quality and nutritional value of food provided have improved, both within and beyond the school setting, and children from all socio-economic groups have benefited.

Funding for school meals is mostly provided through the Dedicated Schools Grant, which is the main block of funding for schools. Free school meals are not for all children but for those whose parents receive certain benefits or who are receiving those benefits themselves (Long, Danechi & Roberts, 2021). These benefits are income support, income-based jobseekers allowance, income-related employment and support allowance, child tax credit, and universal credit with household income of less than £7,400 a year, among other stipulations. However, Woodside et al. (2020) revealed that since September 2014, free school meals have been provided for all children in Reception, Year 1, and Year 2. Since April 2018, households receiving Universal Credit with annual net earnings of over £7,400 no longer qualify for free school meals (Long, Danechi & Roberts, 2021). Furthermore, during the coronavirus outbreak, eligibility for free school meals has been extended to include some groups of children who have no recourse to public funds.

As of January 2021, there were 1.74 million students known to be eligible for free school meals. This means there has been an increase in the proportion of eligible learners to 20.8% of all state-funded learners from 17.3% in January 2020 to 15.4% in January 2019 (Long, Danechi & Roberts, 2021). During the initial coronavirus lockdown, schools were closed to most pupils, and meals or food vouchers were provided to children staying at home.

2.5 SCHOOL NUTRITION IN AFRICA

Sub-Saharan Africa is one of the global regions most affected by hunger, with children being the most vulnerable (World Hunger Education Services, 2016). In addition, the prevalence of numerous forms of the double burden of malnutrition is increasing at an alarming rate in many developing countries (WHO, 2018). In 2018, for the first time ever, half of the world's learners in low- and middle-income countries were able to sit down and be provided with a meal at school. That relates to an estimated 370 million learners across the globe (Mumba & Kesa, 2020). The World Food Programme (WFP) (2019) reports that an estimated 310 million schoolchildren in low- and middle-income countries eat a daily meal at school, with about 18.3 million being provided through the WFP. Bain et al. (2013) also highlighted that the achievement of MDG 1, namely to eradicate extreme poverty

and hunger, has been unsuccessful in Africa, although access to primary education (MDG 2) has significantly improved in many parts of the world. In its contribution to the significance of the feeding programme, UNESCO (2021) states that school feeding programmes contribute to all six Education for All campaigns contained in the Dakar Framework for Action (2000), the Comprehensive Africa Agriculture Development Programme (2003), and the New Partnership for Africa's Development (2003).

In Ghana, the SFP targets the nutritional sector, where emphasis is being placed on improving the nutritional status of the children in the area. Twice per day, primary school grades are fed with imported fortified foods that help to improve their nutritional health (Suleiman, Wright, Gill, Brilot, Waters, Peacock, Procopis, Nibber, Vincent, Dale & Lang, 2013). In the morning, the children are given snacks before cereal with fortified nutrients is served to them. The schools provide the feeding points and water. In a study of SFP in Ghana, Mafugu (2021) noted that in East Akum district, the food is supplied by the East Akum Municipality in conjunction with the former residents of the area who are based in developed countries such as England and Germany. In this program, emphasis is placed on the nutritional benefits of the food. The programme caters to primary school children who are fed twice per school day. During break time, the children are given cereal made of pounded yam and grounded banana, and then at lunchtime, they are given take-home rations of fruits. Since the food is provided by the donor, the storage of the food is under donor control, who supplies weekly rations to the schools and monitors the program. However, the schools are given the mandate to compile meal registers and file them, as well as assist in feeding the children.

However, in Ghana, the problem of maintaining nutritional quality and quantity is experienced in the SFP, where there are no guidelines for both the quantity and quality of ingredients to be served. Cooking in some Ghanaian schools is done under the trees. A recent study by Mafugu (2021) revealed that micronutrients (vitamins and minerals) in the Ghana SFD did not meet international recommendations. A meal planner tool was implemented in some Ghanaian schools with the intention of assisting in providing meal standard specifications. However, some Ghana SFP participants did not have sufficient nutritional knowledge to use the meal planner tool. Therefore, they found it challenging to

work with the meal planner tool to determine appropriate combinations and quantities of foods (Mafugu, 2021). Fernandes (2020) recommended more user-friendly measures, such as serving ladles, paint buckets, and wooden blocks for fish and meat, to ensure that the correct amount of food was served.

In Africa, research has revealed the use of the take-home rations (THR) option in countries like Burkina Faso and Liberia. Before COVID-19, THRs had been shown to be effective in improving the nutritional outcomes of children, including reducing anaemia prevalence (Drake, Lazrak, Fernandes, Chu, Singh, Ryckembusch, Nourozi, Bundy & Burbano, 2018). The benefits of the THR option go beyond schoolchildren. Research in Burkina Faso indicated that younger siblings of children receiving THRs showed significantly higher weight for age than a control group (WFP, 2019). However, their effectiveness depends on the quality, size, and timeliness of the food (Nabe-Nielsen Sibly, Tougaard, Teilmann & Sveegaard, 2014). During the current pandemic crisis, THR has been implemented in various countries. For example, in Liberia, nearly 100,000 children are benefiting from THRs intended for the whole family (based on a five-person household) (UNICEF and WFP, 2020). The programme started in March 2020, as the first cases of COVID-19 were confirmed in the country.

In Niger, where school enrolment is one of the lowest in the world, a WFP-assisted programme is providing, in some areas, the equivalent of the total daily recommended food intake in three meals a day, as well as a THR to attract nomadic girls to school. A study by Suleiman et al. (2013) in Okavango Delta District among the San Communities is another example of an SFP that is aimed at encouraging the San people to release their children to school. The SFP is fully funded by the government, which has employed people to cater for the SFP in schools. What the schools provide are the basics, such as storage facilities and feeding points, but not the food. In countries like Uganda, the Food-for-Education programme model is implemented, which provides meals to learners if they attend school (Eluya, 2019). In Uganda, rural schools have been allocated fields to produce bananas and other vegetables to cater for school feeding programs. The study by Mashiri (2017) noted that for both primary and secondary schools, the situation has

changed for the better, especially considering that the children were affected by hunger, which led to the increase in dropouts.

2.5.1 Regionally Context

In Malawi, the WFP has been the main provider of school meals to an estimated 954,669 primary school learners since 1999 (WFP, 2018). A study by Leo, Muula and Mwambene (2013), which assessed the prevalence of hunger using self-reported data, found that there was a higher prevalence in rural areas (18.9%) compared to 8.3% in urban areas. WFP (2018) reports that other sponsors include organisations like German Technical Cooperation and Action Aid. The programme is administered by the district education managers and local schools (Nkhoma et al., 2013). Malawi also has a Home-Grown School Meals programme, whereby food used by the SFP is sourced locally, thereby providing food to learners timeously and creating awareness about the use of locally produced food (WFP, 2018). Under this SFP, a daily ration of corn soy blend (CSB) porridge is provided to all schoolchildren in the selected schools.

The Namibian variant of SFP provides food to both primary and secondary school-going children, where on school-going days, primary school children are given two meals per day, during break and lunchtime (Mashiri, 2017). The food given to the children addresses nutritional concerns and, at the same time, encourages the enrolment of the once primitive communities in formal schooling. Similarly, the secondary school children are also given two delicious meals during school days (Mashiri, 2017). Though the government does most of the work, the schools in the districts are also involved in the administration of the SFP, such as maintaining hygiene and sanitation standards at the feeding points and ensuring that children come to school not only for feeding but also to learn.

According to the Zimbabwe National Nutrition Strategy, Zimbabwe faces a growing level of chronic malnutrition, which is exacerbated by food insecurity and growing poverty (Mawela & Van den Berg, 2020). More and more learners become dependent on school nutrition programmes. In Zimbabwe, the school feeding programme is not new either. According to Maphosa (2005), the government of Zimbabwe introduced the SFP in 1992

after the drought of the same year ravaged the communities throughout the country. The Government of Zimbabwe embarked on distributing a drink (maheu) made of grounded maize meal, grounded sugar beans, and water. The major targets were both primary and secondary school-going children who were served once per day. In another study of World Vision SFP, Rushinga and Rugube (2012) noted that primary school children were given CSB++ to cater for nutrition-related ailments. The major target of the SFP was the infant classes, whereas the junior and senior classes were excluded from the SFP. Mashiri (2017) contends that the major concern of the donor was to cater for children in their first one thousand days by providing nutritionally rich cereal to facilitate growth and eradicate moderate acute malnutrition aimed at school-going children.

In Botswana, although a study by Moepeng (2013) highlighted the fact that poverty in Botswana has been decreasing, in households with more children, the prevalence of poverty is higher. The Botswana government has successfully implemented its national school feeding programme on a continuous basis for over five decades, resulting in a growth in enrolment and school attendance rates (World Bank, 2016). The SFP falls under the auspices of the Ministry of Local Government and Rural Development (MLGRD) (Eluya, 2019). Data from the 2013 estimate shows that there are 331,000 beneficiaries of the SFP in Botswana, providing learners with at least one meal per day, with a second meal being offered to children in remote area districts (FAO, 2018). Food items provided by Botswana SFPs include sorghum porridge served with beans or canned meat stew, alternating with bread, peanut butter, milk, samp, and beans. However, privately owned schools, also known as English-medium schools, do not participate in the SFP (Eluya, 2019). As a result, learners are reliant on tuck shops, lunch boxes, and street vendors as a source of nutrition during the school day.

The Botswana SFP has stakeholders who are key in the implementation of the programme at various levels. School rations are calculated and distributed in the form of cooked meals. The procurement of commodities is done through both centralised and decentralised models. Bread, jam, peanut butter, and fresh agricultural produce are procured by individual urban and district councils through the Education Department. However, maize meal is procured by district councils for learners in the Kgalagadi,

Ghanzi, and Chobe districts. During the year 2018, the programme catered to some beneficiaries in 756 government-owned primary schools countrywide. The distribution of food commodities shows an increase from 50.7% (2016), 63.24% (2017), and 84% (2018) in primary schools (MLGRD, 2019). The daily ration per child is guided by the menu. However, there are challenges regarding the ration, as it should include more fruits and vegetables (UNSSCN, 2017). The menu has now started to include breakfast since April 1, 2019, as per circular correspondence from MLGRD.

In most urban areas, such as the capital city of Gaborone in Botswana, it is perceived that there is sufficient access to and availability of food. However, FAO (2018) argues that urban food insecurity is a major problem in most households. An urban food security baseline survey conducted in the socio-economically underprivileged areas of Gaborone found that the prevalence of food insecurity was 82% (Nnyepi et al., 2010). In addition, UNSSCN (2017) also confirmed SFP gaps identified by the Government of Botswana and MLGRD (2013) that include inadequate menu composition, outdated guidelines for school feeding, the need to train cooks and other role players within the supply chains, the need to enhance storage and food safety, weak monitoring and evaluation systems, and no school feeding policy.

2.6 NATIONAL SCHOOL NUTRITION IN SOUTH AFRICA

2.6.1 The state of school nutrition in South African schools

The NSNP is one of the strategic ongoing safety nets that were introduced in South Africa more than 20 years ago, providing daily meals to more than 10 million learners. Beneficiaries from the NSNP programme increased from 70% in 2010 to over 82% in 2018 and beyond (Shepherd & Mohohlwane, 2021). The Conditional Grant Framework (2019) reveals that R7.7 billion is channelled towards serving the huge number of learners from marginalised communities in the years 2020–2021. However, given the unforeseeable pandemic that started in 2020 to date, this allocation turned out to be insufficient. The NSNP is operating even on a larger scale than the allocation. The NSNP is of great strategic importance, operating at a large scale in all nine provinces. Even before the pandemic, the 2018 General Household Survey (GHS) revealed that 77% of

learners who attended public schools in 2017 benefitted from school feeding schemes. The 2018 GHS also revealed that 80% of learners aged 7 to 17 living in the poorest 40% of households (according to per capita income) received food through a school feeding and nutrition programme daily. Shepherd and Mohohlwane (2021) articulate that the NSNP target for 2020/21 was to provide meals to 21,000 schools, reaching 10,707,186 learners out of the school population of 13,041,198.

The National Income Dynamics Survey-Coronavirus Rapid Mobile Survey (NIDS-CRAM) is a rapid household survey that employs computer-assisted telephonic interviews (CATI) with the aim of tracking the socio-economic impact of the ongoing COVID-19 crisis in South Africa (World Bank, 2021). Prior analysis using the balanced panel from NIDS-CRAM waves 2, 3, and 4 indicated erratic access to school meals even across time points when schools were open. The World Bank (2021) found that school feeding at the beginning of the 2021 academic year had neither deteriorated nor improved from the final quarter of 2020. In April 2021, access to food at school increased significantly from 49% in November 2020 to 56% in April 2021 (Shepherd & Mohohlwane, 2021). However, the study of Shepherd and Mohohlwane (2021) revealed that much variation exists across provinces: whilst the average proportion of targeted learners receiving school meals in Gauteng and Limpopo exceeded 95% over the four DBE NSNP report cycles, the proportion of targeted learners fed in the Western Cape remained around 60%, whilst feeding in the Northern Cape declined from 80% to 34% over the two months, most likely due to increased learner absenteeism linked to rising infections in the province.

Table 2.1: National School Nutrition Programme meals provided by province in April 2021 to June 2021

Province	Targeted learners 2021/22	30/04/2021	24/05/2021	15/06/2021
Eastern Cape	1,855,065	1,578,708 (85%)	736,855 (40%)	1,578,708 (85%)
Free State	596,674	560,027 (94%)	572,556 (96%)	453,547 (76%)
Gauteng	1,599,116	1,593,508 (100%)	1,574,894 (98%)	1,580,212 (99%)
KwaZulu-Natal	2,442,744	1,849,629 (76%)	1,914,767 (78%)	2,090,570 (86%)
Limpopo	1,644,363	1,600,473 (97%)	1,599,143 (97%)	1,441,708 (88%)
Mpumalanga	920,110	920,110 (100%)	920,110 (100%)	920,110 (100%)
Northern Cape	449,277	242,108 (54%)	220,642 (49%)	152,878 (34%)
North West	751,400	677,913 (90%)	576,321 (77%)	572,987 (76%)
Western Cape	448,437	259,859 (58%)	260,146 (58%)	274,349 (61%)
Total	10,707,186	9,282,335 (87%)	8,375,434 (78%)	9,065,069 (85%)

Source: Adapted from Shepherd and Mohohlwane (2021)

Although food security has improved since April 2020 (NIDS-CRAM Wave 1), the proportion of adults living with children who reported household and child hunger in April 2021 was estimated at 18% and 14%, respectively, has remained relatively stable since November 2020, and is nearly twice pre-pandemic levels (Shepherd & Mohohlwane, 2021). The fact that overall child hunger has remained stable at high levels between October 2020 and April 2021 is cause for concern.

2.6.2 National School Nutrition Policy

Malnutrition in South Africa among young children is a public health challenge that requires a systematic approach to improve nutrition services and promote behaviour change. It is against this background that the government introduced the National School Nutrition Programme (NSNP) in 1994 to meet the nutritional needs of the undernourished school learners (Berejena et al., 2020). The South African government introduced the NSNP as an anti-poverty policy intervention, which declared that all primary school

children should get fed a nutritional meal every day. Several government policies have been initiated to address the issue of food insecurity in South Africa, such as the Food Fortification Programme, food supplementation, and school feeding programmes, including the NSNP, as well as day-care centre schemes (Hassanally et al., 2020). The NSNP earlier identified as the Primary School Feeding Scheme, came into effect in September 1994 (Govender et al., 2020). Upon initial commencement of the programme, it was overseen by both the National Departments of Education and Health. The DoE remained tasked with academic aspects, whereas the Department of Health was responsible for dietary and well-being sections. The Primary School Nutrition Programme then developed into a division of the Integrated Nutrition Programme (Govender et al., 2020). In April 1995, it was re-titled the National School Nutrition Programme (DBE, 2013). The South African DBE administers the NSNP at national and provincial level.

The NSNP reaches approximately 20,000 schools in the poorest quintiles and provides meals to more than nine million learners nationwide. It is a poverty alleviation strategy that aims to deliver a daily nutritious meal, providing at least 30% of the recommended dietary allowance for children over the age of 4 years to learners attending quintile 1, 2, and 3 schools (Kruger et al., 2020). Hassanally et al. (2020) contend that it aims to enhance the learning capacity of learners by providing a healthy school lunch meal to increase learners' energy levels, as well as improve micronutrient intake, making them alert and receptive during lessons. It is prominently tailor made to enhance learning capacity and improve access to education through the provision of nutritious meals to learners residing in low socio-economic communities (Sanousi, 2019). Hassanally et al. (2020) explain that micronutrient deficiencies are common among school children, but unlike stunting and various other effects of long-term malnutrition, micronutrient deficiencies are reversible with the use of food intervention strategies, such as school fortification feeding programmes, or the addition of supplements into school feeding programmes.

According to the strategy, nutrition education in schools should be in line with national recommendations. The food-based dietary guidelines (FBDGs) for South Africa were drafted in 2000, and officially adopted as national dietary guidelines in 2003 and revised

in 2013 (Okeyo, Seekoe, de Villiers, Faber, Nel & Steyn, 2020). Vorster, Badham and Venter (2013) explain that FBDGs are brief, positive dietary recommendation messages that are used to inform consumers how to choose food and beverage combinations that will lead to a diet that is adequate, that meets nutrient needs, and that is, at the same time, prudent, for example, which lowers the risk of non-communicable diseases. The purpose of FBDGs is to inform, educate, and empower South African consumers to change their eating behaviour.

The revised general FBDGs for South Africans in 2012 as stipulated in Vorster et al. (2013) are:

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

When the dietary recommendations are followed, the result should be optimum nutrition, commensurate with optimum physical and mental development, a lowered risk of NCDs, and health and well-being throughout the life course (Vorster et al., 2013). For successful implementation of FBDGs, a holistic approach is necessary, in which all stakeholders or role players work together to improve the food environment and empower consumers to make healthier choices. Special manuals with information on the FBDGs was developed by the DBE and made available to life orientation teachers at schools (Okeyo et al., 2020). Okeyo et al. (2020) added that nutrition education and assessment are included in the Integrated School Health Program (ISHP), which was introduced in 2012 in South Africa,

with the aim of contributing to the improvement of the general health of school-going learners as well as the environmental conditions in schools.

Menus vary with each province in terms of choice of items, but the key nutrients are compulsory to all provinces. The table below shows the menu for Limpopo province for 2021/22 as stipulated by the DBE. It is important to note that the NSNP does not specialise in specific diets linked to health conditions like Diabetes Mellitus, HIV/AIDS, and Tuberculosis.

Table 2.2: 2021/22 Limpopo Province weekly menu for primary schools

Monday	Pilchards stew with rice and yellow vegetable in season	Protein	Pilchards in Tomato
		Starch	Rice
		Vegetable/Fruit	Yellow vegetables in season
		Season	Cooking Oil, Iodised Salt, Onions, Carrots, Sugar
Tuesday	Soya mince with pap and a green vegetable in season	Protein	Approved Soya Mince
		Starch	Maize Meal (Fortified)
		Vegetable/Fruit	Green vegetables in season
		Season	Cooking Oil, Iodised Salt, Onions, Carrots
Wednesday	UHT Milk with pap and fruit in season	Protein	Milk (UHT)
		Starch	Maize Meal (Fortified)
		Vegetable/Fruit	Fruit in season
Thursday		Protein	Sugar Beans
		Starch	Samp
		Vegetable/Fruit	Green vegetables in season
		Season	Cooking Oil, Iodised Salt, Onions, Carrots
Friday		Protein	Pilchards in Tomato
		Starch	Maize Meal (Fortified)
		Vegetable/Fruit	Yellow vegetables in season
		Season	Cooking Oil, Iodised Salt, Onions, Carrots, Sugar

The rationale behind the Food Specification document is to maintain standards, to improve the quality of meals served to learners and to make information available that can guide service providers on the expectations of the NSNP. However, it should be argued that there is always a difference between what is indicated on paper and what happens on the ground. The implementation of the menu plan in schools should be assessed and evaluated.

2.6.3 Management of School Nutrition Programme in schools

SFPs vary in design, implementation, and management structures and can either be nationally owned or administered by international organisations using locally procured or home-grown in-school meals and snacks prepared at school, in the community, or from centralised kitchens (WFP, 2018). No two school feeding programmes are the same; objectives may be similar, but resources and implementation differ from country to country. SFPs are adjusted to meet the needs of the country. A study by Mumba and Kesa (2020) found that in the Gauteng province, a centralised procurement model is used to procure food items where service provider contracts are advertised in the National Gazette and awarded with the support of the Gauteng Department of Finance (DBE, NSNP annual report, 2013/2014). Some provinces use a decentralised model where funds are transferred to the schools to procure food items according to the provincial menu. According to the DBE (2013), school principals must manage the NSNP and appoint a nutrition coordinator to assist him or her. The role of the school principal is essential in managing school nutrition programmes.

Management of the NSNP entails, among other things, budgeting, managing allocated funds, and the sourcing, buying, transporting, and storing of food. Mawela and Van den Berg (2020) identify principals as the main role players, together with School Governing Bodies (SGBs), in the annual appointment of food handlers (parents who prepare and serve food to learners) and who oversee the process of food delivery to a school by appointed contractors. The nutrition coordinator, who is a full-time teacher, supports the role of the principal. Often, the role of the nutrition coordinator is to ensure that food handlers cook according to the NSNP menu, manage the feeding of needy learners, ensure the safe storage of food, and look after the distribution of food parcels to needy

learners (Mawela & Van den Berg, 2020). However, Mawela and Van den Berg (2020) hinted that managing the NSNP requires urgent attention, especially when it comes to promoting sustainable food production in schools and meaningful collaboration with non-governmental organisations (NGOs) and other stakeholders.

In most, if not all, South African public schools (primary and secondary), there are two lunch breaks that take place throughout the school day. Mumba and Kesa (2020) elaborated that one is usually around 10 a.m. and the other around 12 p.m., depending on the time school ends each day. The lunch breaks last about 30-45 minutes each. A study by Mumba and Kesa (2020) found that the lunch areas are not regulated, so learners may consume their lunch anywhere they please and are generally unsupervised by teachers. Needy learners are served daily with a prescribed, balanced meal consisting of protein, starch, fruit, and vegetables. A study by Mawela and Van den Berg (2020) noted that the service providers may vary in the standard of delivery, as some discrepancies in quality or service depending on the supplier were observed. However, the food items delivered across all schools are the exact same, for example, samp, cabbage, milk, and mealie meal, as each school needs to comply with the menu guidelines. The ingredients are supplied by service providers contracted by the provincial education department (DBE, NSNP annual report, 2013/2014). Some schools receive additional food aid from private organisations, which can be in the form of a one-time donation or a partnership. Mumba and Kesa (2020) elaborated that the National DoE has partnered with a food corporation, namely “Tiger Brands Foundation,” and some schools are identified by the province and district to benefit from this food corporation through an in-SBP.

However, Mawela and Van den Berg (2020) noted that the lack of a clear plan on how nutrition programmes should be managed overwhelms many school principals and nutrition coordinators. Teachers feel that managing a school nutrition programme makes heavy calls on their teaching and learning time and compromises their schoolwork. The same applies to principals, who already have a full workload. Even food handlers seem to be overburdened with daily responsibilities. Food handlers in the NSNP have a crucial role; they perform food preparation duties as part of a kitchen team. The DBE employs

the local parents as food handlers who prepare and serve meals in the programme. They are expected to perform routine duties such as peeling vegetables, cleaning, and sanitising (Berejena et al., 2020). The NSNP operational guidelines gave a condition that each food handler should prepare and serve meals for 200 learners per day (Conditional Grant Framework, 2019). This ratio of learners to food handlers (1:200) seems to be posing a heavy load on their daily routine. Furthermore, the food handlers are expected to maintain a high level of health standards, kitchen hygiene, and personal hygiene.

2.6.4 The challenges experienced in implementation of National School Nutrition Programme in South African schools

Since the launch of the MDGs, one of the most important interventions has been the implementation of SFPs. Through the MDGs of 2015, SFPs were used as a tool and safety measure to address poverty alleviation. However, Govender et al. (2020) noted that the rollout of the feeding scheme has been a challenging one. Eluya (2019) echoes that SFPs have been successful; however, the challenge lies in maintaining them so that they can reach as many learners and their families as possible. Several studies carried out in South African primary schools indicate that challenges seem to exist in the implementation of the NSNP, such as the absence of infrastructure. In South Africa, a study by Mafugu (2021) identified an absence of kitchens in the Eastern Cape and Mpumalanga schools. Bundy et al. (2018) and Berejena et al. (2020) reported an absence of storage, preparation, cooking, and eating facilities that meet health and safety standards in schools in South Africa. A study by Mafugu (2021) found that several South African schools that have kitchens also disregard the safety standards provided in the NSNP safety directory. In some of the schools, the gas cylinders were kept inside kitchens.

In a study by Berejena et al. (2020), it was found that food handlers and caterers in the Sedibeng West district of Gauteng and in the Fezile Dabi District in the Free State also reported their frustration with a lack of contractual continuity. These uncertainties frustrate suppliers, and it proves difficult for them to get employment elsewhere. Considering the high rate of unemployment in South Africa, the NSNP is economically alleviating the unemployment challenges. The Cabinet Resolution of 2002 mandated the NSNP to

create job opportunities for the local people within its operations (DBE, 2016). The DBE employs the local parents as food handlers who prepare and serve meals in the programme. To date, well more than 50,000 parents work as food handlers in the programme nationwide (Berejena et al., 2020). Occasionally, food handlers become reluctant to be involved in additional duties due to the frustrations they experienced in the past when the contract expiration date approached. Mafugu (2021) noted that food handlers and principals in the Eastern Cape felt that the NSNP was a burden to them. In addition, Kruger et al. (2020) and Mafugu (2020) found that the food handlers, who are mostly women, are supposed to be provided with training in food safety and hygiene, preparation, and serving. But there is no evidence that this training has been successfully implemented in most schools.

A study by Mafugu (2021) identified food preference and culture as two of the challenges experienced in schools. There were also challenges with food preferences among schools. A product that may be good for one school might not be liked by another. The DBE has provided guidelines to establish healthy school tuck shops, but there is no monitoring in place to regulate implementation. Foods bought from tuck shops or vendors are mostly low in nutrients and high in energy, salt, fat, and sugar, such as biscuits, crisps, and sugar-sweetened beverages. This is concerning, as about 50% of school-going children in South Africa regularly buy food at school and do not pack lunch boxes. Kruger et al. (2020) study showed that most urban adolescents consumed fast foods, sugar-sweetened beverages, and school tuck shop items on three or more occasions per week. Children in the lowest income groups had higher odds of an unhealthy dietary pattern than children in the highest socio-economic groups. The Birth-to-20 cohort study tracked the dietary habits of a large group of urban adolescents in Soweto, Johannesburg, over four years and showed irregular breakfast consumption, infrequent family meals, and frequent consumption of fast foods, sugar-sweetened beverages, and energy-dense school tuckshop items. On the contrary, Hassanally et al. (2020) argued the benefits of snacks in school feeding programmes are well established as they alleviate short-term hunger and micronutrient deficiencies, improve learning, and are cheaper and easier to distribute than meals.

Mafugu (2021) found that the involvement of community members in programme activities like management and implementation was infrequent. Policies are dictated to them, depriving them of the opportunity to share their divergent views. The department only communicates with the schools through meetings held with school principals, who are to share the information with other stakeholders (Mafugu, 2021). On that note, Hassanally et al. (2020) argue that improving the efficacy of school feeding programmes includes designing a school feeding programme specifically for the needs of that community using local teams rather than distance experts. The NGO Feed, Uplift, Educate, and Love (FUEL) made the same finding as reported in Kruger et al. (2020) when it investigated the processes of food delivery in the NSNP and worked with the North-West Province provincial government to improve the procurement and delivery of food in selected schools. Initially, they found that their efforts were unsuccessful because stakeholders at the school level were not involved. They then involved local fieldworkers in developing a monitoring, reporting, and responding tool, which allowed fieldworkers to monitor the quantities of food delivered and assess whether schools were serving nutritious meals on time (Kruger et al., 2020). The monitoring, reporting, and responding methodology was rolled out in other provinces between 2011 and 2017, and progress has been made in serving timely, nutritious meals in most provinces.

A study by Kruger et al. (2020) reported that observation in the Eastern Cape reveals that vegetables such as cabbage are cooked long before mealtime, resulting in incidents of severe food poisoning. The NSNP provides guidelines on the basics of personal hygiene, food hygiene, food preparation, managing food waste, and preventing food poisoning. Yet the recent evaluation of the NSNP showed that almost half of the volunteers had not received training on kitchen hygiene, food safety, and pest control (Kruger et al., 2020). According to the WHO Report on Diarrhoea, Typhoid, and Cholera in Africa (2013), the cases of these diseases are a result of very poor hygienic standards in the preparation of the food, serving, and consumption. On a more controversial note, a study by Borkowski et al. (2021) reported that children who relied on nutrition services provided by schools may suffer from worsening health and nutritional status in the short and medium term. This claim, to some extent, is supported by findings in the study by Adelman et al. (2019),

where data from Uganda indicates that school meal programmes reduced anaemia in primary-school-aged girls and adult women.

A study by Mafugu (2021) on the challenges encountered in implementing the SNP in KwaZulu-Natal Province, South Africa, in 2017 found that late payment of service providers and suppliers' contract submissions was a problem. Overdue payments affected many of the service providers, resulting in a negative impact on the quality of services provided to learners. Although all the service providers signed contract forms to bind them to provide food every day, quality service could not be guaranteed because of payment delays, sometimes stretching up to five months or more. The study reported delays in feeding because of poor delivery of food and strained relationships among stakeholders. Adjustments in school activities had to be made to accommodate the delays in serving the meal. In addition, a study by Mumba and Kesa (2020) on the causes of food wastage in the NSNP of Johannesburg North Primary Schools found that food waste in these programmes increases learners' short- and long-term risk of food insecurity, hunger, and nutrient deficiencies.

A study by Hassanally et al. (2020) identified the reasons why SFPs do not work, which could stem from a number of factors: the food provided does not provide adequate amounts of the missing nutrients; the type of ingredients used may have a low bioavailability, making it difficult for the body to absorb the necessary nutrients; supplementation occurs too late, where older children are far too malnourished to reverse the effects of malnutrition by providing a single meal in the day, which supports the notion that targeting the younger school children would greatly improve the success of the school feeding programme. In addition, a study conducted by Govender et al. (2020) noted that, in terms of time constraints, SFPs can be challenging. Teachers were unable to achieve stability between teaching commitments and SFP management. This was because, although parents assisted with the programme, in smaller schools, this was not the case. Consequently, teachers took on the responsibility of preparing and serving the meals. In some cases, even with parental cooperation, the shortage of water is reported by Kruger et al. (2020) to be a major constraint for the development and maintenance of school

gardens, particularly in semi-arid areas of Limpopo province, where the development of simple irrigation systems needs to be considered.

2.6.5 The impact of the National School Nutrition Programme to learners' welfare and performance in schools

2.6.5.1 Learner welfare

Devereux et al. (2018) articulate that the objectives of the NSNP revolve around three pillars. Firstly, to provide a nutritious meal to learners; second, to promote nutritional knowledge and healthy food choices; and lastly, to create food gardens to improve production knowledge and environmental knowledge. The quality of diet in childhood has been shown to impact future development, educational achievement, health and well-being outcomes, and influences adult diet and non-communicable disease risk such as diabetes and cardio-vascular diseases in later life (Woodside et al., 2020). There is a need for effective and sustainable ways of helping young people, particularly in areas of socio-economic disadvantage, access a better diet, as early modifications in eating habits and behaviour will decrease the risk of developing such conditions. Mawela and Van den Berg (2020) indicate that the NSNP is a key lever, especially for children coming from poor households, since it addresses hunger and contributes to quality education as well as improving health among learners in South Africa. It is a powerful tool to alleviate short-term hunger and enhance children's learning capabilities.

Cohen, Hecht, McLoughlin, Turner and Schwartz (2021) claimed that nearly all studies examining universal free school meals found positive associations with school meal participation. The NSNP has ensured learners receive a meal at school, thereby significantly contributing to learners attending school regularly and ensuring child poverty within the school environment is lessened. Research showed that the NSNP has promoted punctuality and regular school attendance, thereby improving the concentration of learners, developing self-supporting school food gardens, and promoting healthy lifestyles among learners (Mawela & Van den Berg, 2020). In a study by Govender et al. (2020), it was determined that, focusing on social factors, 93% of teachers agreed that the NSNP is improving learner attendance. The study further ascertained that, due to

extreme poverty levels, parents enrolled their children in schools with the purpose of gaining access to the SFP and free primary education. In other words, it provides an incentive for parents to send or keep children at school (Kruger et al., 2020). To accommodate the increase in learner attendance, untrained teachers were employed.

Govender et al. (2020) contend that SFPs are a means to lessen child poverty and contribute to the nourishment of one of the most vulnerable sectors of society while making an invaluable contribution to teaching and learning in the country. As stated in the South African School Nutrition Programme, Formative Evaluation Report 2006, the SFP provides economic assistance to destitute families. Most parents are unable to provide their children with money to buy food from tuck shops. The NSNP thus offers some sort of relief, both financially and psychologically. In the analysis of the data in the study of Govender et al. (2020), it was determined that only 47.9% agreed that the NSNP assisted in reducing poverty. Although the programme influences learner attendance, the objective of reducing poverty remains daunting. Although SFPs cannot reverse the outcome of earlier malnutrition, the provision of school meals can have a significant impact on the nutritional status of learners (Ogbole et al., 2017). Ghana was not able to demonstrate an improvement in nutritional status or a significant difference in nutritional status between participants and non-participants of SFPs. A study conducted by Cervato-Mancuso, Westphal, Araki and Bógus (2013) demonstrated that learners who often go to school hungry are not well behaved in class. In addition to the potential for improving nutritional status, Cervato-Mancuso et al. (2013) contend that school meals promote social interaction between learners and teachers and serve as a practical learning opportunity regarding the role of food and social interactions, which are important for children's emotional development.

A study by Shepherd and Mohohlwane (2021) based on five waves of the NIDS-CRAM data asserts that child access to school meals is shown to significantly reduce the levels of parent worry and depressed mood. In South Africa, the NIDS-CRAM survey reveals that 40% of adults living with children in food-insecure households showed signs of depressed mood in April 2021 (World Bank, 2021). The suspension of the NSNP for four months from March to June 2020 represents the longest break in the provision of daily

meals to eligible learners, producing additional emotional strain for caregivers (Shepherd & Mohohlwane, 2021). Shepherd and Mohohlwane (2021) found that adult worry has declined significantly from 74% in 2020 to 57% in the first quarter of 2021, and was at its lowest level of 45% in April 2021 as schools in South Africa reopened to continue schooling and supplementary feeding. Further statistics revealed that between July 2020 and February 2021, 41-49% of adults reported school feeding amongst attending learners, which increased to 56% by April 2021.

2.6.5.2 Learner performance in school

A hungry learner is more likely to face health- and nutrition-related problems. This, in turn, can affect academic performance, cognitive function, capacity to attend school, and the ability to concentrate in classroom lessons (Faught, Gleddie, Storey, Davison & Veugelers, 2017). Jomaa, McDonnell and Probart (2011) assert that lessening temporary hunger, developing nourishment, and improving the intellectual ability of children are some of the intentions of SFPs. The secondary aims of NSNP are to improve access to education and enhance learning capacity. However, Eluya (2019) argues that some researchers have failed to document convincing evidence regarding the relationship between cognitive function, academic performance, and school feeding, despite Manan and Lee (2014) making the assertion that the relationship between learner nutritional status and academic performance is well-researched. In the same regard, Cohen et al. (2021) contend that most studies examining universal free school meals that included free lunch found positive associations with diet quality, food security, and academic performance; however, the findings of studies examining only universal free breakfast were mixed. Furthermore, research findings were similarly mixed when examining attendance as an outcome.

The NSNP 2013/2014 annual report stated that the DBE agrees that if learners are hungry during classes, teaching and learning become unproductive. As poverty and malnutrition are associated with delayed brain development and cognitive function in young children, it therefore also affects their education. In addition, children affected by poor nutrition are more likely to suffer from anaemia and ill-health that can contribute to a lack of concentration, resulting in a greater likelihood of premature school dropout (Eluya, 2019).

Kruger et al. (2020) argue that where NSNP is implemented, the programme has been shown to improve punctuality, regular school attendance, concentration, and the general well-being of participating learners. In the study by Hochfeld, Graham, Patel, Moodley and Ross (2016) in South Africa, the effects of an in-school breakfast programme on the school performance of schoolchildren were evaluated. This study showed positive results, as learners, educators, and principals indicated that they perceived that the breakfast programme had a positive impact on the children's ability to learn by improving their participation and concentration in the classroom.

There is also a strong link between malnutrition and the cognitive development of children. A study by Govender et al. (2020) bring attention to the impact of child poverty and undernutrition and its far-reaching and damaging effects on children. It found that those children who remain stunted from age 1 through 12 perform worse than those with normal growth. This corroborates evidence from other studies conducted globally, stating that stunting primarily compromises cognitive development in children. For example, nutrition in the early years of a child's life can affect brain development at various levels, such as macrostructure, microstructure, and the operation of neurotransmitters (Borkowski et al., 2021). Frisvold (2015) elaborated that for school-aged children, a recent review highlights the importance of iodine, iron, and folate and the contribution of zinc, vitamin B12, and omega-3 polyunsaturated fatty acids to long-term cognitive development. Results from a study by Grantham-McGregor and Smith (2016) conducted in Jamaica found that SFPs contributed to improved cognitive function among undernourished children when compared to those who are well nourished, as no effect on cognitive function was noted in the latter group. Undernourished children also performed better academically after they received breakfast, whereas a change in score could not be shown among adequately nourished children.

Learners are nutritionally very vulnerable; hence, their dietary habits can have an immediate impact on their health as well as their academic performance. This implies that inadequate nutrition negatively affects learner health and academic success, especially for those who grow up in developing countries where the diet is predominately starch-based with poor dietary diversity (Choudhury & Headey, 2018). Grantham-McGregor and

Smith (2016) advised that an overall adequate diet and not only participation in an SFP should ensure that all nutrient requirements are met in order to protect the current and future health of learners, as malnourished children have a diminished capacity to learn. Evidence from India (Aurino, Fledderjohann & Vellakkal, 2019) and Ghana (Aurino, Wolf & Tsinigo, 2020) shows that food insecurity during childhood reduced reading, numeracy, and English scores, as well as short-term memory and self-regulation.

2.6.6 The strategies to improve the National School Nutrition Programme in schools

Inadequate intake of vegetables and fruit, the frequent consumption of unhealthy snacks high in sugar, fats, or salt, and sugary drinks increase the risk for micronutrient deficiencies. Kruger et al. (2020) reported that according to a national study, one-third of the adolescents ate micronutrient-poor, salty snacks daily, while vegetable and fruit intakes were generally low and lowest in poor households. These findings are an indication of nutrition insecurity and poor micronutrient status. It is therefore imperative to invest in nutrition-related interventions for school-age children and adolescents to optimise the health, development, and education outcomes of this important target group and prepare for a healthy and productive next generation of children. Woodside et al. (2020) suggest that a systematic review of interventions that establish school environments and cultural practises that support children eating healthier foods throughout the day could be an effective intervention strategy.

Kruger et al. (2020) suggested educating children about nutrition and healthy lifestyles. Nutrition education, which is a strategic pillar of the NSNP, focuses on promoting a nutritious lifestyle and developing a comprehensive eating plan amongst learners and school communities (Govender et al., 2020). For school feeding, the WFP proposes that governments improve the hygiene of the whole process from food preparation to food delivery, develop standard operation procedures, enforce physical distancing in the classroom, engage in capacity building and training of all the actors involved, and ensure alternative distribution mechanisms (WFP, 2020). As one of the main roles of a school is to equip children with life skills and capacities that support their well-being, interest in and action for integrating school-based nutrition education into national education curricula

has been growing. However, Kruger et al. (2020) posit that those who develop the teacher and learner support materials often use their own knowledge of nutrition, which may be inaccurate, irrelevant, or incomplete.

Food waste can also be reduced by educating learners, volunteer food handlers, and schools on changing behaviours that cause food waste. A study conducted in Japan by Mumba and Kesa (2020) describes how learners in Japan are taught to consume without waste as part of a cultural norm, and the idea is reinforced with the use of incentives and words of affirmation for learners that were able to consume all their food without wasting. This is a model that can be adapted into the NSNP to reduce waste while simultaneously educating the learners on the effects of waste on the environment. Akamatsu, Fujisaki, Izumi and Shanks (2020:1148) propose methods that may be used to reduce food waste, and these can be adapted into the NSNP, which are as follows: educate learners about the importance of reducing food waste; offer learners flexible portion sizes; and provide learners with meaningful opportunities to address food waste in their schools. A study by Mumba and Kesa (2020) found that currently, the reduction of food waste is not one of the objectives of the NSNP in South Africa, and so there are no structures put in place to reduce this food waste and no laws in place to monitor or track the levels of food waste in the NSNP.

Recent assessments in low- and middle-income countries have shown that even though school nutrition education is reported as widespread, it is not usually prioritised in national policy frameworks, and/or dedicated school nutrition education policies are not fully implemented (FAO, 2020). School nutrition education coverage in the curriculum is narrow, the time allowed is short, and the approach is largely theoretical. Progress in developing and implementing programmes is slow, and there is tough competition with core subjects for a dedicated and constant timeslot, either separately or within those subjects (FAO, 2020). However, in the South African context, as of 2010, the DBE implemented an awards programme that recognised the top performing schools for their excellence, innovation, and dedication in the successful implementation of the NSNP (Mumba & Kesa, 2020). This programme aims at rewarding schools that meet the necessary guidelines as set out by the NSNP.

The South African Food-Based Dietary Guidelines encourage schools to establish food gardens. Govender et al. (2020) found that teachers, learners, and parents are trained with the necessary skills to develop and maintain their own gardens, which aids and supports long-term household food security. A study by Kruger et al. (2020) reported that in a cross-sectional survey of schools across South Africa, 77% of learners indicated that their school has a food garden, while 68% indicated that their families also grow vegetables and fruit. School garden vegetables prevent clinical symptoms that affect school performance and compromise the immune system. With improved access, availability, and intake of fresh produce, schoolchildren are less likely to consume high amounts of processed, energy-dense, and nutrient-poor foods that increase their risk of unhealthy weight gain. Kruger et al. (2020) advised that school gardens, if planned and implemented with the support of parents and the community, can complement SFPs and enhance their long-term impact on children's nutritional status and learning achievement.

The school food environment contributes to learners' overall dietary intake. Hence, lunch boxes, meals provided through SFPs, school tuck-shops, and food items that can be purchased from street vendors must be critically evaluated. However, it cannot be contested that learners are exposed to unhealthy food options in the school environment (Nortje et al., 2017). There is a need to regulate the marketing and sale of unhealthy foods to children in and around schools (Kruger et al., 2020). In 2014, the Department of Health tabled draught regulation R429 relating to the labelling and advertising of foodstuffs, which aimed to prohibit the commercial marketing of food or non-alcoholic beverages to children unless it complies with a set of criteria. This included limiting advertising in places where children are likely to gather, such as crèches, schools, and sports events. Therefore, South Africa has still not legislated or developed a monitoring and enforcement framework for implementation. Advertising and selling unhealthy foods in and around schools is associated with poor diet quality, overweight, and obesity among learners. Currently, South Africa does not have a set of guidelines or policies governing the marketing and sale of unhealthy foods in and around schools (Kruger et al., 2020). Such policies could include banning vending machines that sell unhealthy food options, banning the school signage that is sponsored by big food cooperatives, prohibiting

unhealthy food sales in school tuck shops and areas around the school, and encouraging the selling of fruit and other healthy foods.

A study conducted by Kim (2018) in South Korea found that, contrary to popular belief, learners do purchase healthy food options if they are made available to them. However, a study conducted by Bekker, Koen en Marais (2017) in South Africa found that younger learners tend to be more accepting of healthy tuck-shop options than older learners. It is important to note that the study by Hassanally et al. (2020) found nutrient-dense snacks important to optimise children's nutritional status and cognitive development, as well as to promote physical growth. Given that early childhood is an important period of growth and development, both physically and cognitively, and thus requires an optimal dietary intake of energy and nutrients, On the same note, Ajmal, Basit, Jumani, Mahreen, Rahman and Tahirkheli (2010) found that food items sold in and around schools during school hours play an important role by serving as a source of refreshment and contributing to learner energy requirements. Contrastingly, Wiles, Crow and Pain (2011) argue that most foods sold at tuck shops are often snacks and fast foods that provide empty calories.

During lockdown levels, which closed all schools in South Africa, some measures such as THR's, top-up cash transfers, or food vouchers were considered to create an important safety net (Borkowski et al., 2021). However, these are not long-term solutions. Priority was given to reopening schools safely, as school-based targeting and delivery of nutrition are more cost-effective and have been shown to yield substantial benefits in education and health outcomes.

2.7 THE THEORETICAL FRAMEWORK OF THE RESEARCH

2.7.1 The bio-ecological theory

This study is viewed through the lens of bio-ecological theory by Bronfenbrenner. Bronfenbrenner introduced the ecosystem theory to understand human development by focusing heavily on the contribution of the environment and the effects it has on this development process (Bronfenbrenner & Morris, 2006). The central point of his theory relates to the interactions created between the developing and active human organism and the nearer and wider social context that surrounds it and influences it directly and

indirectly (Panopoulos & Drossinou-Korea, 2020). Ecological systems theory designates child development in relation to a joint function of a child in context and stresses the interactive and reciprocal relationships between a child and the multiple contexts where development occurs (Bronfenbrenner, 1992). The theory regards human development as the set of processes through which the characteristics and properties of the active and evolving human organism and its environment interact to evolve the individual during his or her life.

As child development is influenced by the context of the child, the relationship is interactive in such a way that the impact of an intervention in the life of the child should be realised inside the child and in various systems in the context of the child. It is Bronfenbrenner theory that addresses the interactive relationship of the child as a person and the contexts in which the child exists in child development. According to Bronfenbrenner (1979), the complexity of human development could be understood only through an examination of the interaction between these layers of systems and locating a person at the centre of these systems. Rosa and Tudge (2013) elaborated that a bio-ecological model that explains human development depends not only on the effects of the environment but also on the characteristics of the individual in dealing with the environment. The child is not a passive recipient of the influences he or she receives from social contexts but plays an active role in his or her development. The individual is not only governed by characteristics such as motivations and goals, levels of activity, and temperament (Panopoulos & Drossinou-Korea, 2020), but also by external appearance characteristics that influence the goals and expectations of others.

Bronfenbrenner viewed a child's development in relation to the interactions between the individual and the surrounding environment in view of the layers of systems. The theory explains that a child learns and grows in the context of multiple nested systems: the microsystem, mesosystem, exosystem, and macrosystem. These systems range from proximal to distal, from direct influences to indirect influences (Kim, 2018). Thus, people and experiences at different levels of the system influence the development of a child. For example, the family, teacher, and friends (microsystem), the school they attend, the relationship between family and school as well as teacher and parents (mesosystem),

and social and cultural norms (macrosystem) could all uniquely influence the development of a child (Bronfenbrenner, 1992). The figure below identifies the interactive systems that interact to influence the development of a child, as explained in the Bronfenbrenner bio-ecological model.

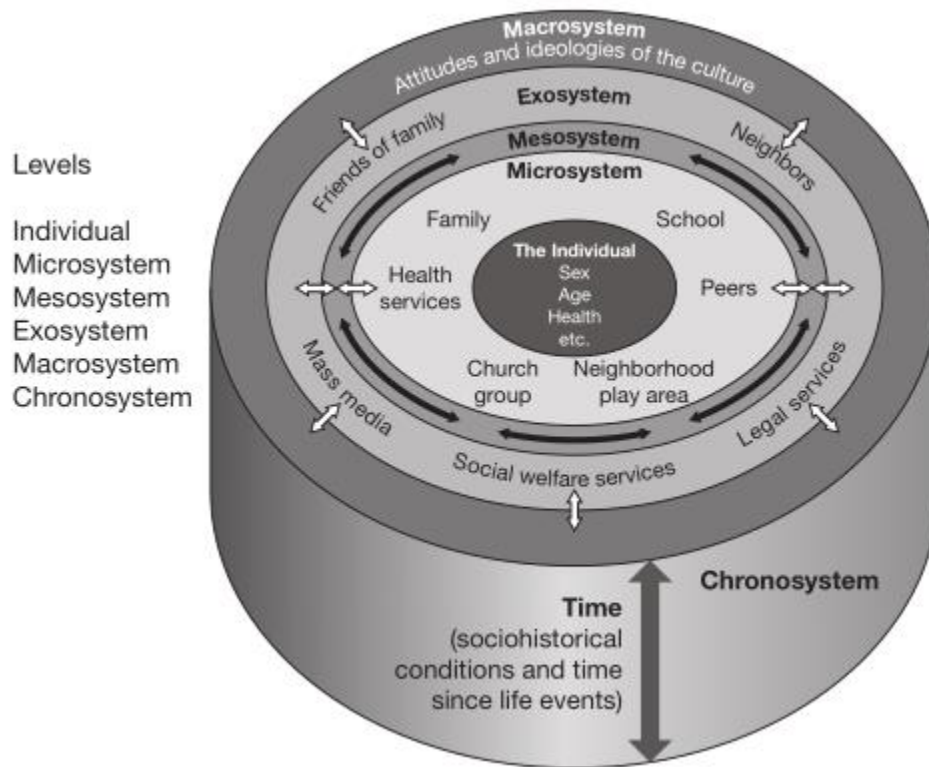


Figure 2.1: The Bronfenbrenner's bio-ecological model of Child development

Source: Adapted from Hayes, O'Toole and Halpenny (2017)

The system consists of four concentric circles: the microsystem, the mesosystem, the exosystem, and the macrosystem. At the centre of these systems is the individual. Each of these levels is embedded in its immediate next and is influenced by their distance to the central unit, the individual (Panopoulos & Drossinou-Korea, 2020). In addition to these four encircled layers of the system, there is another distinctive system, for example, the chronosystem, which is not within the encircled layers of the system but laid over through one's lifetime, affecting him or her in relation to the chronological time or period (Kim, 2018).

2.7.1.1 Microsystem

Microsystem refers to an immediate environment that the individual lives in (Kim, 2018). It comprises the daily environments in which the person transits and makes reciprocal face-to-face contacts (Hayes et al., 2017), for instance, any immediate relationships (personal) or organisations that the individual interacts directly with. Here, the individual is involved in all interactions at the microsystem level. One of the most important microsystems of one's life is that of school. The school environment, the learning process, and the relationships learners develop with their peers and teachers contribute to their social, cognitive, and academic development. According to Panopoulos and Drossinou-Korea (2020), the school is governed by social and physical elements, each of which contributes to the development of each learner. The social elements of the microsystem include learners, teachers, the principal, and their relationships, while the physical elements include the school building, the classrooms, the curriculum, and the teaching methods.

2.7.1.2 Mesosystem

The mesosystem includes the connections between two or more microsystems in which the developing individual is actively involved (Rosa & Tudge, 2013). In simple terms, it refers to the interactions and interconnections between the microsystems (Kim, 2018). That is the relationship between the microsystems. Here, the individual is not always involved in the interactions at the mesosystem level. For instance, another teacher who attends a workshop or is receiving training could still influence the individual teacher at the centre of the system. In the mesosystem, interconnections occur between the school and other microsystems, such as the family, therapeutic centres, or counselling support centres, which influence learners' learning and welfare.

2.7.1.3 Exosystem

The exosystem, as a third cycle of the ecological model, is governed by environments or contexts in which the individual is not actively involved but is indirectly affected (Panopoulos & Drossinou-Korea, 2020). It refers to an environment where the individual is not directly involved (Kim, 2018). Although the ecosystem is external to the individual's

experience, the environmental elements at the exosystem level could profoundly influence the individual. For instance, the decisions made at the school district level, state level, or federal level would affect the individual even though the individual did not have any active role in making the decisions. The exosystem includes the experiences, values, and teacher education that make up the school culture, and therefore their decisions and choices influence learners such as those in inclusive school environments.

2.7.1.4 Macrosystem

The macrosystem is the fourth and broadest level of the individual, encompassing ideologies, traditions, political strategies, social and political values, cultural beliefs, values, customs, attitudes, and laws of the dominant culture that influence the functioning of other systems and thus the central unit, the individual (Hayes et al., 2017). It refers to unseen factors in any culture in which the individual lives (Kim, 2018). It is like air, which one cannot see or touch, yet it is always present. For instance, political ideologies could intentionally and/or unintentionally influence the individual. The macrosystem includes laws regarding educational policies such as those of NSNP that indirectly impact learner school life.

2.7.1.5 Chronosystem

The chronosystem refers to the lifelong development of the individual, to the changes observed in the individual himself, as well as to the effect that changes have on his evolution over time in the environments in which he lives (Panopoulos & Drossinou-Korea, 2020). It refers to a unique layer of the system that influences the individual within chronological time (Kim, 2018). Here, the social and historical changes of a particular period could affect the individual. That is, the individuals who were born and raised in different decades in the same country will vary their development and life conditions within and beyond their position within the system. The chronosystem includes the learner's educational transitions from one classroom to another, or from one grade to another, or from primary to secondary.

2.8 CONCLUSION

This chapter presents the global state of the SFP in less developed countries, which include India and Brazil, and developed countries such as the USA and England. The COVID-19 global pandemic in developed countries used to provide SFPs to the vulnerable for a small charge, which has been revised during the pandemic because of the increased strain on families. African countries, including South Africa, are providing SFPs freely with the help of the private sector. The impact of SFPs on school performance and the welfare of learners in schools has not been contested, but more research still must be done to explain the nature of the impact and how to improve NSNP for better outcomes. A bio-ecological model was used as a theoretical lens for this study. The next chapter discusses the research methodology employed in this study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

Methodology refers to a way of thinking and reviewing a social reality. Orabah et al. (2022) consider methodology as the frame of reference for the research, which is influenced by the paradigm in which our theoretical perspective is developed. In other words, methodology refers to the research design linked to the paradigm or theoretical framework. Methodology is the broad term used to refer to the research approaches, designs, methods, and procedures used in an investigation that is well planned to find out something (Ugwu, Ekere & Onoh, 2021). From this definition, it becomes clear that data gathering, participants' selection, instruments used, and data analysis are all parts of the broad field of research methodology. This chapter begins by describing the methodological approach and the research design used to implement the study. The ethical considerations, trustworthiness, and limitations of the study are also presented in this chapter.

3.2 RESEARCH PARADIGM

A paradigm is defined by Mertens (2014) as the way one sees the world through certain philosophical assumptions that direct thinking and actions. In a similar vein, Kivunja and Kuyini (2017) defined a paradigm as a philosophical way of thinking (Kivunja & Kuyini, 2017). A paradigm may be interchangeably referred to as philosophy or a world view. Babones (2016) states that a paradigm is a collection of beliefs that are associated with a worldview about how scientific practise should take place. In the research context, Guba and Lincoln (2000) define a paradigm as a basic system or world view that guides the researcher. A paradigm is a set of assumptions or beliefs about fundamental aspects of reality that give rise to a particular world view (Nieuwenhuis, 2016a). Further, Saunders et al. (2018) prefer to use philosophy instead of paradigm and have defined it as the researcher's world view or assumptions that guide their research. Okesina (2020) explains it as the researcher's thinking or philosophical orientation or perspective that

influences what should be studied, how it should be studied, and how the results of the study should be interpreted.

A research paradigm is defined, according to Craib (2011), as a framework of thinking that can be used by researchers when carrying out their research. On the same note, Jonker and Pennink (2012) echoed that a research paradigm is a set of fundamental assumptions and beliefs as to how the world is perceived, which then serves as a thinking framework that guides the behaviour of the researcher. Orabah et al. (2022) elaborated that a research paradigm guides the researcher with the appropriate methodological design and the basic methods and resources that support the research perspective and, in turn, contribute to the success of the research process in general and to the achievement of the set objectives. Overall, it seems clear that the research paradigm involves the elements of the researcher's philosophical perspective of the world, the nature of the area being researched, and the research methodology and methods (Orabah et al., 2022). Researchers need to have a guiding philosophy that would make it possible to put in place principles that may systematically lead to valid steps towards examining a phenomenon. The selected research paradigm served as a guiding philosophy for conducting the research (Craib, 2011). Paradigms provide beliefs and dictates for scholars in a particular discipline and influence what should be studied, how it should be studied, and how the results of the study should be interpreted.

3.2.1 Interpretive paradigm

This study is situated within an interpretivist paradigm, which focuses on how individuals make meaning of daily events in their environment based on their perceptions, views, and understandings (Cohen et al., 2018). Bonache and Festing (2020) concur that the objective of interpretivism is to make sense of the meanings and subjective intentions of individuals in each context without imposing a priori analytic categories. Interpretivism is more interested in people and the way they interrelate. It attempts to understand phenomena through the meanings that people assign to them. Considering this, Creswell (2014) argues that interpretivist research tends to rely on the participants' views of the situation being studied and recognises the impact of the research on their own backgrounds and experiences. That is to argue that meaning or interpretation is

perspectival, and therefore a form of negotiation is required to reach consensus. Thus, meaning is socially constructed within a given context. There is an understanding that the researcher will construct knowledge socially or through their personal experiences of real life within the natural setting being investigated.

McMillan and Schumacher (2014) state that interpretative researchers use systematic procedures but maintain that there are multiple socially constructed realities. Interpretive researchers start with individuals and try to understand their interpretations of the world surrounding them, while the actual words of individuals become the evidence of realities. This means that reality is interpreted through the meanings that people give to their lives, and this meaning can be discovered through language or dialogue (Ugwu, Ekere, & Onoh, 2021). It advocates that any phenomenon being studied has multiple realities. The central point of the interpretivist paradigm is to understand the subjective world of human experience (Ugwu, Ekere & Onoh, 2021). This means that a concerted effort is made to understand the viewpoints of the research participants. This is to argue that the researcher attempts to retell the storey of the participants the way he or she understands it based on the subjective evidence given by the participants. The research located within this paradigm has the following characteristics, as enumerated by Ugwu, Ekere and Onoh (2021).

- The belief that the realities are multiple and socially constructed.
- The acceptance that the context is vital for knowledge and knowing.
- The need to understand the individual rather than universal laws.
- The belief that cause and effects are mutually interdependent.
- The belief that the contextual factors need to be taken into consideration.
- The belief that the words of individuals are evidence of realities.

Thanh and Thanh (2015) believe that the interpretive paradigm enables researchers to see reality according to the perceptions and experiences of the participants, adding that researchers using the interpretive paradigm for answering research questions use the experiences gained to interpret their understanding based on the generated data from the participants. My study is based on real-world issues, where teachers are in contact with daily routine events in and around their schools. Interpretivists believe that knowledge is

subjectivist and socially gathered through the interaction between the researchers and the participants (Mustafa & Muhammad, 2017). Interpretivists suggest that for a better gathering of this knowledge, an interactive relationship should be established with the participants. In this situation, the researcher here is an emic (an insider) trying to understand what is happening in society, and so this relationship is important for the interaction to take place and to touch those individuals' hearts and minds, to share their concerns, experiences, and intentions (Goodsell, 2013). However, Orabah et al. (2022) revealed that some scholars argue that although interpretivists claim that they depend on the individuals and their recognised relationship with the researcher, it is being criticised that participants rarely engage in deliberative activity about their actions. The researcher selected interpretivism as the paradigm for this study as it enabled immersion in the research context, talking to participants, and interrelating face-to-face with them while taking notes of their thoughts, feelings, and ideas so as to avoid miscues and misconstrued information.

3.3 RESEARCH DESIGN

Nieuwenhuis (2016b) provides a comprehensive definition of research design as a plan for collecting and analysing evidence that makes it possible for the investigator to answer questions he or she has posed. Robson (2011) shares the same sentiment that research design is concerned with turning the research question into projects. The University of South California (2017) elaborately regards a research design as a detailed plan drawn by the researchers that shows how the different components of the study shall be integrated in a coherent and logical way with the primary purpose of addressing the research question effectively. On another front, McMillan and Schumacher (2014) stipulate that the purpose of research design as a skill is to clarify and identify valid information that will assist in answering the research questions. However, research design is better regarded as a plan for how the researcher will study and answer the question at hand. Creswell (2014) stated that research designs are plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. McMillan and Schumacher (2014) agree that it is the plan according to which we obtain information from research participants or subjects, collect

information from them, and describe what we are going to do with the participants with a view to reaching conclusions about the research problem, research hypothesis, and research questions. Creswell (2014) argues that the purpose of the research design is to determine the methods used by the researchers to obtain subjects, collect data, analyse, and interpret the results.

Another perspective regards research design as a process. Welman, Kruger and Mitchell (2011) define research design as a process that involves obtaining scientific knowledge by means of various methods and procedures. Research design is about the decisions a researcher makes on how to conduct the research process from the start to the end to address the research objective. On this note, Melnikovas (2018) defines a research design as the general way the researcher seeks to propose solutions to problems raised in order to meet the research objective. Besides, De Vos et al. (2014) argued that research design is about the decision that the researcher makes concerning the topic that must be studied. It provides guidelines and structure for the research process in order to prevent haphazard procedures. Above all, a research design describes the purpose of the given study, the kind of research questions being addressed, the techniques to be used for collecting data, approaches to selecting samples, and how the data are going to be analysed. Leedy and Ormrod (2010) maintain that the research design provides the overall structure for the procedure the researcher follows, the data the researcher collects, and the data analysis the researcher conducts. This implies that the logical plan allowed the researcher to navigate the way from the first point of the study to the end when presenting the findings and making recommendations. Shangase (2013) is of the opinion that the results of any investigation will be reliable and generally accepted once the proper methodology has been followed. This used qualitative research, particularly phenomenological studies.

3.3.1 Qualitative research

Ravitch and Carl (2015) define qualitative research as the collection, analysis, and interpretation of comprehensive narrative data to gain insights into a particular phenomenon of interest. They further explain that the central focus of qualitative research is to provide an understanding of a social setting or activity as viewed from the perspective

of the research participants. In order to achieve this focus, the researcher gathers data directly from the participants. There is less emphasis on numbers and more emphasis on values and context. Creswell and Poth (2018) describe qualitative research as an effort to comprehend persons, groups, and phenomena in their ordinary settings in contextualised ways. In addition, Merriam and Grenier (2019) indicate that the interpretive paradigm is subjective, and it uses a qualitative method to explore individual experiences and perspectives. Qualitative research aims to produce factual descriptions based on face-to-face knowledge of individuals and social groups in their natural settings (Babbie & Mouton, 2001). In a natural setting, the researcher is referring to a situation where the participant is not placed under any kind of pressure but rather feels that they have total control over their contributions. Because of this, Leedy and Ormrod (2010) are of the opinion that qualitative research enables the researcher to gain new insights, develop new concepts or theoretical perspectives about an event, a phenomenon, or personality, and act on or discover the problems that exist within a particular phenomenon.

Qualitative research is an approach useful for understanding experiences, drawing from personal reflections and past research. Creswell (2014) argues that qualitative research is used to understand the life-world of masses or individuals and how those individuals or groups use their insight to present their opinions as they are directly involved in that world. Creswell and Poth (2018) explain that a qualitative approach to research is adopted when there is a problem or concern that needs to be explored and when a multifaceted, thorough understanding of the issue is needed. It is also used when the aim is to empower individuals to share ideas and to listen to their voices (Creswell & Poth, 2018). Qualitative research, according to De Vos et al. (2014), is used to answer questions about the complex nature of phenomena and to describe and understand the phenomena from participants' points of view. The approach permits holistic research of the problem at hand (Merriam & Grenier, 2019). The use of a qualitative approach allows the researcher to research a situation holistically, taking several variables into consideration.

Qualitative researchers assemble data in the field at the site where participants experience the problem under study. Information is gathered by talking directly to the people and by observing how they behave within their context. Researchers collect data

by examining documents, observing behavior, and interviewing participants. Numerous forms of data are collected, analysed, and interpreted (Creswell & Poth, 2018). Patton (2005) asserts that a qualitative approach provides a chance to get close enough to the people and the circumstances to capture what's happening. It is against this background that the researcher chose a qualitative research approach in order to elicit and analyse teachers' experiences on the impact of nutrition on learners based on their experiences. The researcher aims to gain a deeper insight into the impact of the NSNP in South Africa. According to Lichthman (2010), qualitative research provides a thorough understanding of the human experience in some real-life contexts. This characteristic makes it a suitable approach to use in an educational setting where participants can be observed and interviewed in their natural setting, and thus their behaviour should remain unaltered by the experience.

However, it is necessary to say that despite the advantages that the qualitative method enjoys, there are also a few disadvantages. One of the major disadvantages of qualitative research is that the subjectivity of the inquiry leads to difficulties in establishing the reliability and validity of the approach and information (Adams, 2010). In order to ensure validity and avoid subjectivity, Stenbacka (2001) suggests that the researcher must remain non-judgmental throughout the study process so that the report may be constructed in a balanced way. Besides, generalisation is not the focus of qualitative research, but providing deeper insight in the context of the participants is to generate an explanation of the research problem in the context of the participant.

3.3.2 Phenomenological study

A qualitative design encompasses procedures of inquiry such as phenomenology, narratives, ethnographies, and case studies (Creswell & Poth, 2018). This study employed a phenomenological approach. The strategies of inquiry in qualitative research are shown in Figure 3.1.



Figure 3.1: Qualitative research strategies

Source: Creswell and Poth (2018)

A phenomenological study provides in-depth, contextualized, and open-ended responses from research participants about their views, opinions, feelings, knowledge, and experiences. (Tanwir et al., 2021). Marshall and Rossman (2014) contend that phenomenological studies examine human experiences through the descriptions provided by the people involved. These experiences are called lived experiences. It focuses on uncovering what experiences are like. Williams (2021) explains that the researcher wants to see what it is like from the participant's point of view, which involves trying to see what it is like for someone to undergo different experiences. Vagle (2018)

urges the qualitative researcher to keep in mind that they are trying, as far as possible, to allow the participant to tell you what it is like to live in their personal world. The goal of phenomenological studies is to describe the meaning that experiences hold for each subject. It seeks to explore, describe, and analyse the meaning of individual lived experiences—how they perceive it, feel about it, judge it, remember it, make sense of it, and talk about it with others.

In addition, Wiersma (2000) concurs that the phenomenological approach emphasises that the meaning of reality is in the eyes and minds of the beholder, the way the individual perceives their experiences. Marshall and Rossman (2014) also assert that the purpose of phenomenology is to depict and appreciate the principles of lived experiences of individuals who have experienced a particular phenomenon. To understand the lived experience from the point of view of the subject, the researcher must consider his or her own beliefs and feelings. To make sure the experiences and views of the participants are not distorted and misrepresented, Byrne (2011) calls for the use of bracketing, which is setting aside preconceived notions by the researcher, which enables one to objectively describe the phenomena under study. According to Lichtman (2010), bracketing involves placing one's own thoughts about the topic in suspense or out of question. Bracketing assumes people can separate their personal knowledge from their life experiences. This means that bracketing in the study helped the researcher identify the essential experiences shared by the research participants. To this effect, the researcher thought that phenomenological study was more relevant in this study as it respects people's experiences.

3.4 POPULATION AND SAMPLING

3.4.1 Population

A population is defined as a group of individuals or items that share similar features from which data can be gathered and analysed (Investor Words, 2017). Welman et al. (2011) explain that the population encompasses a total collection of all units of analysis about which the researcher wishes to draw specific conclusions. It refers to a complete set of elements, for example, persons or objects that possess some common characteristic

defined by the sampling criteria established by the researcher. In other words, the target population is the entire group of people or objects to which the researcher wishes to generalise the study findings. Such a population should meet a set of criteria of interest to the researcher. The population of interest is the study's target population that it intends to study (Majid, 2018). In a broader sense, Nieuwenhuis (2016b) regards a population as any collection of specified groups of human beings or of non-human entities such as objects, educational institutions, time units, or geographical areas. The population should be properly defined so that there is no ambiguity as to whether a given unit belongs to the population. If a population is not properly defined, a researcher does not know what units to consider when selecting the sample. This study was conducted in primary schools in Mahwereleng Circuit, Waterberg District, Limpopo Province. Basically, the circuit is urban, with a few rural primary schools. In Mahwereleng Circuit, there are a total of 14 primary schools with a total of 253 teachers. Six are urban schools, and eight are rural primary schools. This defines the population of this study where the sample was drawn.

3.4.2 Sampling

Sampling is the process of selecting a group of people, events, behaviours, or other elements with which to conduct a study (Bonache & Festing, 2020). It is the process of selecting a few cases from a target population in order to provide information that can be used to make judgments about a much larger number of cases. Yin (2011) echoes that sampling refers to the process of selecting a subset of cases in order to draw conclusions about the entire set. Therefore, this means that sampling involved the logistics of identifying the participants to be used. The process of selecting elements from a larger population is thus called sampling. Data are generally collected from a sample rather than from an entire population; this is not only less costly but also more practical.

A sample is the selected elements (people or objects) procedurally chosen for participation in a study to represent the target or accessible population (Bonache & Festing, 2020). McMillan and Schumacher (2014) define the concept of sample as the number of individuals selected from a population for a study. Kumar (2014) stated that a sample comprises elements of the population considered for actual inclusion in the study, or it can be viewed as a subset of measurements drawn from a population in which we

are interested. It is a group of elements drawn from the population that are representative of the population and that are studied in order to acquire some knowledge about the entire population. In brief, Ranjit et al. (2011) say a sample is a subgroup of a population one is interested in. A sample of people is referred to as a subject or participant.

The purpose of sampling is to enable the researcher to obtain the desired information in a reliable manner without necessarily involving the entire population. Sampling enables one to study a portion of the population rather than the entire population. Sampling is necessary because a study of all elements of interest is not possible, especially when the target population is large. The aim of sampling is to save time and effort, but also to be consistent and unbiased in terms of whatever is being researched (Nieuwenhuis, 2016b). Time constraints, research costs, and the availability of participants mean that data cannot be collected from the whole target population (Cohen et al., 2018). Sampling is done to shorten the time that would otherwise be spent studying the whole population. It is done to reduce costs since fewer cases and resources are required than if the whole population were used. Besides, it is done to gain greater accuracy in data collection and analysis since few people are involved, either as subjects or as participants. Flick (2018) posits that it is vitally important for researchers to decide their sampling strategy at an early stage of research planning.

Non-probability sampling was used in this study, particularly convenient sampling. Sharma (2017) asserts that the non-probability sampling technique is totally based on the judgement of the researcher using inclusive criteria. Non-probability sampling is a sampling strategy in which the chance that an individual will be selected is unknown; hence, the researcher cannot claim that the sample is representative of the larger population (Flick, 2018). They are techniques based on non-representativeness. Bonache and Festing (2020) argue that results from such studies lack external validity and are generally limited in terms of generalisability to a larger population. However, they are preferred because they are much less complicated and less expensive. Besides, the focus of qualitative research, as argued earlier, is not on generalisation but on a deeper understanding of the defined sample in the specified context (Sharma, 2017). They are often used in combination and as supplements to probability sampling. The common non-

probability sampling techniques include convenience, purposefulness, quota, and networking (snowball) sampling techniques.

In this study, the researcher purposefully divided the schools into two pools, for example, pool A of urban primary schools and pool B of rural primary schools. According to Maree (2015), qualitative research usually makes use of purposive sampling, and purposive sampling was used to select the schools for this study. Maree (2015) describes purposive sampling as choosing participants who can provide information that fulfils the required research objectives about the phenomenon. On the same note, McMillan and Schumacher (2014) regard purposive sampling as a type of sampling that allows for choosing small groups or individuals who are likely to be knowledgeable and informative about the phenomenon under study, selecting cases without needing or desiring to generalise to all such cases. The researcher stratified the sample into layers to effectively embrace the different settings of primary schools in Mahwereleng Circuit. Orabah et al. (2022) explained that interpretive researchers attempt to employ stratified purposive sampling methods to ensure that the resulting sample will be distributed in the same way as the population in terms of the stratifying criterion. The researcher selected two schools in pool A, for example: the biggest school and the smallest urban school in the circuit. In pool B, the researcher did the same and selected the school with the largest enrollment and the smallest school in rural areas of Mahwereleng Circuit. That means four schools were selected through purposive stratified sampling to make sure schools in different contexts of primary schools in Mahwereleng Circuit are captured.

The actual participants were selected through convenient sampling, as every teacher teaching in the selected schools was considered an information-rich participant as they were all teaching learners who were exposed to the same school nutritional practises. Taherdoost (2016) contends that convenient sampling selects the participants from those who are readily available to the researcher. Convenience sampling collects data from whoever information-rich participant is willing to partake in a study, is the most approachable, or is, in other ways, conveniently accessible to the researcher (Scholtz, 2021). Typically, convenience sampling tends to be a preferred sampling technique because it is inexpensive. The researcher selected three teachers per school. The

teachers who the researcher met first the day she visited each of the selected schools to identify research participants and who first showed their willingness to participate in the study were selected as participants in this study. The summary of selected participants is indicated in Table 3.1.

Table 3.1: Selected participants

Pools	Selected Schools	Selected participants	Code	No. of selected participants
Pool A: Urban primal schools	School AH Urban primary school with biggest enrolment	Teacher 1	School AH Teacher 1	1
		Teacher 2	School AH Teacher 2	1
		Teacher 3	School AH Teacher 3	1
	School AL Urban primary school with smallest enrolment	Teacher 1	School AL Teacher 1	1
		Teacher 2	School AL Teacher 2	1
		Teacher 3	School AL Teacher 3	1
Pool B: Urban primal schools	School BH Urban primary school with biggest enrolment	Teacher 1	School BH Teacher 1	1
		Teacher 2	School BH Teacher 2	1
		Teacher 3	School BH Teacher 3	1
	School BL Urban primary school with smallest enrolment	Teacher 1	School BL Teacher 1	1
		Teacher 2	School BL Teacher 2	1
		Teacher 3	School BL Teacher 3	1
Total number of participants				12

A total of 12 participants were selected from four schools, as the researcher considered the number reasonable to provide credible results.

3.5 DATA COLLECTION

Sutton and Austin (2015) describe data collection as a process that involves the generation of large amounts of data. In other words, data collection is the gathering of raw data from people who are experiencing the problem being investigated using either standard or universal instruments or constructed instruments. Data collection is the vehicle through which researchers collect information to answer the research question and defend conclusions and recommendations based on the research findings (Mertens, 2009). De Vos et al. (2014) see data collection as a process when the researcher accesses information by directly interacting with an individual or a group of people who have relevant and rich information that aligns with the research topic. The researcher adopted a qualitative approach for the study as an inquiry in which researchers collect

data in face-to-face situations by interacting with selected persons in their setting. Babbie and Maxfield (2014) echoed that qualitative approaches acquire data primarily through interpersonal contact with participants, usually an interview, or through the presence of the researcher in proximity to pertinent events, usually observation. In this study, data collection was interactive using interviews, specifically semi-structured interviews.

The researcher considered interviews applicable because they are regarded as the predominant mode of data collection in qualitative research (De Vos et al., 2014). It is also regarded by Lichtman (2010) as the most common form of data collection in qualitative research. An interview is a conversation in which one person, referred to as the interviewer, asks questions while the other person, referred to as the interviewee, responds to the questions (Wiersma, 2000). De Vos et al. (2014) posit that, as a research instrument, an interview is unique in that it involves the collection of data through direct verbal interaction between individuals. Rule and John (2011) identify interviews as a prerequisite for the researcher to generate relevant information from the participants who are directly in contact with the site of research. Interviews can be conducted with an individual or in groups; however, in this study, the researcher only did face-to-face interviews with individuals. Tanwir et al. (2021) assert that the foundation for a good interview is based on respect for the participants and being understanding and sensitive to the issue being discussed, along with assurance of safety and confidentiality. Interviews produce in-depth, insightful, and detailed data that can be readily validated for understanding. Isaacs (2014) identifies four categories of interviews. There are structured, semi-structured, focus group, and unstructured interviews.

3.5.1 Semi-structured interviews

This study adopted semi-structured interviews as a primary strategy for data collection as they allowed participants to express themselves at some length. Wahyuni (2012) contends that a semi-structured interview is a hybrid type of interview that lies between structured and in-depth interviews. De Vos et al. (2014) explain that in the semi-structured interview, the researcher is in direct contact with the participant to get an explicit and holistic picture in order to anticipate answers to questions on the research topic. Nieuwenhuis (2016a) emphasises that semi-structured interviews consist of specific and

defined questions determined beforehand, yet at the same time allow some elaborations on the questions and answers. The use of predetermined questions allows for objectivity in the interviews when a researcher interviews a reasonably large number of participants. It keeps the interview discussions focused on the objectives of the study. It helps to neutralise personality differences among the research participants in the way they express themselves by keeping them on track, as some participants talk too much and others talk much less. In both cases, semi-structured interviews help make sure the questions pertaining to the study objectives are addressed. Ugwu, Ekere, and Onoh (2021) clarified that in each interview, the researcher will use the same set of questions but can add other questions if the necessity for probing arises. On the same note, Petty et al. (2012) state that the conduct of semi-structured interviews involves a few pre-determined areas of interest with possible prompts to help guide the conversation.

Semi-structured interviews are commonly used in interpretive research to facilitate sharing the perspectives of the interviewees as well as their stories and experiences regarding the phenomena being researched (Orabah et al., 2022). De Vos et al. (2014) are of the opinion that semi-structured interviews are used by the researcher to gain a detailed picture of participants' beliefs, perceptions, or accounts about a particular topic. It allows a systematic and repeated collection of data where questions are organised in a protocol that seeks thick and deep data focused on efficient data analysis (Marshall & Rossman, 2014). Researchers use semi-structured interviews to gain a detailed picture of a participant's beliefs about a particular topic. In this study, semi-structured interviews allowed the researcher to have a more flexible structure that is usually organised around an interview guide. It created an interactive environment between the researcher and the participant because it allowed face-to-face interaction with them. It also granted the opportunity to have control over the questions while maintaining its flexible nature. The semi-structured interviews were conducted according to the interview guide, as explained below.

3.5.1.1 Interview Schedule

The interviews were conducted by the researcher alone during the school days but outside of teaching time. The participants chose dates, times, and venues that were

convenient and comfortable to them. However, Flick (2018) noted that a quiet, non-threatening environment is important in order to ensure the interview runs smoothly with seating arrangements that encourage interaction. The participants in each school were interviewed on different days but within the same week, meaning the researcher took four weeks to cover the twelve participants in the selected four primary schools. A time of 30 to 45 minutes was budgeted for each interview, even though most of the interviews barely lasted for 30 minutes. Wahyuni (2012) states that the interviews should start with an explanation of the research purpose and objective, followed by an explanation of issues of confidentiality, anonymity, and the voluntary nature of the study. This procedure was followed in this study. The researcher also handed out consent forms for signing by all participants. The participant granted permission for recording the interview. The consent forms indicated that their names, school names, and responses were confidential and anonymous; codes were used to protect participants' identities.

The interview questions were derived from the four objectives of the study to explore the objectives for a deeper understanding of each objective. The interview was divided into five sections, with each objective addressed in its own section; however, the first section was devoted to the gathering of biographical data to understand the background of the participants. The following objectives were addressed in the interview guide:

- Objective 1: To determine how the National School Nutrition Programme implemented in Mahwereleng primary schools.
- Objective 2: To understand teachers' experiences on the implementation of National School Nutrition Programme in Mahwereleng primary schools.
- Objective 3: To determine the impact of the National School Nutrition Programme to learners' welfare and performance in schools.
- Objective 4: To establish the alternative strategies to improve the National School Nutrition Programme in schools.

The following sections of the interview guide were drawn from the above stated objectives respectively:

- Section A: Biographical data

- Section B: National School Nutrition Programme implemented in Mahwereleng primary schools
- Section C: Teachers' experiences on the implementation of National School Nutrition Programme in Mahwereleng primary schools
- Section D: The impact of the National School Nutrition Programme to learners' welfare and performance in schools
- Section E: Alternative strategies to improve the National School Nutrition Programme in schools

Open-ended questions were posed in the four sections of the interview, besides Section A. McMillan and Schumacher (2014) believe that qualitative interviewers prefer a conversational tone to indicate empathy and understanding while conveying acceptance to encourage the elaboration of subtle and valid data. Starting by asking open-ended questions led to a conversation that helped the researcher make clear distinctions on aspects of the topic that led to rich data generation. In this study, open-ended questions were asked so that participants could best voice their experiences without being constrained by the perspective of the researcher. It is against this background that the researcher thought it wise to use semi-structured interviews, as they are more flexible and allow the interviewer to probe the participants to expand his or her responses. Often, the researcher repeated the questions because it was necessary for the interviewee to clearly interpret the question before deciding how to answer it. Probing techniques were used in order to get clarity or further information on the said question, which helped the researcher get the opinions and views of the participants clear to avoid putting words in their mouths.

With the consent of the participants all interviews were audio recorded. This allowed the interviews to be conversational as the researcher-maintained eye contact with the participants and avoided taking many field notes. However, the taking of field notes and capturing non-verbal cues during the interviews were data collection tools that further assists in data collection. Maree (2015) indicated that by audio-recording the interview, the researcher would be able to generate data speedily. In support, Creswell (2014) advised that interview responses need to be tape-recorded to save time. Audio recording

captured every word that was spoken by each participant such that no spoken word was lost every word was captured for consideration. Audio recording helps to capture every word spoken by the participants and allows the researcher to maintain eye contact with the participants in the conversation (Cohen et al., 2018). Cohen et al. (2018) assert that research interviews allows the participants to argue their elucidations of the world in which they live, and express feelings about how they regard situation from their own point of view. In this regard bracketing as earlier on explained was used to make sure the researcher focuses on the view of the participants and hides own feelings, beliefs and perspective. The audio recorded interviews were transcribed soon after the interviews to capture the interview experiences well. The interview guide is attached in the appendices.

3.6 DATA ANALYSIS

After completing data collection, a more detailed and refined analysis was done. Data analysis involves organising raw data into a system that reveals the basic results of the research. Data should be arranged, ordered, and presented in some reasonable format that permits decision-makers to quickly detect patterns in the data (Rubin & Babbie, 2016). Wahyuni (2012) indicated that data analysis is based on creating meaning from the generated data. On the same note, Yazan (2015) defined data analysis as the steps to be used to make meaning from the generated data. On a more elaborate note, McMillan and Schumacher (2014) regard data analysis as primarily an inductive process of organising data into categories and identifying patterns and relationships among categories. McMillan and Schumacher (2014) further argued that even though the analysis methods are different depending on researchers in general, their induction procedures and their techniques are the same. During data analysis, the researcher makes sense of the data by segmenting it and then putting it back together.

The researcher needs to take the generated data from participants and interpret, synthesise, and combine such information into a single unit. Wahyuni (2012) believes that qualitative data analysis is about reaching a conclusion based on evidence and reasoning from raw data and indicates that performing data analysis on qualitative data involves dismantling, segmentation, and assembling data to form meaningful patterns in order to

draw inferences. Further to that, Leedy and Ormrod (2010) claim that data analysis in qualitative research involves the following steps:

- organisational details about the case;
- categorisation of data;
- interpretation of single instances;
- identification of patterns; and
- synthesis and generalisation/

Even though there is no prescribed method of data analysis in qualitative research, Orabah et al. (2022) argue that qualitative methods lead to data that is analysed using thematic exploration. Thematic analysis was used as the data analysis strategy in this study.

3.6.1 Thematic analysis

Braun and Clarke (2017) appreciated that thematic analysis is an appropriate and powerful method to use when seeking to understand a set of experiences, thoughts, or behaviours across a data set. However, Lochmiller (2021) hinted that, in comparison with other analytic strategies used by qualitative researchers, thematic analysis is one of the most ambiguously defined analytic techniques in the qualitative research field. To shed light, Lochmiller (2021) shared that thematic analysis involves the identification of recurring patterns that are presented by researchers as overarching statements or themes. Braun and Clarke (2017) define thematic analysis as a method for identifying, analysing, and reporting patterns (themes) within data. Nowell, Norris, White and Moules (2017) state that in a qualitative sample, thematic analysis is used to classify, analyse, arrange, explain, and generate informative and consistent results, as well as report themes contained in a dataset. As a result, the thematic approach was used for data analysis to ensure that important information was derived from the data obtained for the research.

The given definitions presume that a researcher produces a generalised understanding of coded data based on the recurring application of codes and the patterns associated with those codes. The more frequently codes appear in the data set, the more likely it is

that the researcher will state that code as the basis of a theme. Lochmiller (2021) controversially claimed that scholars have reached limited agreement about how thematic analysis should be performed. He clarified that while thematic analysis may consider coding frequencies in the production of themes, this analytic approach should not be treated as a purely quantitative exercise. A distinguishing feature of thematic analysis is its flexibility to be used within a wide range of theoretical and epistemological frameworks and to be applied to a wide range of study questions, designs, and sample sizes (Kiger & Varpio, 2020), while some scholars have described thematic analysis as falling within the realm of ethnography (Joffe, 2011) or as particularly suited to phenomenological studies (Almutairi, 2018). Braun and Clarke (2017) argue that thematic analysis can stand alone as an analytic method and be seen as foundational for other qualitative research methods.

The most widely accepted framework for conducting thematic analysis involves a six-step process that was proposed by Braun and Clarke (2017): familiarising yourself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report as outlined in Figure 3.2.

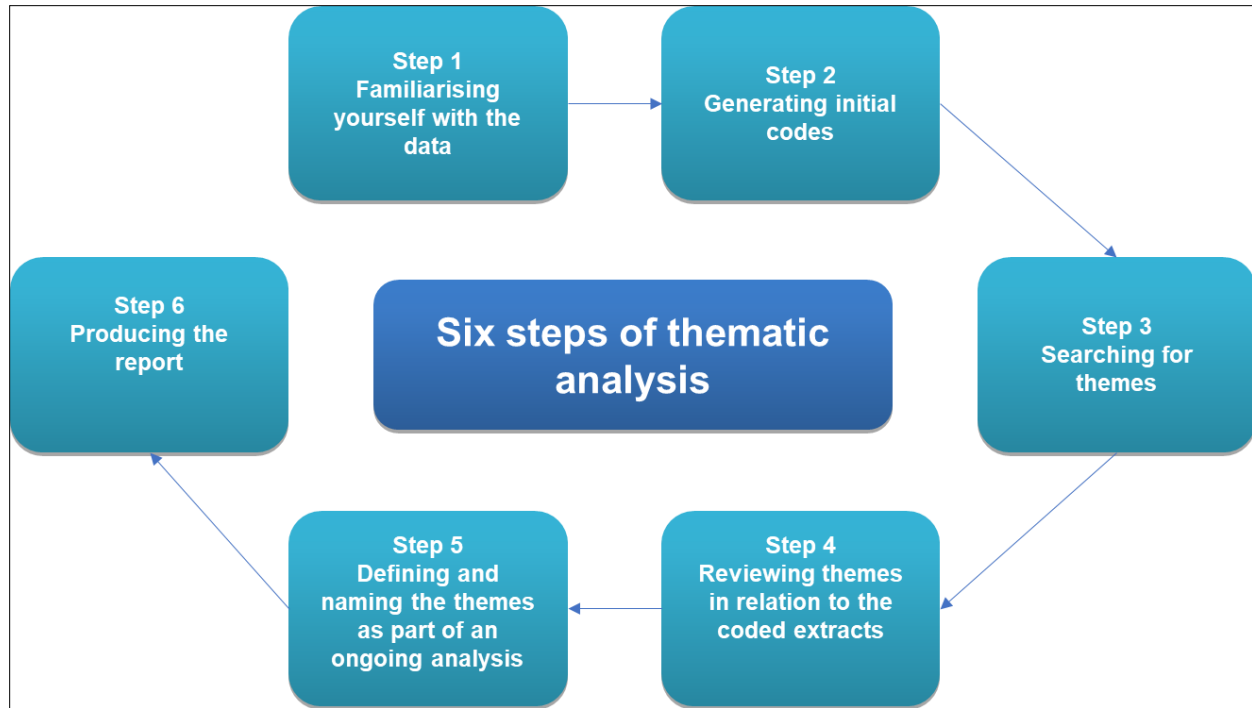


Figure 3.2: Six steps of thematic analysis

Source: Braun and Clarke (2017)

Step 1: Familiarising yourself with the data

The first step in thematic analysis's process is becoming familiar with the entire data set, which entails repeated and active reading of the transcribed data (Braun & Clarke, 2017). Rampioni, Moşoi, Rossi, Moraru, Rosenberg and Stara (2021) advise that while it can be tempting to begin coding data and searching for themes immediately, familiarising oneself with the entirety of the data set first will provide a valuable orientation to the raw data and is foundational for all subsequent steps. The process of transcription was time-consuming but served as an excellent way to become familiar with the data.

Step 2: Generating initial codes

After step 1's familiarisation work, researchers can begin to take notes on potential data items of interest, questions, connections between data items, and other preliminary ideas. This is the beginning of the Step 2 coding process. This phase of work generates codes, not themes. Kiger and Varpio (2020) define a code as the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way

regarding the phenomenon. These codes are more numerous and specific than themes, but they provide an indication of the context of the conversation. This process became easier once I became familiar with the data presented in the transcripts. During the coding process, references were made to too many codes that would lead to the themes.

Step 3: Searching for themes

The third step involves examination of the coded data extracts to look for potential themes of broader significance (Braun & Clarke, 2017). Braun and Clarke (2017) regard a theme as a patterned response or meaning derived from the data that informs the research question. Lochmiller (2021) simply defines a theme as a unifying or dominant idea. Kiger and Varpio (2020) explained that themes do not simply emerge from the data; instead, themes are constructed by the researcher through analysing, combining, comparing, and even graphically mapping how codes relate to one another. In this study, themes emerged from repeating codes related to the research objectives and expressing the lived experiences of the participants.

Step 4: Reviewing themes in relation to the coded extracts

This step requires the researcher to conduct a recursive review of the potential themes in relation to the coded data items and the entire dataset, possibly constructing a thematic map of analysis (Braun & Clarke, 2017). The researcher questioned whether to combine, refine, separate, or discard the initial themes. This process ensured that the information provided was coherent, reflected the views of the participants, and in line with the objectives. The initial themes that were not in line or not functioning well as meaningful interpretations of the data or may not provide information that addresses the research questions were discarded, and some themes were merged where necessary.

Step 5: Defining and naming the themes as part of an ongoing analysis

In this step, the researcher is tasked with presenting a detailed analysis of the thematic framework. Each individual theme and sub-theme is to be expressed in relation to both the dataset and the research questions (Byrne, 2011). It involves continuing analysis to improve the specifics of each theme and the overall storey the analysis tells, producing

clear definitions and names for each theme. Themes were named and clearly defined in relation to their sub-themes as they addressed the research questions and the objectives.

Step 6: Producing the report

Byrne (2011) expressed that the separation between steps five and six can often be blurry, as this final phase would rarely only occur at the end of the analysis. As opposed to practises typical of quantitative research that would see the researcher conduct and then write up the analysis, the write-up of qualitative research is very much interwoven into the entire process of the analysis (Braun & Clarke, 2017). A detailed account of the data collected and the analysis process was compiled. The researcher transformed the analysis into writing by using compelling extract examples that relate to the themes, research question, and literature.

Thematic analysis is an easily accessible and theoretically flexible interpretative approach to qualitative data analysis that facilitates the identification and analysis of patterns or themes in each data set. Themes are typically understood to constitute domain summaries, or summaries of what participants said in relation to a particular topic or data collection question. Basically, the data analysis method provides a clear way of comparing, merging, and splitting views emerging from the data to generate diverse perspectives shared by the research participants for a multi-perspective understanding of the phenomenon.

3.7 TRUSTWORTHINESS

Trustworthiness is an important aspect that requires researchers to produce authentic findings. Yilmaz (2013) explained that for a study to be credible and trustworthy, the data must first and foremost be sufficiently descriptive and include a great deal of pure description of people, activities, interactions, and settings so that the reader or reviewer can understand what occurred and how it occurred. De Vos et al. (2014) add that the critical aspects of trustworthiness are credibility, confirmability, dependability, and transferability. Trustworthiness is a means to support the arguments that the inquiry's findings were worth paying attention to.

3.7.1 Credibility

Credibility is the extent to which the results of a study's reality are judged to be trustworthy and reasonable (McMillan & Schumacher, 2014). Credibility means the researcher's ability to demonstrate a true picture of the phenomena under investigation (Orabah et al., 2022). It is meant to establish that the results of research are believable (Simmonds et al., 2015). Thus, this is a classic example of quality, not quantity. It depends more on the richness of the information gathered than on the amount of data gathered. Through the member-checking technique, the researcher verified the data with the participants by providing each of them with a copy of their interview transcript for review (Creswell, 2014) before starting the analysis process. To help ensure the honesty of the informants, the researcher sent a consent form prior to the data collection session to make sure that the study involved only those who were genuinely frank and willing to participate. According to Wahyuni (2012), the careful selection of those participants is considered the first step toward credibility in qualitative research.

3.7.2 Transferability

Wahyuni (2012) defined transferability as a validation of whether the information collected can work in other contexts. To ensure transferability, purposive sampling was used to select participants who were information-rich. The in-depth findings gleaned from the participants' responses would allow others to apply them in their related contexts based on the defined inclusion and exclusion criteria in the population of the study. This claim is not blind to the fact that qualitative research does not focus on generalisations far beyond the scope of the study, but the findings apply in related contexts. On this note, the transferability of data was ensured by offering a comprehensive description of the subject, participants, data collection, and data analysis. Detailed reporting was used to ensure transferability. According to Sangster-Gormely, Ploeg, Kaasalainen, McAiney, Martin-Misener, Donald, Wickson-Griffiths, Carter, Schindel, Brazil and Taniguchi (2013), the purpose of rich, thick descriptions is transferability based on the details provided by the researcher of the study. By creating detailed descriptions that are rich and thick, it allows a reader to find shared characteristics and possibly transfer these findings to other settings.

3.7.3 Dependability

Petty et al. (2012) define dependability as an audit trail of procedures and processes carried out by the researcher to enable a judgement to be made by another. To ensure dependability, all steps of the research process and procedures were explained. The researcher also used the interview schedule audio recorder as a tool for generating data from the participants from four different schools. At the same time, another researcher with the most familiarity and ability to conduct qualitative research supervised the study as the university supervisor.

3.7.4 Confirmability

Wahyuni (2012) states that confirmability is about how others confirm the findings to determine if the outcomes are accurate reflections of the participants. Yilmaz (2013) explains confirmability as findings made after analysing the generated data and evaluating it through the auditing process. In ensuring confirmability in this study, the researcher used an audio recorder for the interview process to backup findings concerning the research topic. The researchers tried not to influence their own opinions in interviews and in the coding process through bracketing. Bracketing hides the beliefs, opinions, feelings, and sentiments of the researcher to increase objectivity in capturing the point of the research participants.

3.8 ETHICAL CONSIDERATIONS

According to Mustafa, Abd-Razak, Che-Ani, Abdullah and Mohd-Nor (2011), ethics concerns the system of moral principles by which individuals can judge their actions as right or wrong, good or bad. McMillan and Schumacher (2014) indicate that ethics are generally considered to deal with beliefs about what is right or wrong, proper or improper, good or bad. On the other hand, Chambers, Smith, Bratini, Jensen and Romero (2010) indicated that the ethics of science concern what is wrong and what is right in the conduct of research because scientific research is a form of human conduct that must conform to generally accepted norms and values. In all research, ethics is an important consideration, and it should be taken very seriously by the researchers (Cosgrove, 2018). Orabah et al. (2022) assert that ethics is more intrinsic to the interpretive paradigm

because of the inclusion of the participants' values and personal views in the inquiry, which often targets sensitive matters. Ethical issues are considered necessary during all phases of the research process. All necessary steps were taken to ensure that the participants understood the research requirements and that the key principles of informed participant consent, confidentiality, right to withdraw, anonymity, and avoidance of harm were upheld.

3.8.1 Permission

To ensure that my research was ethical, several procedures were followed. Firstly, the researcher applied for ethical clearance from the University Ethics Committee as an enrolled Master's degree student. The researcher obtained the ethical clearance certificate, which granted the right to request permission to gain access to sites for research in Limpopo Province through the Limpopo Provincial DoE, the Circuit Manager of Mahwereleng Circuit, and the Principals of the four selected primary schools in Mahwereleng Circuit. Through the help of the principals, the researcher was able to meet the teachers in the respective schools.

3.8.2 Protection from harm

The primary ethical consideration in research is to protect the wellbeing and security of the participants. Cosgrove (2018) emphasised that during the generation of data, it is essential to consider reducing the risk of unanticipated harm, protecting the interviewee's information, effectively informing interviewees about the nature of the study, and reducing the risk of exploitation. In support, Israel and Hay (2014) explain that researchers should protect their participants, be trustworthy, develop quality in their research study, and be aware of unacceptable behaviour that may jeopardise the research process. The participants were free from harm (physical or mental) and exploitation, and they were protected as agreed upon through the signing of the consent forms by the researcher and participants. This study was not, at any stage, intimidating to the participants, and the interaction was characterised by mutual respect throughout the process. No deception by participants occurred.

3.8.3 Voluntarism

Denzin and Lincoln (2011) indicate it is the research's code of conduct that participants must agree voluntarily to participate without any physical or psychological coercion. The participants were made aware that participation was voluntary and that there would be no money paid or incentives given to them. I personally made certain that all the participants in this study received disclosure of the nature of the study. The researcher was responsible enough to ensure that participants fully understood the purpose, procedures, and risks involved in the study. The participants fully understood what was expected of them and, above all, were told how the findings of this research would benefit them. Participants were given the opportunity to ask questions about the study, and the answers were given to their satisfaction. The details of the study were therefore clearly understood by each participant. Participants were also made aware that interviews would be audio-recorded. Voluntary participation was ensured by informing the principles of informed consent and the right to withdrawal.

3.8.3.1 Informed Consent

It is unethical to collect data without the knowledge of participants and their expressed willingness and informed consent (Kumar, 2014). Cosgrove (2018) maintains that informed consent principles are based on the premise that consent is with complete enlightenment, exercised in a non-coercive situation by competent individuals. In other words, there is a need to be upfront with participants if you are to involve them in a research project. They must be told about the nature of the research and their involvement so that they have a realistic chance to choose participation or nonparticipation. An explanation of the purpose and topic of the study was made, and the reasons why they were needed to be part of the research were clearly presented. The teachers were informed that their participation was voluntary. The participants were briefly informed about the interview process and that an audio recorder would be used during the interview. The participants were asked to sign informed consent forms after I had finished explaining the content of the form to them, to formally indicate that their participation was informed and voluntary.

3.8.3.2 Right to withdrawal

The teachers who volunteered to participate in the research were told that they were free to withdraw from the research process at any time without being disadvantaged in any way if they felt uncomfortable proceeding with the process. In other words, the participants were made aware that they were at liberty to withdraw at any stage of the research should they feel uncomfortable, and that there would be no negative or undesirable consequences for that decision. The researcher made sure that participation at any stage of the research project was voluntary, without any coercion.

3.8.4 The right to privacy

It is the right of the participants to be protected in terms of their right to personal privacy and professional privacy. This is done to make sure the professional and personal integrity of the participants are protected and respected. The principles of confidentiality and anonymity were observed to ensure the privacy of the participants.

3.8.4.1 Confidentiality

Confidentiality in research studies refers to the obligation of an individual or organisation to safeguard entrusted information (Creswell, 2014). Confidentiality means that the collected data is kept confidential and not shared with anyone else without the consent of the participants; there is no need to share it at all. During the data collection process, participants were informed that the data collected would be confidential and only used for the purpose of this study. Their names would not be revealed in any way. They were also assured that their recorded interview and responses would not be accessed by anyone except the researcher. They were promised that all data recordings and transcripts would be stored in a locked cabinet by the researcher. Participants were assured that all information collected would be used for research purposes only.

3.8.4.2 Anonymity

Anonymity means that although the respondents' identities are known by the researcher, they should be kept secret from any other person and shielded from any possible

exposure. Anonymity means participant identities should be kept secret, even to the researcher. I removed their names, as well as the name of the school, to guarantee that their identities would not be revealed by participating in the study. The participants' identities were protected by using codes to create a good relationship and to hide the participants' identities, and the anonymity of responses was guaranteed. Their school names and their names will not be disclosed or used.

3.9 LIMITATION OF THE STUDY

The study was conducted using qualitative research with a full understanding of the limitations of qualitative research in terms of generalisation of the findings; however, the use of stratified purposive sampling to effectively embrace the different geographical locations and sizes of the schools in the circuit in terms of enrolment was a measure to increase credibility and generalisation of the study. It would have been more credible to use more than one data collection method, but again, the reasonably high number of participants for qualitative research was used to increase diversity of view from the semi-structured interview. Time was a problem since most of the participants were educators. To address this constraint, I conducted interviews during the afternoons on a date and time convenient to the participants, as suggested by the participant.

3.10 CONCLUSION

In this chapter, the researcher examined the research methodology, in which issues such as research paradigm, research design, population, and sample, as well as the data collection method and data analysis process that were used to generate data, were discussed. Finally, the issues of ethics, ensuring trustworthiness, and the limitations of the study were discussed and outlined. The next chapter will consider data presentation, analysis, and discussion.

CHAPTER 4

DISCUSSION OF FINDINGS AND INTERPRETATION

4.1 INTRODUCTION

Chapter 3 discusses research methodology and research design. This chapter presents an analysis of the semi-structured interviews to address the research question and the sub-research questions. It presents the findings of the data analysis process. The results are presented, discussed, and interpreted in relation to the literature. This chapter presents the descriptive analysis of the data collected in the study by drawing on the responses from individual discussions with the teachers in four sampled primary schools in Mahwereleng Circuit. McMillan and Schumacher (2014) suggest that the presentation of the data in qualitative studies should employ the participants' actual language in order to qualify for evidence-based inquiry. The data in this chapter is set within the participants' context as a narrative text.

4.2 BIOGRAPHICAL DATA

The summary of the biographical data of the participants is presented in Table 4.1.

Table 4.1: Biographical data

Theme	Sub-themes	Frequency
Number of years teaching at this school	0-5	5
	6-10	3
	11-15	0
	16-20	1
	21-25	0
	Above 26	3
Qualifications	Diploma in Education	7
	Honours	5
Grade taught	FP	9
	IP	1
	IP & SP	2

Almost half of the participants are less than five years old in their current schools, as some of them were transferred on a promotional basis as Head of Departments and

others on horizontal transfers for other reasons. A reasonable number of participants have been in their current schools for more than 25 years. Nearly half of the participants hold honours degrees in education; the rest are diploma holders with either an advanced certificate in education or an advanced certificate in teaching. Most of the participants—about three-quarters—are teaching foundation phase grades. Only a few of the participants are teaching the senior phase and the intermediate phase.

4.3 PRESENTATION OF CATEGORIES, SUBCATEGORIES AND THEMES

The researchers employed both an inductive and deductive approach to theme and category identification, respectively. The data was deductively categorised into four categories based on the four objectives of the study. Each category was also deductively divided into sub-categories based on the questions used to explore each objective during the interviews, as shown in Figure 4.1. Young, Varpio, Uijtdehaage and Paradis (2019) explain that a deductive approach uses a pre-existing theory, framework, or other researcher-driven focus to identify themes or categories of interest. In this study, objectives and interview questions were used to identify categories and sub-categories, respectively. Themes were then inductively identified based on their relevance to the objectives and research questions. An inductive approach derives themes from the researcher's data (Young et al., 2019). Maguire and Delahunt (2017) regard a theme as a pattern that captures something significant or interesting about the data and/or research question. Braun and Clarke (2017) argue that there are no hard-and-fast rules about what makes a theme. A theme is characterised by its significance (Maguire & Delahunt, 2017). Themes were identified in each of the sub-categories as responses of the participants to the interview questions, as more elaborately shown in other figs after Figure 4.1.

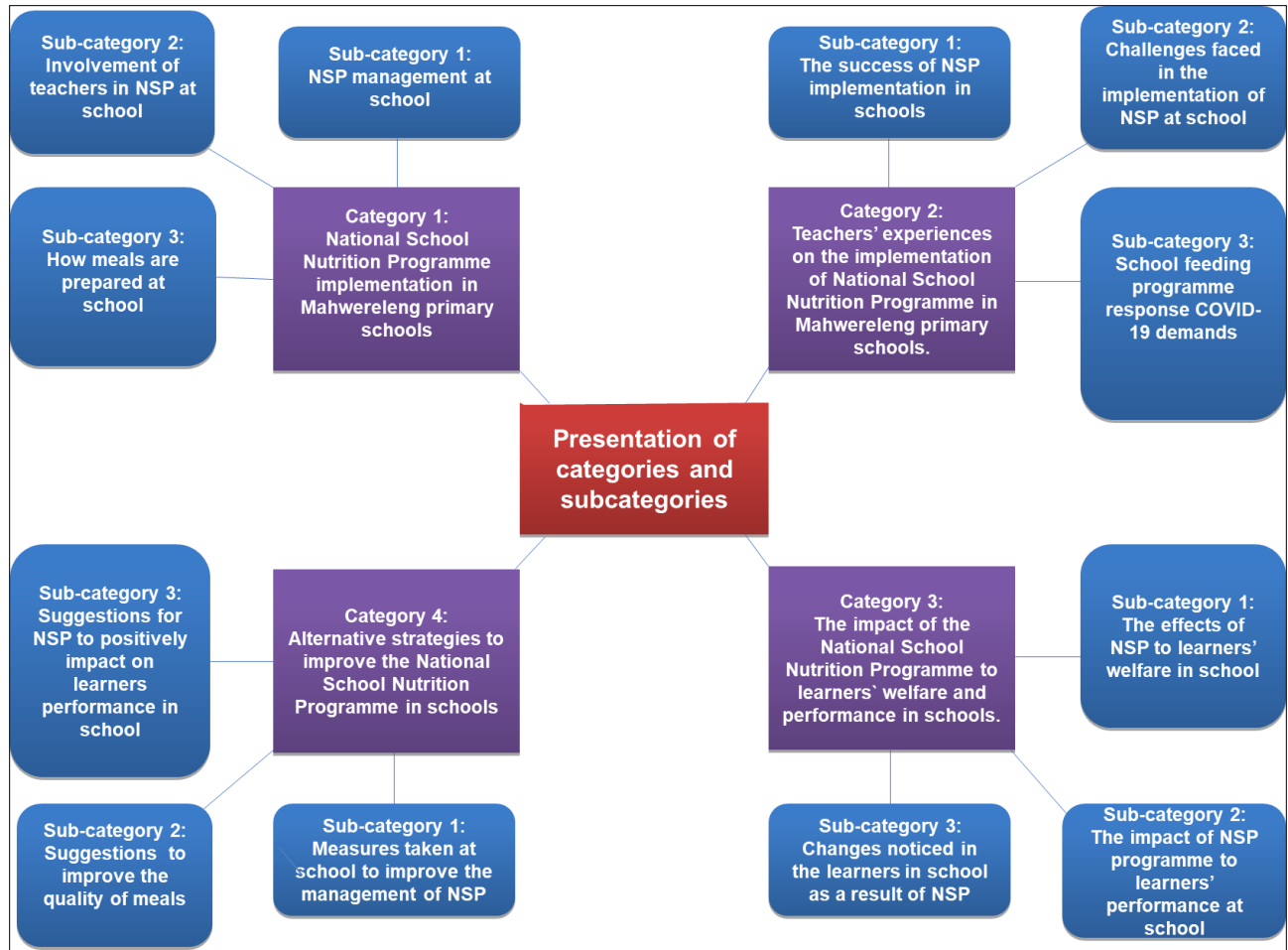


Figure 4.1: Presentation of categories and subcategories

Each of the categories, sub-categories, and themes is illustrated and discussed in this chapter.

4.3.1 Category 1: National School Nutrition Programme Implementation in Mahwereleng Primary Schools

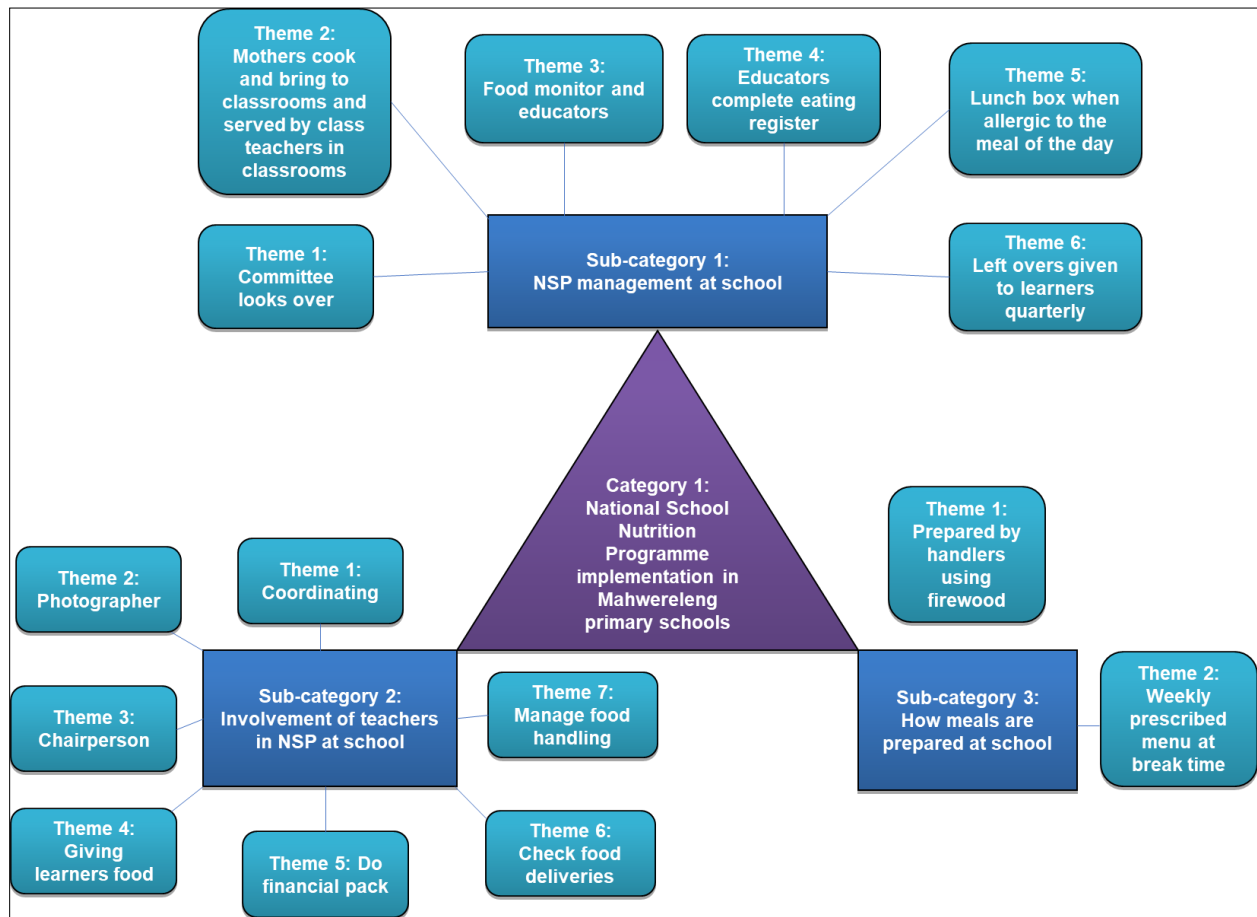


Figure 4.2: Category 1: National School Nutrition Programme Implementation In Mahwereleng Primary Schools

In Figure 4.2, themes are added to the identified categories and sub-categories to provide a full picture of the views of the participants on the implementation of the NSNP in Mahwereleng primary schools.

4.3.1.1 Sub-category 1: National School Nutrition Programme Management at school

In response to how the NSNP is managed at schools, seven themes emerged, as discussed below.

4.3.1.2 Theme 1: Committee looks over

Three of the four schools reported the presence of a committee that runs the school feeding programme. Each member of the committee is given a task to manage among the functions of the committee. As reported by the participants, the committee is responsible for checking food deliveries, meal preparation, measuring food items, and taking care of the vulnerable learners' food needs. School BH Teacher 2 elaborately explained that; *“We have a committee that is responsible for managing the NSNP and within that committee each is given a task to perform for an example there’s someone who is responsible for vulnerable learners and then she’s taking care of those learners especially when food are left, they use to give those learners especially those that are vulnerable so that they can have something to eat at home. For us to determine whether the learner is vulnerable or not, we assess them to find their family background as to whether the learner has parents, vulnerable learners are learners who do not have both parents, may be because they are deceased. We check their background and most of the time we find that is only the grandmother who is taking care of them and you might find that the grand mother is depending on the social grand for living so such learner needs extra assistance.”* This finding to some extent supports the assertion of the WFP (2020) that besides their role in keeping children in school and being a direct nutrition and health intervention, school feeding programmes are an entry point for introducing other safety nets to address chronic vulnerabilities in underserved or at-risk populations.

School AH Teacher 1 added that, *“There is a committee that is in charge, who checks on the deliveries, preparations of meals on daily basis”*. One of the participants pointed out that it is the SGB member who is responsible for measuring the food (School BH Teacher 1). This does not necessarily mean that it is the policy stipulation that an SGB member is supposed to measure the food items. As one of the participants also indicated, the foundation phase teachers are given the responsibility to measure food items for the following day since they have time to do that after dismissing their learners, as foundation phase learners leave school earlier than other grades.

4.3.1.3 Theme 2: Mothers cook and bring food to classrooms and learners are served by class teachers

This study found that it is mothers from the community who are employed as food helpers or handlers that prepare the food in the school and serve food in the classrooms for class teachers to feed learners in their classrooms. No school reported differently in this regard; it's a common practise in schools. That means learners eat food in their classroom under the supervision of their class teachers. It is the class teacher who makes sure all learners are fed. This implies that food handlers deliver food to classes in quantities that correspond to the class size or number of learners. The findings of this study agree with those of Mashiri (2017) that SFPs are meant to increase community involvement in school programs, particularly where programmes depend on the community to prepare and serve meals, as the food handlers are mothers that are employed by the community. The study by Berejena et al. (2020) concurs that food handlers in the NSNP perform food preparation duties as part of a kitchen team, and they are local parents employed by the DBE to prepare and serve meals in the programme.

4.3.1.4 Theme 3: Food monitor and educators

Sixteen of the participants in two small schools, one in an urban area and another in a rural area, reported the use of food monitors provided by the DoE, who are assisted by two educators to help with the management of the NSNP. What is not clear is the position of this food monitor and two teachers in relation to the committee that is running the NSNP, as all schools reported the presence of the committee in their schools. What is also striking is that the participants who reported the presence of food monitors and two educators did not report the presence of the committee, which may imply that the food monitor and two educators are part of the school committee running the NSNP.

4.3.1.5 Theme 4: Educators complete eating register

One participant indicated that educators complete the eating register that is submitted to the circuit as a report of how learners are benefiting from the NSNP in schools. School BL Teacher 2 said, *“There are mother helpers who prepare food and take food to classes*

for educators to serve their learners, and educators help to manage by filling in every day eating register for submission to the circuit.”

4.3.1.6 Theme 5: Lunch box when allergic to the meal of the day

This study found that in managing the NSNP, the teachers fill the gaps in the programme by encouraging the parents to provide lunch boxes for their children who are allergic to the meal plan for certain days. School AH Teacher 1 said, *“we advise parents that they can give their learners lunch boxes only during the day their kids does not take what is prepared for that day only because as the school we do not have a plan to replace for what has been prepared for that day.”* This implies the NSNP programme lacks flexibility in the meal plan to cater for the diversity of food preferences of learners and allergies, which makes other learners who do not eat what is on the meal plan sidelined. The study by Mawela and Van den Berg (2020) noted that the service providers may vary in the standard of delivery as some discrepancies in quality or service depending on the supplier were observed; however, the food items delivered across all schools are the exact same as each school needs to comply with the menu guidelines. This means the menu guidelines are handed down to schools, not developed by schools, hence the inflexibility in providing options for the learners with allergies to some foods, as found in this study.

4.3.1.7 Theme 6: Left over food given to learners quarterly

It is the finding in this study that the food supplied by the DBE is enough to point out that there is always extra food left at the end of the quarter, which the teachers pack and distribute to all learners to take home as food packs. This implies that the DoE does not condone the storage of food in schools to the point of having stale food in the storehouse when learners are there; hence, extra food each quarter must be disposed of by giving learners food packs. Each quarter must start with a new supply from the DoE.

4.3.1.8 Sub-category 2: Involvement of teachers in National School Nutrition Programme at school

The study found that teachers are involved in the NSNP as coordinators, photographers, chairpersons, giving learners food, doing financial packing, checking food deliveries, and

managing food handling. This implies that teachers are free to be nominated or elected to occupy any role in the management of the NSNP; there are no prescribed limitations, according to policy, to the role of teachers in the management of the NSNP. In other words, teachers are more involved in the running of the school feeding programme in liaison with the parents and the DoE. School BH Teacher 3 aired that, *“I am the one checking as to whether the kitchen, where the food is prepared is clean, the storage, dishes even the utensils used to prepare food. To keep the kitchen free from the virus, there is sanitizers that they are using and there were protective clothes, aprons, safety boots and even cover their heads. Moreover, we advise them to cut their nails and avoid applying nail polish, wear earrings or necklace because one of those can mistakenly fall in the food during preparation.”*

However, according to DBE (2013), school principals have to manage the NSNP and appoint a nutrition coordinator to assist him or her. The study by Mawela and Van den Berg (2020) revealed that the nutrition coordinator, who is a full-time teacher, supports the role of the principal. Often, the role of the nutrition coordinator is to ensure that food handlers cook according to the NSNP menu, manage the feeding of needy learners, ensure the safe storage of food, and look after the distribution of food parcels to needy learners (Mawela & Van den Berg, 2020). The outline of the duties of the nutrition coordinator in Mawela and Van den Berg (2020) echoes the responsibilities found to be done by teachers in this study. The exceptional role mentioned in this regard is the preparation of financial packs, which involves the payment of food handlers and the buying of firewood. It is exceptional in the sense that even though the food handlers are recruited directly by the school, they are also employed by the DoE; hence, for them to be handed their salaries by teachers is an exception.

4.3.1.9 Sub-category 3: How meals are prepared at school

This study found that food is prepared according to the weekly prescribed menu. The meals are only served at break times in all schools. The food handlers cook the meals using firewood, and other schools are using gas in shack kitchens. School AH Teacher 1 mentioned that, *“Food is prepared by the food handlers in a shack using firewood, and after cooking they dish up food in the food servers and take them to classes for educators*

to serve their learners”. School AH Teacher 3 added that, “There are six mother helpers who prepare food and dish up food in the containers and take them to their respective classes where all class teachers serve the learners in their classes”. School BH Teacher 3 said, “Every morning, they divide themselves into groups; make a use of three-legged pots to prepare porridge or samp while other group cook vegetables on a gas stove”. This implies learners are fed fresh and hot meals that are prepared in the morning to be ready by break time; it is not food that has to stand overnight and eaten the next day.

4.3.2 Category 2: Teachers’ Experiences On The Implementation Of National School Nutrition Programme In Mahwereleng Primary Schools

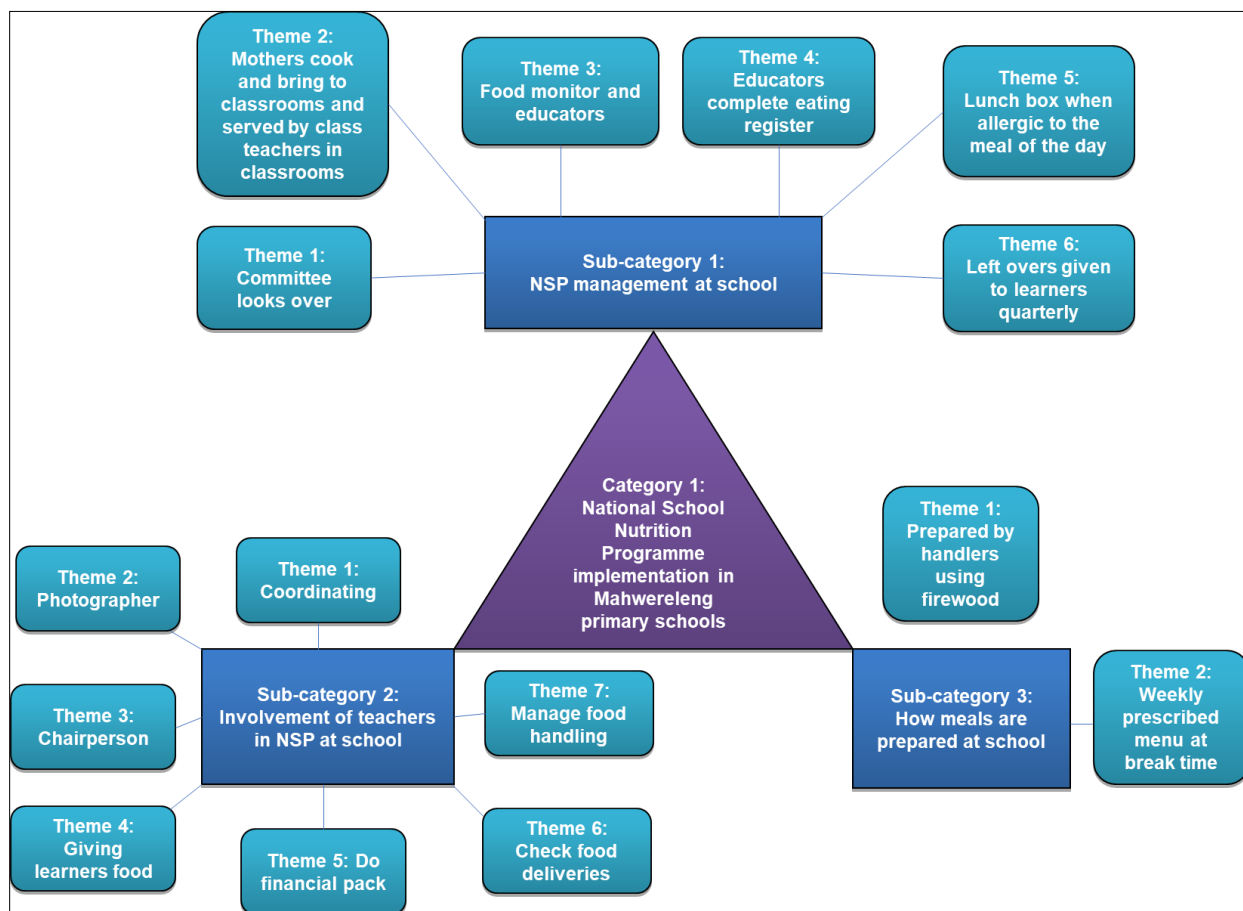


Figure 4.3: Category 2: Teachers’ experiences on the implementation of National School Nutrition Programme in Mahwereleng primary schools

Three sub-categories are identified with the respective themes that emerged as teachers' experiences with the implementation of NSNP in Mahwereleng primary schools.

4.3.2.1 Sub-category 1: The success of National School Nutrition Programme implementation in schools

4.3.2.1.1 Theme 1: The National School Nutrition Programme was successful

All participants have converged in airing sentiments that the NSNP was successful, as benefits are manifesting clearly for all to appreciate, the feeding times are consistent, there are no quarrels, and everything is being implemented as per plan. School BL Teacher 2 said, *“Implementation of the National Schools Nutrition Programme is successful at my school as learners manage to have food on time that is agreed upon by the school, and the menu is strictly followed even though sometimes we run short of food especially during the re-opening of schools.”* The programme is successful but with some hick-ups was also found in the study of Eluya (2019), who echoes that SFPs have been successful; however, the challenge lies in maintaining them so that they can reach as many learners and their families as possible.

Reflection on the above comments might argue that we should hire food monitors who will strictly monitor whether the prepared menu and the amount of food for the day are strictly followed for the feeding of learners.

4.3.2.1.2 Sub-category 2: Challenges faced in the implementation of National School Nutrition Programme at school

Seven themes emerged as challenges faced by the schools in the implementation of the NSNP.

Reflecting on the above comments, one might argue that volunteer mother helpers should be trained and hired for permanent positions, as the renewal of contracts every year causes challenges to the implementation of the NSNP.

4.3.2.1.3 Theme 1: Educators not cooperative

One-sixth of the participants in two schools described educators as uncooperative in the implementation of the NSNP in school. They are reported to be uncooperative in the marking of eating registers in the classroom. This reflects negligence, as according to the way NSNP is implemented in schools, teachers are the ones feeding learners in their classrooms and supervising the feeding process in their classes; failing to just mark the register is gross negligence in this respect. It is failing the DoE's efforts to monitor NSNP implementation in schools. School BL Teacher 3 mentioned that, *“Certain educators are lazy to mark the registers for learners who are eating and for those who are not eating. So, it becomes difficult for us to compile the list.”* This finding to some extent aligns with the findings of Mawela and Van den Berg (2020) that teachers feel that managing a school nutrition programme makes heavy calls on their teaching and learning time.

In reflection on the above comments, one might argue that the department creates one post in schools for the educator, who will only manage the NSNP, as the making of the register and dishing up of learners requires time as the educator must also have lunch during break.

4.3.2.1.4 Theme 2: Food items delivery delays

Even though the participants resoundingly pronounced the NSNP implementation as generally successful, there are always some loopholes in every act of man. The participants raised complaints over the common delays in food delivery to schools, especially in the first week of the reopening of every quarter. The study of Mafugu (2021) to some extent provides reasons for the delays of food deliveries, as it attributed such delays to late payment of service providers and suppliers' contract submissions found in KwaZulu-Natal Province. Although all the service providers signed contract forms to bind them to provide food every day, quality service could not be guaranteed because of payment delays, sometimes stretching up to five months or more. The study reported delays in feeding because of poor delivery of food.

In reflection, one might argue that the department creates jobs by hiring youth who will package and deliver food to the circuit for schools to collect their food from the circuit; as such, there will be no delivery delays as each school will collect the required food on time.

4.3.2.1.5 Theme 3: Poor quality of some food items

Nearly half of the participants converged in raising the challenge of poor-quality food as one of the challenges faced in schools. The food is of poor quality in the sense that the beans delivered are said to be hard to cook (School AH Teacher 2). The suppliers provide small fruits that are sometimes rotten and stale, which means they are sometimes delivering expired food in good packs (School AH Teacher 3; School AL Teacher 2). School BL Teachers 2 mentioned that, *“Sometimes the supplier delivers beans that are hard to cook. They bring rotten cabbages and only one type of very small green apples.”*

In reflection on the above statement, one might argue that the department of agriculture should train the community members on how to grow foods and vegetables, as this will be supplied to schools fresh as they are, and this will help as they will be able to eat different types of food according to their seasons of harvest instead of eating only one type of fruit, which is just a small green apple.

4.3.2.1.6 Theme 4: Learners do not like the menu

One-sixth of the participants from two big schools, both urban and rural, indicated that some learners do not like the prepared menu, for example, tinned fish and milk (School AH Teacher 3). This finding supports the findings of the study of Mafugu (2021), which identified taste preferences by some learners who would not eat some meals because they were not appealing to them as one of the challenges experienced by SFPs.

In reflection on the above comments, one might argue that the superiors who are responsible for them come up with three different types of menus for each day, as this will assist as all learners will be accommodated within the three types.

4.3.2.1.7 Theme 5: Food not enough

Nearly half of the participants, all from three schools except the small rural school, identified food measures as not enough for the learners. The small amounts of food are not only because the school wants to give learners a small amount of food, but also because suppliers are said to be delivering insufficient food as the deliveries are said to be worked out based on previous year learner enrolment, which is always lower as learner enrolment is increasing (School BH Teacher 1). The learners are coming to school on empty stomachs, only to be served a small, measured meal at breakfast. School BH Teacher 1 said, *“To me there’s no difference as the food served to learners as the food is very little to an extent that learners are not satisfied so as teachers we go around asking from other classes if they have some left overs to give to those learners.”* However, it has been noted in this study that in some schools, class teachers always take note of vulnerable learners to make sure they have enough food where ever possible, as left-overs are given to the vulnerable learners to even take home on a daily basis.

In reflection on the above comments, one might argue that the DoE, in collaboration with the Department of Social Welfare and Social Development, comes up with food parcels for each learner to take home.

4.3.2.1.8 Theme 6: Shortage of equipment

Due to the increase in enrollment, some participants indicated a shortage of utensils is experienced in schools. This primarily refers to the utensils used for cooking and serving the meals. An increased number of learners require bigger cooking utensils, which are sometimes not provided in time. The studies by Bundy et al. (2018) and Berejena et al. (2020) agree that the absence of preparation, cooking, and eating facilities that meet health and safety standards in schools in South Africa This finding is in line with the findings of this study, as this study found that besides the shortage of cooking utensils, food is prepared in shack kitchens in schools.

In reflection on the above comment, one might argue that those in power of allocating utensils and infrastructure to schools at least allocate more than the enrolment for each

year, as most of the time enrolment increases as, as they said, the school nutrition programme increases enrolment.

4.3.2.1.9 Theme 7: Food poisoning

One school reported cases of food poisoning that they once experienced. School BH Teacher 1 mentioned that: *“We only experienced a problem were learners had stomach cramps because they ate food poisoning as one of the educators indicated that a serving dish in her class was not clean as she saw rust on it.”* This finding exonerates the DoE from the problem of food poisoning, as the problem is emanating from a lack of hygiene practises in the food preparation process at school and the use of old dishes to serve food. This finding supports the finding of the study by Mafugu (2021), which found that some of the South African schools that have kitchens also disregard the safety standards provided in the NSNP safety directory. On the same note, a study by Kruger et al. (2020) reported that observation in the Eastern Cape reveals that vegetables such as cabbages are cooked long before mealtime, resulting in incidents of severe food poisoning.

Reflecting on the above comments, one might argue that food handlers should be trained quarterly on hygiene to avoid giving learners food on dirty utensils.

4.3.2.2 Sub-category 3: School feeding programme response Covid-19 demands

The unpredictable occurrence and impact of the global disaster of COVID-19 on the norms of running the NSNP in schools must be understood, as this is the time we are in. The school responded to the COVID-19 pandemic through the mismanagement of NSNP in some ways.

Reflecting on the above comments, one might argue that all stakeholders within the school yard should be taught the precautionary measures on how to prevent the spread of or be infected with COVID-19.

4.3.2.2.1 Theme 1: Social distancing, washing, and sanitisation

Most of the participants aired the use of COVID-19 safety measures such as social distancing by allowing the learners to have food in their classes rather than for the whole

to congest the food preparation areas, as in classes learners are already sitting according to social distances, so that is maintained in eating the served food. The hygiene measures of always washing hands and sanitising hands, utensils, classrooms, and food preparation places are maintained. However, the participants acknowledged that it is difficult to enforce COVID-19 protocols on young learners in the foundation phase. School AH Teacher 3 mentioned that, *“It was very difficult to learners to follow the Covid-19 protocols as most of primary learners especially the foundation phase where I’m responsible for learners are not wearing masks, they are not following social distancing and even the shortage of staff and infrastructure made it difficult for the rules to be followed”*. School BL Teacher 2 added that, *“It was very hard for us to follow Covid-19 rules as foundation phase learners were exchanging their masks because kids enjoy playing when they are together.”* The WFP (2020) contends that one of the main roles of a school is to equip children with life skills and capacities that support their well-being.

In reflection on the above comment, one might argue that, as educators, we must encourage learners to follow a 1.5-meter distance from one another, and the wearing of masks and washing hands with soap and water for 20 minutes should be compulsory for all learners all the time. And the community must be taught about the dangers of COVID-19 and encouraged to vaccinate and take boosters.

4.3.2.2.2 Theme 2: Food parcels for learners at home

One-third of the participants in three schools reported making use of food parcels to reach learners at home during the days when learners were not coming to school since schools were still using the rotational attendance system to manage the issue of decongesting schools in respect of social distancing in schools. This means learners come to school to collect food parcels on the days they are out of school (School BH Teacher 3). In some cases, vulnerable learners’ parents or guardians are called to collect food to prepare food for children at home. The study by Drake et al. (2018) found that in countries like Burkina Faso and Liberia, even prior to COVID-19, THRs had been shown to be effective in improving the nutritional outcomes of children. The benefits of the THRs option go beyond schoolchildren. Drake et al. (2018) assert that during the current pandemic crisis, THRs have been implemented in various countries.

In reflection on the above comments, one must argue that learners should be given food parcels at schools, as the government once came up with food parcels but didn't reach them as they ended up in the wrong hands.

4.3.2.2.3 Theme 3: Reduced food quantities

One school reported reducing the food quantities during rotational meals only to cook enough for the learners that are in attendance. School BH Teacher 1 indicated that, *“Due to Covid-19 regulations where we forced to follow 1.5-meter distance where by which the rotational schooling were introduced as to avoid being infected as such our learners were rotating weekly and as such foods were measured accordingly.”* This implies that not all schools had to reach out with food parcels to the learners at home.

In reflection on the above commendation, one might argue that learners who were absent from school come to collect their food parcels from school the same day after school.

4.3.3 Category 3: The Impact of The National School Nutrition Programme to Learners' Welfare and Performance in Schools

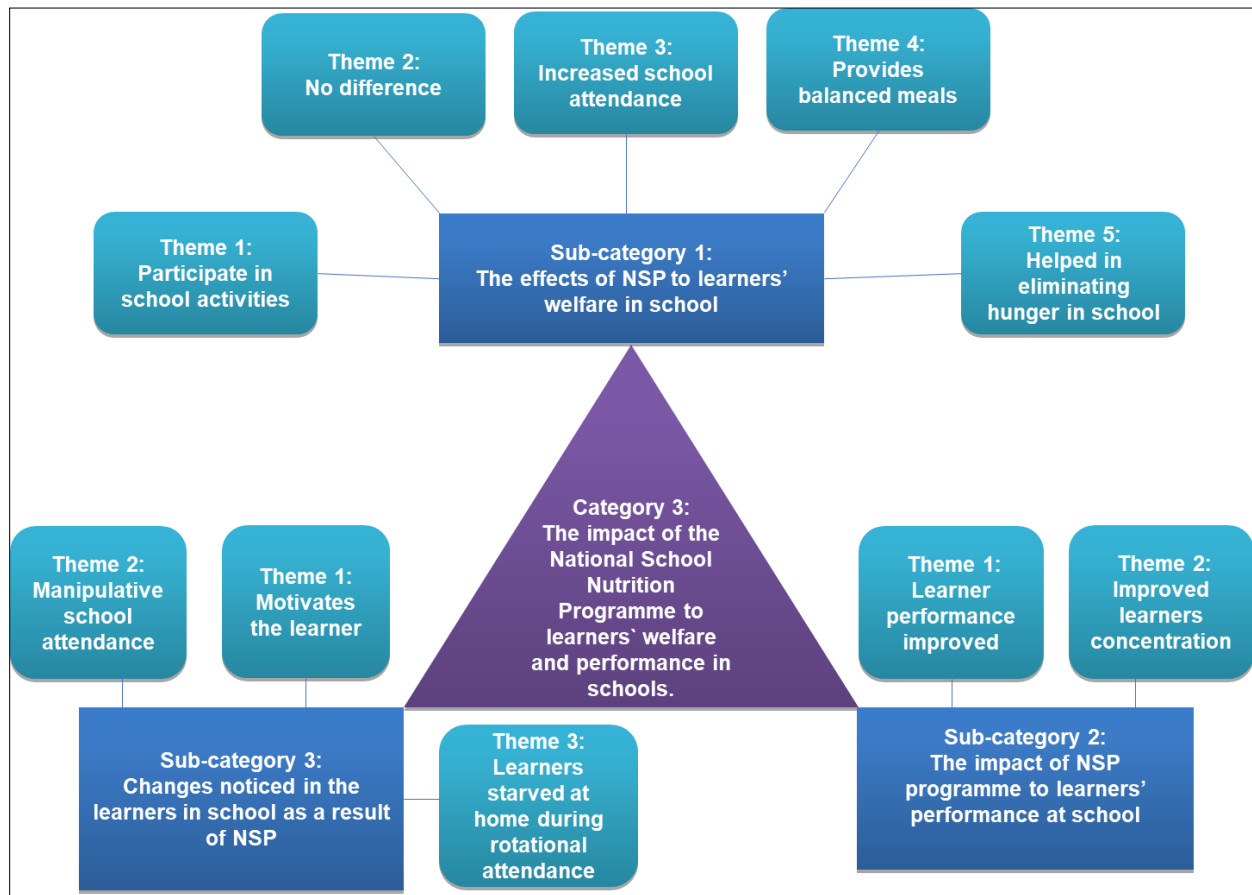


Figure 4.4: Category 3: The impact of the National School Nutrition Programme to learners' welfare and performance in schools

4.3.3.1 Sub-category 1: The effects of National School Nutrition Programme to learners' welfare in school

4.3.3.1.1 Theme 1: Participate in school activities

Almost half of the participants indicated an improvement in the participation of the learners in school activities. The learners are said to be increasingly taking part in school activities and participating in class activities. School BH Teacher 2 aired that, *“Very much useful to the learner welfare because the learner who comes to school with an empty stomach will be unable to cope with the situation in the school or will not hear anything*

because of hunger so the more the department decided to come up with this programme.”

This finding agrees with the findings of Kruger et al. (2020), who found that where NSNP is implemented, the programme has been shown to improve the general well-being of participating learners. In addition, Cervato-Mancuso et al. (2013) contend that school meals promote social interaction between learners and teachers.

4.3.3.1.2 Theme 2: Increased school attendance

Nearly all participants—over 80% of the participants—agreed that school meals have increased learners' school attendance. The learners' absenteeism has decreased, and so has the dropout rate (School AH Teacher 1). The learners are coming to school regularly as they know they will have meals at school (School AL Teacher 3). School BH Teacher 3 expressed that, *“I have realised that learners are coming to school even if they are not supposed to come as they come just to get something at school. Some will just come to school even if they are not feeling well just to have something to eat.”* This implies that the coming to school of learners is motivated by the need for school meals, and most of the learners make sure they do not miss school meals. This finding echoes the findings of Govender et al. (2020), who found that 93% of teachers agreed that the NSNP is improving learner attendance. On the same note, a study by Borkowski et al. (2021) reveal evidence to suggest that school feeding can increase enrolment and attendance rates for girls and the most disadvantaged children. This study cannot qualify the increased attendance of girls but supports the increased attendance of disadvantaged children.

Reflecting on the above comments, one might argue that learning and teaching have improved as learners are no longer running away from school, and as such, learning and teaching have improved.

4.3.3.1.3 Theme 3: Provides balanced meals

One participant recognised the importance of the NSNP school meals in providing balanced meals to learners that are crucial to boosting their nutritional status. School BH Teacher 2 indicated that, *“Learners will come to school and it also assisted as learners are getting a meal that is balanced than at home because sometimes you find that at*

home they are unable to buy ice but learners get it at the school. It also helped decrease the number of absenteeism.” This finding confirms the assertion of Berejena et al. (2020) that the South African government introduced the NSNP as an anti-poverty policy intervention that declared that all primary school children should get fed a nutritional meal every day. Sanousi (2019) echoes that the NSNP enhances learning capacity and improves access to education through the provision of nutritious meals to learners residing in low socio-economic communities. UNDP (2012) agrees that, as learners spend most of the day at school, SFPs can improve the nutritional status of children and school enrollment. Woodside et al. (2020) claim that food provided in schools could have a major influence on children’s diet quality and have the potential to reduce inequalities in dietary intake.

Reflecting on the above commend, one might argue that schools must have a plan for alternatives for those who are not taking what is prepared for the day for them not to lose any nutrients prepared for that day, as you find that during tinned fish some are allergic to it and end up losing the nutrients from it for that day.

4.3.3.1.4 Theme 4: Helped in eliminating hunger in school

A claim was made in this study that school meals help to eliminate the effects of hunger on learners, as most of the cases that may sometimes result in learners being referred to clinics are being addressed by just giving them food to eat. School BL Teacher 2 said, *“Sometimes you find that a learner seem to be sick in the morning, as we are used to such cases we give them some food to eat and they become good after some hours and this helped us a lot as we avoid taking earners home or to the clinic because of hunger.”* This finding supports the assertion of Mawela and Van den Berg (2020) that the NSNP is a key lever, especially for children coming from poor households, since it addresses hunger and contributes to quality education as well as improving health among learners in South Africa. It is a powerful tool to alleviate short-term hunger and enhance children’s learning capacities. On the same note, Jomaa et al., (2011) found that lessening temporary hunger, developing nourishment, and improving the intellectual ability of children are some of the intentions of SFPs.

Reflecting on that commend, one might argue that at least food should be increased, as most of the learners seem not to be satisfied after being fed, and they go for the second time, so what will happen if there is no food left at that time?

4.3.3.1.5 Theme 5: No difference

A third of the participants denied observing any difference or effect on the welfare of the learners as a result of the school meals. However, it is clear some of the participants said it out of misconception, as they approached the question from a different angle than intended by the question. For example, School AH Teacher 3 claimed that, *“I didn’t notice any change with the learners I’m responsible for as it is still the beginning of the year and we were still following the rotational schooling programme due to the problem of infrastructure, but what I know is that, the meals which are provided at schools are, therefore, intended to give energy for mental and physical activities for the body and brain to function and to make the learners alert and receptive during lessons.”* This response is not reflecting the teachers experience with the NSNP over the years; it sounds as if the NSNP was just introduced at the school in the beginning of this year, yet this is the teacher who has been teaching at this school for the past five years. In addition to such misconceptions, some of the participants reflected mixed feelings, as they denied while at the same time appreciating the effect of the school meals on the learners’ welfare. School BL Teacher 3 controversially said, *“I didn’t notice any change but learners seem to like the food so much that they do not want to miss the meals.”* This implies that some teachers are in denial that this has an impact on the welfare of learners in schools. Some responded out of frustration, to the point of not being objective enough to look at the impact of the NSNP in a broader framework than the mere setbacks they are encountering in the school in some cases. School BH Teacher 1 argued that *“To me there’s no difference as the food served to learners as the food is very little to an extent that learners are not satisfied so as teachers we go around asking from other classes if they have some left overs to give to those learners.”*

Reflecting on the above recommendation, one might argue that the department should always review its menu in order to improve the quality of meals. For example, if other

animal proteins like meat and eggs are added to the menu, this will help the welfare of learners.

Sub-category 2: The impact of NSP programme to learners' performance at school

4.3.3.2.1 Theme 1: Learner performance improved

Over 83% of the participants expressed sentiments that the NSNP has improved the academic performance of learners in schools. The increased attendance and participation of learners in school activities has also affected the general academic performance of learners in the classroom, as learners are motivated to come to school. School AL Teacher 3 said, *“Learners come to school happy knowing that they are going to eat and from eating good food, they will have a good mind which will increase the improvement.”* This finding supports the assertion of Cohen et al. (2021) that most studies examining universal free school meals found positive associations with academic performance. In a broader context, empirical evidence from India (Aurino et al., 2019) and Ghana (Aurino et al., 2020) shows that food insecurity during childhood reduces reading, numeracy, and English scores, as well as short-term memory and self-regulation. This implies that hunger affects the learning capacity of learners negatively; hence, school meals in this study have been found to improve learners' engagement in learning activities and academic performance.

Reflecting on the above commend, one might argue that the department stopped their programme of four years in a phase as the implementation of the NSNP was to improve performance, but most of the learners cannot read or write as they are being promoted to the next phase after being in one phase for more than four years.

4.3.3.2.2 Theme 2: Improves learners concentration

It is the view of most of the participants that school meals improve learner concentration in the classroom, which positively impacts the learners' performance (School AH Teacher 3). School BH Teacher 2 mentioned that, *“In terms of performance like I said a learner who comes to school in an empty stomach finds it difficult to concentrate in class, since learners ate at school progress has improved.”* This finding supports the findings of

Mawela and Van den Berg (2020) that the NSNP has promoted punctuality and regular school attendance, thereby improving the concentration of learners. Faught et al. (2017) explain that a hungry learner is more likely to face health- and nutrition-related problems. This, in turn, can affect academic performance, cognitive function, the capacity to attend school, and the ability to concentrate in classroom lessons.

However, some participants shared a different view, as they regard break-time school meals as causing learners to be full and losing concentration in the classroom as they become sleepy because of overeating since the meals are hard, solid foods like pap. School BH Teacher 3 said, *“Performance have improved because the learners participate in class but sometimes after break most of the learners becomes sleepy and I think this is because they eat more than enough as they collect food twice.”* The collection of food twice does not mean two meals are provided in school but means learners are allowed to collect more food if there are left overs as the class teacher serves food to the class during break time. This explains why some students sleep in class during lessons that begin after the break. That means school meals can only cause learners to be sleepy when consumed in excess during break time, which explains why NSNP encourages meals to be served in measured quantities. Hassanally et al. (2020) contend that the NSNP aims to enhance the learning capacity of learners by providing a healthy school meal to increase learners’ energy levels, making them alert and receptive during lessons.

In reflection on the above comment, one might argue that food needs to be served according to the measurement, and learners must not be allowed to take food twice as they end up being sleepy, which means that food does not serve its purpose.

4.3.3.3 Sub-category 3: Changes noticed in the learners in school as a result of National School Nutrition Programme

Most of the responses were repetitions of the impact of NSNP on learners’ welfare and performance, but the question was relevant as the researcher wanted to dig deeper for more views on the impact of NSNP using questions from different angles.

Reflection on the above comments: one might argue that the responses to all the questions are the same as all the learners receive the same food at the same time in different schools, as the NSNP is guided by the NSNP policy.

4.3.3.3.1 Theme 1: Motivates the learner

It is the finding of this study that the learners are motivated to come to school and to take part in all activities of the school, including classroom participation, with confidence (School BH Teacher 2). Even though the motivation is based on accessing school meals, the learners do not want to miss any meals.

Reflecting on these comments, it might be argued that the introduction and implementation of the NSNP have impacted learners positively, and the aims and objectives of its introduction have been met.

4.3.3.3.2 Theme 2: Manipulative school attendance

On the contrary, one of the participants in the small rural school made a striking observation and revelation: learners are not really coming to school for learning but for school meals and disappear from school after break time, or even rather, they come to school around break time for food. It is more like manipulative school attendance, which is not driven by the motivation to learn; hence, some learners come at the right time for meals and leave the school. School AL Teacher 1 shared that, *“Some learners do not come to school, they only come during break time to eat and then go home.”*

Reflecting on that, one might argue that the classroom attendance register be marked in the morning and after breaks, as learners will be noticed and reprimanded.

4.3.3.3.3 Theme 3: Learners starved at home during rotational attendance

The study found that the NSNP feeding norms in schools were disrupted during COVID-19. When schools reopened, the first phase of reopening was strategically using the rotational attendance of learners to maintain social distancing for the safety of learners. School AH Teacher 1 said, *“During the rotational schooling imposed by Covid-19 most of the learners suffered a lot as they get food at school and during that time they were at*

home with no food to eat because most of the parents for learners are not working they depend on grand for living which is not enough to can by foods.” Even though this study found that food parcels were delivered to learners at home, or rather, they were allowed to come and collect food on days they were out of school, not every school did so. The report of some learners starving at home at the time of rotational attendance confirms the earlier finding that some schools were cooking food enough only for the learners attending school on that day, not catering for the learners at home.

Reflecting on the above comments, one might argue that learners should be given food parcels to take home, as the amount of food at schools caters to all learners, including those at home, and the preparation of food for each day must be done according to the number of learners at school on those days.

4.3.4 Category 4: Alternative Strategies To Improve The National School Nutrition Programme In Schools



Figure 4.5: Category 4: Alternative strategies to improve the National School Nutrition Programme in schools

4.3.4.1 Sub-category 1: Measures taken at school to improve the management of National School Nutrition Programme

4.3.4.1.1 Theme 1: Encourage teachers to be supportive

Lack of cooperation by teachers has been reported as one of the findings in this study; hence, the participants suggested the need to encourage teachers to realise the benefits being realised by the NSNP. School AH Teacher 1 mentioned that, *“We advise educators to take the NSNP programme serious as something that is helping us to achieve what we are here for as the main aim of teaching is to educate and train poor learners to become future leaders as they are not taking it serious.”* In other words, the school management is encouraging teachers by reminding them of the goal of teaching and the aims of schooling and the importance of the NSNP as a tool to achieve these intended outcomes.

Reflecting on the commendation above, one might argue that educators were not well trained on how to administer the program, and their workload makes them less supportive.

4.3.4.1.2 Theme 2: Installed cameras to monitor food preparation and eating

To ensure that the school management remains accountable for its role in managing any school activity, this study found that cameras have been installed in the school to monitor the food cooking process and the serving and eating of learners in classes. School AH Teacher 2 aired that, *“At our school we have cameras in classrooms even where mother cooks are preparing food but from the kitchen the cameras are assisting as monitoring but at the gate we are having security guards.”* School AH Teacher 3 echoed that, *“Cameras are installed in the school and the security guards are also used to help manage the food.”* Even though food handlers are employed to prepare the food, teachers, the SMT, and the principal remain accountable as professionals for what happens in the school. The setting up of cameras helps to cover all corners of the school to supervise and monitor the implementation of NSNP in school.

Reflecting on that, one might argue that schools must hire security to take care of equipment and stored food, as the cameras might not be of help because these days we are facing a problem of electricity reductions.

4.3.4.1.3 Theme 3: Secure food storage

It is the finding of this study that the food is not delivered to school daily but in batches to store at the school, which requires security to avoid theft and good conditions to avoid perishables being affected (School AL Teacher 3). School AH Teacher 3 added that, *“Food is also stored in a strong room where only the committee members are allowed in”*. This implies that the school committee has full control of handling and rationing the food that is supplied to the school.

Reflecting on the above comments, one might argue that schools must have well-ventilated kitchens where they can store their food instead of locking them in the strong room, which is always locked, and the temperature is not good for food, which will be easily contaminated.

4.3.4.1.4 Theme 4: Checking food items specification and keeping record

The study found that it is the responsibility of the school, through the committee or designated teachers as delegated by the school principal, to take note of the quantities of food supplied to the school. The record should be filed and submitted to the DoE as a monitoring system for the NSNP handling in the school. School AH Teacher 1 said, *“Contracted suppliers should indicate specification and names of the products as most of the time they supply beans that are hard to cook, rice which when is cooked is like porridge and the cabbage sometimes is very small or rotten.”* The rationale behind the Food Specification document is to maintain standards, improve the quality of meals served to learners, and make information available that can guide service providers on the expectations of the NSNP.

In reflection on the above comment, one might argue that the Department of Agriculture should train parents on how to grow fruits and vegetables and become commercial

farmers, as this will assist as schools will buy fresh fruits and vegetables from local farmers instead of someone they do not even know where fruits are coming from.

4.3.4.1.5 Theme 5: Scheduling meals

It is the finding of this study that the meals are scheduled according to the weekly meal plan as advised by the DoE and at break times consistently if the food supply is delivered to the school (School AL Teacher 2).

Reflecting on the above comment, one might argue that the department appoints permanent, full-time food handlers to take care of food to avoid problems.

4.3.4.1.6 Theme 6: Teachers help in measuring food

Despite being labelled as uncooperative in some schools, this study found that teachers are taking a hands-on approach by measuring the food items and giving them to the food handlers. School BH Teacher 1 mentioned that, *“As the committee we’ve improved these days as even the mother helpers are not going alone in the store room as we’ve taken foundation phase educators as they knock off earlier so they assist with the measurements of food as such we are no longer experiencing shortages.”* This contribution made a revelation about the shortage of food experienced in schools, not to be squarely blamed on the DoE but on the handling of food in schools.

Reflecting on that, one might argue that the department appoints one educator on a permanent post only to administer the program, as the department will have enough time to train the educator without disturbing learning and teaching.

4.3.4.1.7 Theme 7: Experienced committee members

For consistency in the handling of food in schools, it is the finding of this study that to improve the food handling services in schools, some schools retain some of the committee members for their experience to be maintained in the running of school meals in schools. School BH Teacher 2 mentioned that, *“The committee help in the NSNP, when the contract or term expires’ some people get extended contracts so it helps a lot because we will be having experienced people.”* It is when food handlers do not have a sense of

security in their job at the expiration of their contracts that they do not care about how they provide service or even take advantage of the food in store rooms. The need to consider the contracts of the food handlers was also shared in the study by Berejena et al. (2020), which revealed that food handlers and caterers in the Sedibeng West district of Gauteng and in the Fezile Dabi District in the Free State also reported their frustration with a lack of contractual continuity. Occasionally, food handlers become reluctant to be involved in additional duties due to the frustrations they experienced in the past when the contract expiration date approached. The findings of this study revealed that even though food handlers are employed by the state, the school has a role to play in managing the welfare of food handlers. In this regard, Mawela and Van den Berg (2020) identified principals and the SGBs as the main role players in the annual appointment of food handlers who oversee the process of food delivered to a school by appointed contractors.

Reflecting on the above comment, one might argue that the department hires qualified food handlers instead of giving them a one-year contract, as this ends up making parents unwilling to take part as food handlers knowing that there is only a one-year contract.

4.3.4.1.8 Theme 8: Stress on hygiene

It is the finding of this study that schools stress hygiene in the food handling and eating process for learners and food handlers to avoid incidences of food poisoning outbreaks. School BH Teacher 3 said, *“Children must wash their hands before they eat, and also the teachers ensure that the utensils are available and clean.”* The study by Berejena et al. (2020) found that food handlers are expected to maintain a high level of health standards, kitchen hygiene, and personal hygiene. The NSNP provides guidelines on the basics of personal hygiene, food hygiene, food preparation, managing food waste, and preventing food poisoning.

Reflecting on the above comment, one might argue that all stakeholders within the school should be trained on hygiene, as this will help them avoid eating unhealthy food.

4.3.4.1.9 Theme 9: Educate learners on balanced diet of school food

Food preference by learners has been reported as one of the challenges encountered in schools in the study, where some learners are not taking some meals because of choice in some cases. This study found that teachers are educating learners on the need for a balanced diet that is provided through scheduled school meals to make sure all the key nutrients are met in the weekly school meal plan. School AH Teacher 1 indicated that, *“We encourage learners to eat the food prepared at school because it’s healthy and also a balanced diet than to bring along lunch boxes with food with a lot of sugar, which does not boost their immune system.”* Devereux et al. (2018) articulate that the objectives of the NSNP embrace providing a nutritious meal to learners and promoting nutritional knowledge and healthy food choices. FAO (2020) found that school nutrition education coverage in the curriculum across countries is narrow, the time allowed is short, and the approach is largely theoretical.

Reflecting on the above, one might argue that learners should be encouraged to eat only food prepared at school as their lunch boxes are not balanced. Most of the time, you find that learners are having biscuits with concentrated juice, which is not well diluted and sometimes causes them to vomit. So, if parents can be taught how foods given to learners are balanced, they will stop giving their kids lunch boxes that are not balanced.

4.3.4.2 Sub-category 2: Suggestions to improve the quality of meals

4.3.4.2.1 Theme 1: School gardens

Some schools are taking the initiative to start school gardens so that students can have fresh vegetables instead of the cabbages that are often supplied to schools in a rotten state. School AH Teacher 2 said, *“We have started with that as now we replaced cabbage with spinach grown from our school garden so sometimes instead of cooking cabbage they are cooking spinach.”* The South African Food-Based Dietary Guidelines encourage schools to establish food gardens. However, in this study, only one school out of the four sampled schools indicated the presence of a school garden. To some extent, this finding does not support the finding of Kruger et al. (2020) that, in a cross-sectional survey of schools across South Africa, 77% of learners indicated that their school has a food

garden. Vinueza et al. (2016) indicated that school gardens are useful educational tools as they can be used to influence the eating habits and practises of learners.

Reflecting on that, one might argue that schools should be encouraged to start gardens within their school yards. The introduction of gardens in schools might be done in the form of a competition where the best school garden and the educator responsible are remunerated seasonally, as this will motivate educators to take part.

4.3.4.2.2 Theme 2: To change where suppliers buy food items

It is the suggestion of this study that suppliers should change where they buy food or ensure that specifications of food are strictly followed and observed to avoid buying already expired, poor-quality food products. School AH Teacher 3 mentioned that, *“If possible those who are responsible for the NSNP from the Province should be advised to identify best supermarkets where the suppliers can buy fresh foods as sometimes you find that they gave us beans that is not easy to cook”*. South Africa uses different models of food supply to schools, but most of the provinces use a decentralised system that gives the provincial education department the power to contract suppliers to supply food to schools (DBE, NSNP annual report, 2013/2014). Hence, the problems encountered are different according to the supplier subcontracted. The suggestion in this study is that the Provincial DoE, acting on the reports from schools, should advise the suppliers to make sure fresh food is supplied to schools.

Reflecting on the above comment, one might argue that the supply of food to schools be given to community members on rotational contracts, as this will make them supply good food knowing that if they supply food that is not of good quality, they might not be hired to supply food again.

4.3.4.2.3 Theme 3: Provide food options

Sentiments were raised that food options should be provided to the learners who do not eat certain foods that may be on the meal plan for that day. However, the suggestion lacked tangible measures on how this can be made possible in the school; hence, it remains an idea rather than a workable solution. School AL Teacher 2 said, *“There should*

be a veg or something for learners who do not eat milk”. However, vegetables option suggestion is workable in school with vegetable gardens.

Reflecting on the above comment, one might argue that alternatives be introduced for those who are not taking what is prepared for the day to have something with the same nutrients. This can also help parents encourage learners to eat, as there will be no complaints about them not eating what is not prepared.

4.3.4.2.4 Theme 4: Consultation meeting with teachers

This study found that participants suggested holding wider consultations with teachers in schools for suggestions of food items and menu plans that are more suitable in schools in different provinces. This suggestion makes the NSNP more sensitive to the culture and traditions of various provinces in terms of food preferences. School BH Teacher 3 suggested *“We can have more workshops on NSNP programmes, record views from different schools might be of help and improve the quality of food.”* This finding agrees with the assertion of Hassanally et al. (2020) that improving the efficacy of school feeding programmes includes designing a school feeding programme specifically for the needs of that community using local teams rather than distance experts.

Reflecting on the above comment, one might argue that the NSNP officials and those responsible have discussion meetings with educators on how to run the programme and discuss the menus to be given to learners. By doing that, one will also encourage educators to take part in running the programme as they will be part of the decisions taken.

4.3.4.2.5 Theme 5: Reduce the number of meals

A suggestion was given to reduce the number of meals so that more nutritious meals are provided. In other words, this is a suggestion of valuing the quality of meals instead of quantity. School BL Teacher 1 mentioned, *“They can provide meat at least once a week as the main aim was to provide one nutritious meal to all learners in the poor primary schools.”* However, the question remains: whether the main aim of NSNP is more on providing nutritious meals or making sure hunger is alleviated in schools.

The NSNP aims to enhance the learning capacity of learners through the provision of a healthy meal at schools. Where it is implemented, the programme has been shown to improve punctuality, regular school attendance, concentration, and the general wellbeing of participating learners.

4.3.4.2.6 Theme 6: Give schools money to buy own food

A more decentralised suggestion was made that the DoE should give money directly to schools to buy their own food for learners. School BL Teacher 2 said, *“If the Government can give schools money to buy food for them and hire some people/youth to go around schools to check the quality of foods bought by the schools. By doing this the government will be creating jobs for our youth and this will also assist in supplying food of good quality to schools.”* This suggestion requires a higher level of accountability and competence in schools for effective implementation. In other words, it is a decision that is made based on trust that the schools have the competence and consistency to draw up and implement meal plans. Youth are not experts that can go around schools to supervise professionals such as teachers. The decentralisation of the feeding programme has been proven to display some advantages. The study by Mafugu (2021) contends that it allows key stakeholders, for example, schools, learners, local municipalities, service providers, and enterprises, to play a significant role in determining what meals learners consume. This suggestion supports the finding of Mumba and Kesa (2020) that some provinces in South Africa use a decentralised model whereby funds are transferred to the schools to procure food items according to the provincial menu.

Reflecting on the above comments, one might argue that schools should be given money for food in the form of vouchers that can only be used in food shops.

4.3.4.2.7 Theme 7: Meals are of good quality already

It is the finding of this study that some teachers expressed contentment that the quality of meals provided in the schools is of good quality. This is an appreciation of the DoE and suppliers efforts in meeting the nutritional needs of the learners in schools. School BH Teacher 2 appreciated that, *“I do not think there is something to be done to improve the quality of food as to me the food are of good quality as they usually do not eat the same*

meal as they eta yesterday they give them different types of food and when I look at those food they are rich in minerals and vitamins it is a balanced type of food.” This appreciation lies in facts, because the school meals are scheduled according to the meal plan that was drawn to make sure different nutrient requirements are met in the week for a balanced diet. Then, as long as the meal plans are being followed and food is delivered to schools according to those specifications and is served to the learners daily according to the meal plan, quality meals are provided in schools.

Reflecting on the above comment, one might argue that they are not of good quality, as some educators mentioned that sometimes beans are hard to cook and just a small green apple, and sometimes the cabbages are rotten and too small, so the food delivered to schools is not of good quality at all.

4.3.4.3 Sub-category 3: Suggestions for National School Nutrition Programme to positively impact on learners performance in school

4.3.4.3.1 Theme 1: Maintain food supply

Given the finding in this study that NSNP is improving the performance of learners in schools, the study suggests that the only thing required for the NSNP to impact positively on learners’ performance is to maintain food supply to schools. In other words, consistency in providing school meals goes a long way toward improving learners’ performance in schools. School AH Teacher 2 stated that, *“Make sure that food is always available for learners as if food cannot be there it will be a very painful situation for learners as they won’t get anything from the school and go back to their homes not to get anything to eat so that will be a very serious problem.”* In other words, the schools do not have the capacity to meet the daily school meal requirements of the learners without a supply of food from the DoE. If the department cannot supply food, then learners are not given school meals. On the same note, School AL Teacher 3 stressed that, *“Suppliers should work according to plan which was given to the school because sometimes they do not deliver correct food”*. The study by Eluya (2019) posits that SFPs have been successful; however, the challenge lies in maintaining them so that they can reach as many learners and their families as possible. From a broader context, the study of

Govender et al. (2020) cited that in the Brazil SFP, the challenge was that many schools in the interior did not receive food on a regular basis, which resulted in poor school attendance. This implies that failing to be consistent in supplying food to schools has a reverse effect that can negatively affect learners' performance.

Reflecting on the above comment, one might argue that food supplies should be given to members of the community on a rotational basis. By doing this, it will create jobs for communities and encourage them to take part in their schools.

4.3.4.3.2 Theme 2: Introduce cereals in the morning and snacks in the afternoon

A suggestion was made to increase the number of meals provided to the learners from the current breakfast meals to cereals in the morning and snacks in the afternoon. School BL Teacher 2 indicated that, *"The Government should as well give learners breakfast in the form of at least two slices of bread in the morning"*. School AL Teacher 1 said, *"The department must make breakfast for learners, and give them snack after school."* This suggestion is supported by the findings of Hassanally et al. (2020) that the benefits of snacks in school feeding programmes are well established as they alleviate short-term hunger and micronutrient deficiencies, improve learning, and are cheaper and easier to distribute than meals. The study by Hassanally et al. (2020) adds that nutrient-dense snacks are important to optimise children's nutritional status and cognitive development.

Reflecting on the above comment, one might argue that breakfast should be introduced, as it will help learners a lot because you'll find that some get food at school but nothing at home, and they'll be waiting for food again during break.

4.3.4.3.3 Theme 3: Increase food measures

This study found that learners are getting small meals, which are not satisfying enough to quench their hunger; hence, a suggestion was made that there is a need for the DoE to increase the prescribed measurement of food. School BL Teacher 2 said *"The DoE must increase the measurement of food given to learners as it is not enough"*. However, it should be noted that in this study, a point was raised that too much food is causing

learners to be sleepy in after-break lessons, which negatively affects their concentration in the classroom.

Reflecting on the above quotation, one may argue that learners should be given breakfast in the morning before the commencement of periods, as this will help them instead of increasing the prescribed measurements, which causes some to be sleepy.

4.3.4.3.4 Theme 4: Training on food handling and management

The need for training was raised in this study: training in the food handling and management of the NSNP at the school level. School BL Teacher 2 mentioned that, *“According to my observation in managing the NSNP I personally need to be trained on how to manage this as especially with the measurements of food.”* It is important to note that the participant who raised this point is a department head, which communicates the way the effective implementation of NSNP is being taken for granted in some schools. Department heads are part of the SMT, so if members of the SMT are not well informed about some practices, such as NSNP management, it reflects that some teachers may not even be aware that they need training in this respect. To some extent, the study of Mawela and Van den Berg (2020) supports this finding by noting that a lack of a clear plan for how nutrition programmes should be managed overwhelms many school principals and nutrition coordinators. In addition to teachers, Kruger et al. (2020) and Mafugu (2020) found that the food handlers, who are mostly women, are supposed to be provided with training in food safety and hygiene, preparation, and serving. But there is no evidence that this training has been successfully implemented in most schools (Kruger et al., 2020). Monitoring of the implementation of a programme can only be effectively done by people who are aware of and have been trained on what is expected of them; hence, the DoE should prioritise the training of the SMT members for effective implementation of the NSNP in school. Once the SMT is trained, teachers and food handlers can be trained on effective management of the SFP.

Reflecting on the above comment, one might argue that training food handlers, SMTs, and educators will be very helpful, as all will be working knowing exactly what is expected of them.

4.4 CONCLUSION

In this chapter, I presented the views of the teachers on the impact of the NSNP in the primary schools to answer my research question: What are the teachers' views on the impact of the National School Nutrition Program in the primary schools in Mahwereleng Circuit, Limpopo Province? Thematic analysis from the semi-structured interviews was deductively discussed in four categories: Biographical data; NSNP implementation in Mahwereleng primary schools; teachers' experiences with the implementation of NSNP; the impact of the NSNP on learners' welfare and performance in schools; alternative strategies to improve the NSNP in schools. The next chapter, Chapter 5, draws recommendations and conclusions.

CHAPTER 5

SUMMARY, RECOMMENDATION AND CONCLUSIONS

5.1 INTRODUCTION

The previous chapter presented data in terms of identified themes and sub-themes as background information brought about the impact of the National School Nutrition Programme. All participants were classified according to their participation and how they were involved in the NSNP. This chapter aims at providing an overview of the study by reviewing the research problem, summarising the study, and providing recommendations for future studies.

5.2 REVIEW OF THE RESEARCH PROBLEM

The study was carried out to investigate the changes brought by the impact of the NSNP on the two rural and two urban primary schools in Mahwelereng Circuit, Mogalakwena District, around Mokopane.

5.3 DISCUSSIONS OF FINDINGS

The following discussions of key findings are linked from the results of the literature review and empirical study. The main issues identified are:

- a The impact of the National School Nutrition Programme in the rural and urban schools in Mahwereleng Circuit.
The experiences of teachers on the impact of National School Nutrition Programme in Mahwereleng primary schools.
- b The impact of the National School Nutrition Programme to learners' welfare and performance in schools.
- c The alternative strategies that can be used to improve the implementation of National School Nutrition Programme in schools.

5.3.1 The perceived impact of the National School Nutrition Programme in the rural and urban primary schools Mahwereleng Circuit

Most of the schools have a committee that manages the implementation of the NSNP. In some schools, particularly small schools in both urban and rural areas, the committee is assisted by a food monitor from the DoE. The committee is responsible for checking food deliveries, meal preparation, measuring food items, and taking care of the vulnerable learners' food needs. Each member of the committee is allocated a role among the various functions of the committees to work with the non-teaching staff of the school responsible for cooking food. An SGB member and the foundation phase teachers (because they knock off earlier) are given the responsibility of measuring food a day before. The meals are prepared by food handlers hired by the school on a yearly contract basis and served to the class teachers in their respective quantities in their classrooms. Teachers supervise the feeding of learners during break times in their classrooms and mark the eating register that is submitted to the circuit office. Teachers are more involved in the running of the NSNP in liaison with the parents and the DoE. Teachers are also responsible for the NSNP as coordinators, photographers, chairpersons, financial planners, and food handlers. However, the unusual practise found in this study is the delegation of financial responsibilities to teachers, such as handing food handlers their salaries. Food is prepared according to the weekly prescribed menu. The meals do not provide alternatives for learners with allergies to some foods; instead, teachers encourage learners to come with supplementary lunch boxes. Extra food is given to the vulnerable learners every day, and excess food is given to all learners as food packs at the end of every quarter. Each quarter starts with fresh food from the DoE.

5.3.2 The experiences of teachers on the implementation of National School Nutrition Programme in Mahwereleng primary schools

Teachers expressed appreciation and sentiments that the implementation of the NSNP in schools is generally successful, as learners have access to food at break time in all schools according to the weekly menu plan as prescribed by the DoE. However, teachers acknowledged experiencing some challenges as the food is not delivered in time, particularly in the first week of schools opening for the new quarter. As if that is not

enough, the suppliers deliver stale food that has already expired and rotten fruits and cabbages. Some of the food items delivered are of poor quality, such as beans that are hard to cook. The teachers complained that besides the prescribed food measures per learner being small, the quantities of food delivered to the school by suppliers are always worked out using previous year enrolment, so it is not enough as the number of learners is increasing in schools. In addition, the prescribed meals in the menu plan are inflexible; they do not cater to learner preferences or allergies; hence, some learners do not like the menu and decide not to eat at school but bring their own lunch boxes. Incidences of food poisoning were reported in some schools not because of the negligence of the DoE but because of the failure to strictly adhere to hygiene practises in the classrooms, as some of the plates were not clean.

Besides the negligence of some teachers in failing to supervise hygiene practises in the classrooms, some teachers have been reported to even fail to mark the eating register, so the eating records are not updated, hence compromising the effective implementation of the NSNP in schools. To some extent, the negligence of teachers in their supervisory roles increased challenges in the measures and social distancing protocols enforced in schools when schools reopened during the COVID-19 pandemic. Teachers reported that managing foundation phase learners and following COVID-19 protocols is difficult, as the learners can even change their masks and talk about washing their hands thoroughly before eating. Because of COVID-19 social distancing measures, schools adopted a rotational attendance system to make sure all learners were receiving food. Some schools went all the way to allow learners who are not coming to school on that day to only come at break time to access their food, and some parents and guardians of vulnerable learners were called to come to school and collect food items for their children at home. However, few schools reduced the food quantities cooked in a day to only cater for learners in attendance. This implies that not all schools cater to learners who are not attending school on out-of-school days, according to the rotational attendance systems.

5.3.3 The perceived impact of the National School Nutrition Programme to learners' welfare and performance in schools

Teachers identified increased school attendance and the elimination of hunger among learners in schools as some of the impacts of the NSNP on learners' welfare; however, mixed feelings were expressed. The NSNP motivates learners to come to school, and attendance has increased and the school dropout rate has gone down. However, the school attendance is not in good faith but manipulative, as learners either come to school in the morning and disappear after break time meals or they rather come to school at break time specifically for meals, even at the time the rotational attendance system has been lifted. The point is that the intention of coming to school is no longer focused on learning for some of the learners but just to have access to school meals. This study found that the NSNP, to some extent, has not only managed to eliminate the effects of hunger on learners in schools but has also managed to meet balanced dietary needs that many learners are not able to meet in their homes. However, learners starved at home during school closures as a result of lockdown rules that shut down the schools in 2020, and even in the rotational attendance system, as not all schools reached out to the learners on the day they were out of school. This implies that the success of the NSNP was challenged in schools as a result of the disruptions caused by the COVID-19 pandemic.

The NSNP increased the motivation of learners to take part in school activities in the classroom, as hunger causes disorientation and leads to learners losing interest in the classroom. It increased the concentration of learners in the classroom, as hunger is some form of internal noise that can disturb learners' focus on classroom activities. Henceforth, learners' academic performance has increased as the NSNP enables learners to attend school and actively engage in classroom activities. However, some teachers expressed reservations that break-time meals often cause learners to sleep in class after a break because their stomachs are full. This provides a rationale for why the DoE prescribes food rationing based on prescribed measures. It was found as a common practise that some learners are allowed to get an extra plate if there are left overs; these cases cause learners to sleep in lessons after break; hence, it is not the meals at break time that cause learners to sleep in lessons, but the management of break time meals.

5.3.4 The alternative strategies that can be used to improve the National School Nutrition Programme in schools

The schools have taken measures to improve the implementation of the NSNP in their schools. The one-year contract of the food handlers has been a concern, as hiring new food handlers every year, even though it provides employment opportunities to a large part of the community, continuously keeps the standard of food handling at the same level, as the school has to deal with new food handlers every year. Hence, schools are retaining some experienced food handlers at the end of their year contract for the purposes of continuity, which helps in improving food handling standards because of experience. The SMTs take it upon themselves to remind teachers of the supportive role of the NSNP in facilitating the achievement of the primary teaching and learning goals as a way of seeking teachers' cooperation and commitment to the implementation of the NSNP in schools. It should be noted that even though teachers may be called negligent in some aspects, they should be appreciated for being hands-on in some schools. In the foundation phase, teachers who knock off early are involved in the measuring of food with food handlers, which has seen schools realise an improvement in food management. To a large extent, this shares the blame for the food shortage between the DoE and the school through food mishandling by food handlers.

It is important to note that even though there are cases of food poisoning as a result of a lack of hygiene practises in classrooms, schools are not turning a blind eye. Some schools have installed cameras in food preparation places and classrooms and monitor the specifications of food items when they are delivered, just to make sure learners are given healthy food in a hygienic environment. Cameras are installed to make sure the food preparation and feeding processes are monitored to keep everyone on their toes and make sure hygiene practises are followed. Besides checking for the specifications of the food, the received food is stored in storage rooms secured in a way that perishables will not go stale. Given that not all learners are coming from impoverished backgrounds that may require school supplementary feeding, the teachers educate learners on the balanced diet provided in the school every week for them to appreciate the NSNP more.

As suggestions to improve the quality of meals, it is important to note that some teachers appreciated, to the point of even arguing, that there is no need as the meals are already of good quality and the meals in the weekly menu plan are scheduled to provide a balanced diet. However, because the menu plan is inflexible in terms of catering to learners' allergies and the supply of stale food, teachers suggested cultivating vegetables in school gardens to provide more options for fresh vegetable supplies other than stale cabbages. In this study, only one school has a school garden; others solely rely on vegetables supplied by the DoE. The DOE should make sure quality and fresh food is supplied to schools, and the teachers suggested decentralisation of procurement by providing money to buy food directly to schools instead of contractors assigned by the Provincial Education Department. The need for wide consultation with teachers for the menu to meet the cultural preferences of food in different contexts was suggested by the teachers.

In appreciation of the impact of NSNP on learners' performance, teachers advocated for maintaining food supplies in schools. As schools have no capacity to feed learners on their own, any interruption of the school feeding plan can yield reverse effects on learning. Teachers even suggested increasing the frequency of meals from break time only to including lunch snacks or morning cereals. They even suggested increasing the prescribed food measures, despite the fact that more food causes learners to sleep during lessons. This study found that teachers and food handlers need more training, as even the SMT members are not trained in the management of the NSNP. Prescribing monitoring standards to the staff that is not trained is setting schools up for failure in the implementation of the NSNP; hence, the DoE should set the standard and expectations for the management of the NSNP through training.

5.4 SUMMARY OF FINDINGS

The main findings of this study are summarised below in terms of sub-theme 1, sub-theme 2, sub-theme 3, and sub-theme 4. The research outlined how each of the subthemes was addressed.

5.4.1 Sub-theme 1: The perceived impact of the National School Nutrition Programme in the rural and urban schools in Mahwereleng Circuit

School feeding programmes are implemented across the globe, within the region, in Africa, in low- and middle-income countries, and in developed nations, using different names and strategies to make sure all vulnerable learners have access to food in schools. In the South African context, the NSNP is implemented in all primary public schools in South Africa. To motivate schools in the effective implementation of the NSNP, the DoE even introduced an awards programme that recognised the top performing schools for their excellence, innovation, and dedication in the successful implementation of the NSNP. This incentive even saw more schools improving in the implementation of the NSNP. The need for the NSNP increased because of the COVID-19 pandemic, as more families were thrown off balance economically. One breakfast meal is provided in primary public schools according to the provincial menu prescribed by the provincial DoE to all schools in the province. The rationale behind the menu prescription is to maintain standards and improve the quality of meals served to learners. It is not about quantity only but also quality, so the menu provides for the key nutrients every day to meet the balanced diet requirements of the learners.

The food is supplied to schools at the beginning of every quarter in measured quantities according to the enrolment by the contractors hired by the Provincial DoE. DBE stipulates that the school principals must manage the NSNP and appoint a nutrition coordinator to assist him or her. In addition, the school and the SGB have the responsibility for the annual appointment of food handlers who oversee the process of food delivery to a school by appointed contractors. The nutrition coordinator, who is a full-time teacher, supports the role of the principal. Often, the role of the nutrition coordinator is to ensure that food handlers cook according to the NSNP menu, manage the feeding of needy learners, ensure the safe storage of food, and look after the distribution of food parcels to needy learners. Food handlers perform food preparation duties as part of a kitchen team. Food handlers are local parents employed by the DoE who prepare and serve meals in the NSNP. Food handlers are expected to maintain a high level of health standards, kitchen

hygiene, and personal hygiene by performing routine duties that include peeling vegetables, cleaning, and sanitising food preparation places and utensils.

5.4.2 Sub-theme 2: The perceived impact of the National School Nutrition Programme in the rural and urban schools in Mahwereleng Circuit

The increase in the number of schools and learners benefiting from the NSNP in South Africa over the years, even before and during the COVID-19 pandemic, reflects the success of the NSNP implementation in South African schools. However, challenges have been echoed and explained in the literature review. The delays in the delivery of food supplies to schools are partly a result of late payments from contracted suppliers and late suppliers' contract submissions. Although all the service providers signed contract forms to bind them to provide food every day, quality service could not be guaranteed because of payment delays. Teachers are sometimes regarded as uncooperative because they are overloaded with work and struggle to strike a balance between teaching responsibilities and meeting the needs of their learners. Teachers are unable to effectively achieve stability between teaching commitments and SFP management. Teachers feel that managing a school nutrition programme makes heavy calls on their teaching and learning time and compromises their schoolwork. Even in Ghana, teachers are given the mandate to compile meal registers and file them, as well as assist in feeding the children.

The NSNP menu is prescribed and handed down from the Provincial DoE. The menu does not specialise in specific diets linked to health conditions and allergies of learners; hence, meeting the needs and taste preferences of learners in daily meals is a challenge. A product, which may be good for one school, might not be liked by another. Literature confirmed that the shutdown of schools and reduced number of learners in attendance because of social distance to manage the COVID-19 pandemic resulted in the starving of learners in many countries, as not all countries responded by reaching out to learners at home, resulting in nearly 370 million children not receiving a school meal in 150 countries (UNESCO, 2020). WFP (2020) elaborated that children globally are estimated to have missed an average of 4 out of 10 in-school meals they would have regularly received, with children in some countries missing 9 out of 10 in-school meals. However, in

developed countries such as the USA, measures were taken to provide food or funds for food for learners at home. Related problems are that it affects academic performance, cognitive function, capacity to attend school, and ability to concentrate in classroom lessons.

5.4.3 Sub-theme 3: Strategies used to improve the National School Nutrition Programme in schools

Nutrition education in schools is regarded as a strategic pillar of the NSNP, as it focuses on promoting a nutritious lifestyle and developing a comprehensive eating plan amongst learners and school communities. Awareness through formal education such as nutrition education goes a long way toward changing learners' and teachers' attitudes towards NSNP and improving the commitment of teachers to the programme and the uptake of school meals by learners. The quality of diet in childhood has been shown to impact future development, educational achievement, health and well-being outcomes, and adult diet and non-communicable disease risk.

Managing the NSNP requires urgent attention when it comes to promoting sustainable food production in schools. The objectives of the NSNP include creating food gardens that improve production and environmental knowledge in learners. School gardens are useful educational tools as they can be used to influence the eating habits and practises of learners. The South African Food-Based Dietary Guidelines encourage schools to establish food gardens. In South Africa, provinces use different procurement models for food supply to schools, with some using a centralised model such as Gauteng and others using a decentralised model where schools are given grants to buy and manage their own NSNPs according to the provincial menu. This has improved the quality of school meals, particularly the availability of fruits and vegetables. On a different note, in South Africa, the lack of a clear plan for how nutrition programmes should be managed overwhelms many school principals and nutrition coordinators. SMT, teachers, and food handlers require training, as a lack of understanding makes the implementation of any programme exhausting. Food handlers, who are mostly women, are supposed to be provided with training in food safety and hygiene, preparation, and serving. But there is no evidence that this training has been successfully implemented in most schools.

5.5 FINDINGS FOR FUTURE USE

- The studies by Mawela and Van den Berg (2020) and Mashiri (2017), including this study, found that the NSNP improves school attendance; however, this study found that some learners come to school for food only, whereas the other two studies added that it also improves punctuality. One can argue that coming to school at break time for food and leaving school after break time meals expose a lack of strict supervision by teachers. The schools need to take advantage of increased attendance to enforce punctuality and discipline to ensure that learners attend lessons.
- Even though the DOE employs food handlers for one-year contracts, schools should retain key food handlers for continuity to improve food handling in schools.
- The DOE should enforce the establishment of school gardens in schools for the provision of fresh vegetables and even fruits to schools.
- Besides the NSNP Policy from the Provincial Department of Education, schools should have a feeding policy that is clear to all so that all school stakeholders are well-informed and positioned in the implementation of the NSNP.
- A decentralised procurement model should be used to mobilise local resources for school feeding to improve NSNP implementation.
- Effective monitoring and supervision by the DOE of the NSNP can only be done through training of the SMT and teachers in NSNP management so that expectations are clearly established and agreed on.

5.6 SUGGESTIONS FOR FURTHER RESEARCH

Further research can be conducted in the evaluation of the centralised and decentralised procurement models of food for effective implementation of the NSNP in South Africa, since provinces have adopted different procurement models.

5.7 SUMMARY OF THE CHAPTER

This chapter aimed at investigating the impact brought by the implementation of the NSNP and focusing on the findings and recommendations of the study. As the main

objective of the study was to investigate and outline the impact of the NSNP, it was found that since the NSNP was implemented in schools, performance improved, absenteeism was minimised, enrolment increased, and in general, progress has improved. As such, the main aim of the NSNP and this study was achieved.

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APPENDICES

ANNEXURE A: SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE: The impact of the National School Nutrition Program in the primary schools in Mahwereleng Circuit in Limpopo Province

Main research question:

- What is the impact of the National School Nutrition Program in the primary schools in Mahwereleng Circuit in Limpopo Province?

Time frame: 30-45 minutes.

INTERVIEW PROCEDURE

- The researcher greets the research participant
- Researcher introduces herself
- The researcher explains the focus of the study
- Participant study and sign the informed consent form as consent for participation
- Researcher assures confidentiality and anonymity
- The researcher gathers biographical data.

SECTION A: Biographic data

1.1. For how long have you been teaching at this school?

1.2. What is your qualification?

1.3. Which grades and subjects are you teaching?

SECTION B: How the National School Nutrition Programme implemented in Mahwereleng primary schools.

1. How is the NSP managed at your school?
2. How are you involved in the NSP at your school?
3. Comment on how the meals are prepared at school?
4. What can be done to improve the quality of meals?

SECTION C: Teachers' experiences on the implementation of National School Nutrition Programme in Mahwereleng primary schools.

5. Comment on the success of NSP implementation in your schools?
6. What are the challenges you are facing on the implementation of NSP at your school?
7. How did the school feeding programme respond to the demands imposed by Covid-19?

SECTION D: The impact of the National School Nutrition Programme to learners' welfare and performance in schools.

8. In your views what are the effects of NSP to learners' welfare you have observed in your school?
9. Comment on the impact of NSP programme to learners' performance at your school?
10. What changes have you noticed in the learners in your school as a result of NSP?

SECTION E: Alternative strategies to improve the National School Nutrition Programme in schools.

11. What measures are taken at your school to improve the management of NSP?
12. What suggestions can you make for NSP to positively impact on learners performance in your school.

Thank you for your cooperation.

ANNEXURE B: REQUEST TO CONDUCT THE STUDY



Central University of
Technology

Private bag x20539

Bloemfontein

9300

The District Director

Mogalakwena District

From: Lebesse T.G

Date: 11 August 2021

REQUEST TO CONDUCT A RESEARCH INTERVIEW AT SEGOA-KGALA PRIMARY SCHOOL

DEAR SIR

I am a Master's Degree student in the Department of Humanities at the Central University technology Free State Campus. As part of my course, and under the supervision of Dr Ngobeni and Prof Sepeng. I am conducting research on the impact of the National School Nutrition Programme at Segoa-kgala Primary School in Mogalakwena District Limpopo Province. The research's aim is to investigate the impact brought by the National School Nutrition Programme at Segoa-kgala Primary School. The school has been selected because it is found in the deep rural area and where most of the parents are not working and depends on the Social and Child Support Grands for survival. I am asking Segoa-kgala Primary School to participate in an unstructured interview which will be scheduled at any day after permission is granted. The information will be treated confidentially. There will be no anticipated risk, compensation or direct benefits to the school as a participant in this interview. Findings and recommendations of the study can also be used by the

school, the circuit and district to make improvement on how the National School Nutrition Programme should be implemented. The school is free to withdraw its consent to participate and may discontinue its participation in the interview at any time without consequences. If you have any question about this research please contact me at 082 399 9030: email: tglebese26@gmail.com or my supervisor Dr. Ngobeni E.T at 082 218 0033 or the HOD of the programme Dr Modise at 082 703 4127.

Yours faithfully

Lebese TG (Work Station: Makgubuketja Primary School.

To: The Principal

Kgatabela Primary School

From: Lebese TG

Date: 12 August 2021

REQUEST TO CONDUCT A RESEARCH INTERVIEW AT KGATABELA PRIMARY SCHOOL

Dear Madam.

I am a Master's Degree student in the Department of Humanities at the Central University of Technology Bloemfontein Campus. As part of my course, under the supervision of Dr Ngobeni E.T and Prof P Sepeng. I am conducting research on The Impact of the National School Nutrition Programme at Kgatabela Primary School in Mogalakwena District, Limpopo Province.

I am asking the school to participate in an unstructured interview which will be scheduled at any day after permission is granted. The information will be treated confidentially. There will be no anticipated risk, compensation or direct benefits to the school as a participant. The research's aim is to investigate the Impact of the National School Nutrition programme at Kgatabela Primary School. The school has been selected because it is found among other schools most of the parents are not working and depends social grand

for survival and the National School Nutrition Programme brought some changes to the school.

Findings and recommendations of the study can also be used by the school and the circuit or district to make improvement on how the National School Nutrition Programme should be implemented. The school is free to withdraw its consent to participate and may discontinue its participation in the interview at any time without consequences.

If you have any question about this research please contact me at 082 399 9030: email: tglebese26@gmail.com or my supervisor Dr. Ngobeni E.T at 072 304 0832 or the HOD of the programme Dr. Modise



P.O. Box 1264
MAHWELERENG
0626

Kgatabela Primary School

Enquiries: Dacket M J
CELL NO: 071 243 5492
FAX NO: 086 618 0143

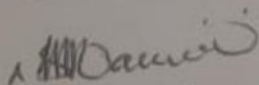
22 February 2022

Dear Madam LEBESE T.G

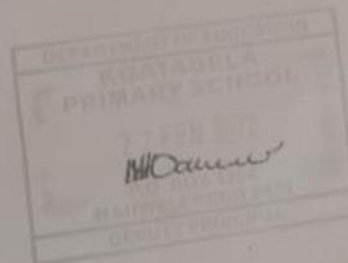
SUBJECT: APPROVAL TO CONDUCT RESEARCH ON THE IMPACT OF THE NATIONAL SCHOOL NUTRITION IN KGATABELA PRIMARY SCHOOL IN MAHWELERENG CIRCUIT UNDER MOGALAKWENA DISTRICT.

1. The above matter refers.
2. Kgatabela Primary hereby grant you permission to conduct research on the impact of National School Nutrition Programme (NSNP).
3. Be informed that you have been granted permission on the 25TH February 2022, time 08h00.
4. We hope and believe that your research will follow the research ethics as outlined by your institution.
5. Wish you all the best in your studies.

Yours Faithfully



Dacket M J
PRINCIPAL



ANNEXURE C: EDITING LETTER

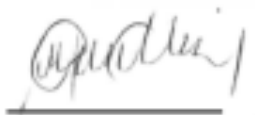


Marieta Grundling (MBA)

366 Rosemary Street
Grootfontein Country Estates
Pretoria, 0081
081 354 1596
edit@profeditmba.co.za
18 February 2024

To Whom It May Concern

This serves to confirm that the dissertation: ***The impact of the National School Nutritional Programme in the selected rural and urban primary school in Mahwelereng circuit*** by **Lebese Tenyeko Gladys** was edited. The language, presentation, and referencing system (both in-text and against the Reference List), were checked and corrected.



M Grundling
18 February 2024