

# Management of school nutrition programmes to improve environmental justice in schools: a South African case study

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**Objective:** The objective of this study was to determine how school principals and nutrition coordinators see their roles in the management of school nutrition programmes for learners from disadvantaged communities.

**Design:** In this qualitative study, a single case study design was used to collect data through open-ended questionnaires, follow-up interviews and field notes.

**Subjects and setting:** Principals and nutrition coordinators at five primary schools and three secondary township schools in Alexandra.

**Results:** The findings highlight the importance of school nutrition programmes in contributing to a healthy learning environment. Principals and nutrition coordinators were clear about their management roles and responsibilities in the programme. The biggest challenges were the work overload of nutrition coordinators, a lack of training and inadequate food delivery.

**Conclusion:** Based on the findings, the study recommends the implementation of a training programme for school principals and nutrition coordinators on time and human resource management to assist them in balancing teaching time and the management of food handlers, the appointment of a nutrition coordinator and collaboration with non-government organisations, volunteers and businesses to assist schools. Finally, this study reveals that the struggle for environmental justice to address shortage of nutritious food to feed needy learners remains valid and that school nutrition programmes, if managed properly, can make a crucial contribution in this regard.

**Keywords** environmental justice, healthy environment, management, nutrition coordinators, School nutrition programmes, school principals

## Introduction

In recent years, the intersection between environmental justice, schools and nutrition has been examined by several researchers.<sup>1,2</sup> Although a multi-faceted term, environmental justice sees the environment as not only nature but also the home, neighbourhood, school and workplace. In South Africa it is regarded as a political term, which gained popularity in the 1990s with the relaxation of apartheid laws and places the well-being of people at the centre of relationships.<sup>2</sup> Environmental injustice is closely related to the marginalisation of black citizens under apartheid and campaigns led by many organisations, institutions and movements for environmental justice. The principles of environmental justice are included in Section 24 of the Bill of Rights, which provides that all people have the right to an environment that is not harmful to their health or well-being.<sup>3</sup>

The importance of environmental justice was also evident in the new inclusive school curriculum after the first democratic elections in 1994, which focused on redressing educational inequalities of the past. One of the principles in the school curriculum was environmental and social justice, which required addressing the physical, social and emotional needs of all learners.<sup>4</sup> In order to address these needs one of the initiatives of the post-apartheid democratic government was the establishment of a national school nutrition programme.<sup>5</sup> The programme, which is funded by the Department of Basic Education, sees the school as a place to feed and educate learners who are undernourished and provides meals to learners in schools from disadvantaged communities.<sup>4</sup> The Department provides meals to all

learners in non-fee paying public primary and secondary schools.<sup>5,6</sup>

The purpose of the National School Nutrition Programme (NSNP) is to promote quality education by ensuring that children operate in a healthy environment. This environment should be conducive to learning, provide food during school hours as an incentive for children to attend school regularly, and address the problem of malnutrition.<sup>7</sup> Vorley and Corbett<sup>8</sup> indicate that the majority of children enrolled in non-fee-paying schools are marginalised street children and those affected by HIV/AIDS. In 2016 the NSNP provided meals in 21 000 schools.<sup>9</sup>

School nutrition programmes are not unique to South Africa. Graham and Zidenberg<sup>10</sup> indicate that in 2012 no less than 66 million children throughout the developing world, mostly in Africa, received food at school. According to the Zimbabwe National Nutrition Strategy,<sup>11</sup> Zimbabwe faces a growing level of chronic malnutrition, which is exacerbated by food insecurity and growing poverty. More and more learners become dependent on school nutrition programmes. According to Gorski *et al.*,<sup>12</sup> schools in the USA serve 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.

Despite the fact that school nutrition programmes have many advantages, Mbusi,<sup>13</sup> with reference to the South African context, states that the service has been beset by management challenges.

## The management of school nutrition programmes

According to the Department of Basic Education,<sup>4</sup> school principals have to manage the NSNP and appoint a nutrition coordinator to assist him or her. Management of the NSNP entails, among other things, budgeting, managing allocated funds, and the sourcing, buying, transporting and storing of food. They are 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) who oversee the process of food delivery to a school by appointed contractors. It is clear that the role of the school principal is essential in managing school nutrition programmes.<sup>14</sup> 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; see to the safe storage of food; and look after the distribution of food parcels to needy learners.

Schools often experience unexpected increased learner enrolments due to rural depopulation.<sup>1</sup> This results in a shortage of food, which deprives them of their right to a healthy environment.<sup>15</sup> To address this challenge, schools started vegetable gardens.<sup>16</sup> However, a vegetable garden needs human resources, available land, gardening tools, seeds, water, proper security, fertile soil and insecticides.

## Research problem

In the Alexandra Township, Gauteng, where this study was conducted, the NSNP aims to establish environmental justice by providing a nutritious meal at school. Needy learners are served daily with a prescribed, balanced meal consisting of protein, starch, fruit and vegetables. 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.<sup>6</sup>

In our literature review we found a significant knowledge and skills gap in how school nutrition programmes are managed. 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. Mbusi<sup>13</sup> indicates 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.

Against this background, the aim of this single case study was to determine the roles of school principals and nutrition coordinators when managing nutrition programmes in schools. We wanted to find out what worked well and what the challenges were in order to make suggestions for the effective management of school nutrition programmes.

## Methods

### Design

This study was conducted within an interpretivist paradigm in which individuals seek to understand their world and develop the subjective meaning of their experiences and perceptions.<sup>17,18</sup> More specifically, we were interested in school principals' and nutrition coordinators' perceptions and interpretations

of their roles in managing school nutritional programmes. Using a single case study, we found a qualitative approach most applicable as we wanted to collect in-depth, non-numerical data.

### Setting and participants

School principals and nutrition coordinators of five primary schools and three secondary schools in Alexandra Township were purposefully sampled as participants. Alexandra, an overcrowded township in South Africa with a population of more than 500 000,<sup>19</sup> is a legacy from apartheid, which forced black people to live in underserved neighbourhoods. The eight school principals were sampled because they manage the entire process of nutrition in their schools and the eight nutrition coordinators were chosen because they coordinate school nutrition programmes. Selected schools had between 1 090 and 1 676 learners.

### Ethical considerations

We received ethical clearance from the University of South Africa (2017/03/1590158024/1/1mc) and permission from the Provincial Department of Education. Participants provided written consent and issues of confidentiality and anonymity were dealt with.

### Data collection

By using self-administered questionnaires with open-ended questions (see [Appendix A](#)) and conducting follow-up one-on-one interviews as well as non-participant observation we were able to collect data. We sent questionnaires to the selected schools' principals and nutrition coordinators and received all questionnaires back by the due date. The questions focused on the purpose of the programme, their roles in the programme, as well as the challenges they experience. The questionnaires were supplemented with follow-up interviews. The purpose of the interviews was to verify data, ask for evidence in some instances and for clarifications to make sure that we had a clear understanding of the responses in the questionnaires. All participants were visited at the eight schools and the informal follow-up interviews lasted 10–20 minutes. Furthermore, we visited all the schools at times when food was distributed to learners with the intention of observing how the food was prepared, how learners were fed and how nutrition coordinators were supervising food handlers. Field notes were taken during these visits. We used a thematic approach to analyse our data.<sup>20</sup>

All participants in this study signed consent forms and the schools' governing bodies gave permission not only to do this research, but also to visit the schools on specific days. Learners and food handlers were aware of the purpose of our presence at the schools.

### Data analysis

The captured data from this qualitative study were presented and analysed using the thematic approach.<sup>21</sup> Data obtained through individual questionnaires, interviews and observations were transcribed and read. They were then analysed in order to identify patterns in accordance with the research objective. The data were coded and verified by both authors and differences were discussed until agreement was reached. Thereafter themes were identified. The last step was to name the identified themes. The data analysis was guided by the aim of the research.

## Findings

The following themes emerged from the data analysis process:

- The purpose of introducing nutrition programmes in schools;
- The roles of school principals and nutrition coordinators in managing the nutrition programmes in schools;
- Challenges experienced.

### **Purpose of introducing nutritional programmes to schools**

The main response from both the primary and secondary school principals was that the school nutritional programmes were introduced on the instruction of the Department of Basic Education because learners were from poor backgrounds. One of the principals responded as follows: 'We are implementing the national school nutrition programme as per the instruction from the Department of Basic Education in order to improve the health and well-being of our children who come from poor backgrounds.' Another principal made it clear that the programme goes beyond the boundaries of the school. She stated that 'The purpose and value of the school nutrition programme is seen beyond the school boundaries, since most households also benefit. From our vegetable gardens we give needy learners food parcels on Fridays as part of making a contribution to the community.' This implies that the school nutrition programme does not feed learners only while they are at school.

The responses of the nutrition coordinators were similar to those of their principals. For instance, one of the coordinators indicated that 'There is no doubt that most of our learners are coming from poor families, and most of them cannot afford a lunch box'. Another coordinator indicated that the purpose of the programme was to improve results and stated that 'Since 1994, there is an increase in the number of learners attending schools, and the pass rates have improved, and this is mainly because of the nutrition programme'. Furthermore, a coordinator indicated that owing to the nutritional programme, learners' school attendance and performance were continuously improving: 'I have seen the improvement of learners on a daily basis, more especially the learners who are continuously sick and absent from school. The programme provides a balanced and nutritious diet to our learners. I think they have the right to live in a healthy environment with enough healthy food.' According to this coordinator, the purpose and value of the nutrition programme transcends feeding. Besides providing nourishment to learners, it improves their health. One of the coordinators mentioned that the programme improved learners' performance on the sports field, by saying that 'our sport coordinator reported that learners display a lot of energy while playing games such as netball and soccer. Besides a high attendance rate in different sport activities in school, learners perform well on the sports field. Sufficient and healthy food makes this possible.'

The views of the school principals and nutrition coordinators support our observation during school visits. At most schools, particularly primary schools, learners arrived early because they receive breakfast in class. During the follow-up interviews, one of the coordinators who was asked about the benefits of the NSNP stated that 'Breakfast in class has installed punctuality and discipline to most of the learners'. In some primary and secondary schools, not only needy learners took part in the NSNP, but also those who had lunch boxes. This observation was an indication that they enjoyed the healthy and balanced meals. One school principal questioned on the purpose of the NSNP confirmed that 'Healthy and nutritious food is prepared using the

provided menu with the intention of keeping the health standard of learners'. This suggests that the NSNP provides not only daily food, but also a menu-based diet.

### **Roles of school principals and nutrition coordinators in managing nutrition programmes in schools**

Principals and nutrition coordinators were in general clear about their roles and responsibilities regarding the NSNP. School principals mainly referred to the overall management of the programme, including the management of coordinators and food handlers. For example, one principal indicated that: 'My role is to implement the NSNP. I also make sure that the school governing body hires food-handlers who prepare food for learners.' Another principal mentioned that: 'My duty is to make sure that the school has a nutrition coordinator who will supervise the food-handlers, place orders, check food quality and shortages, ensure that food is secured and make sure that all learners, more especially our needy learners, get food on a daily basis.' A different principal stated that there was a policy regarding the NSNP that principals had to adhere to when managing nutrition programmes. According to our observations at schools as well as the responses of principals, they were not involved in the running of the day-to-day business of the school nutrition programmes; the school nutrition coordinators were tasked to do this.

During the follow-up interviews, one of the principals highlighted that 'There are other roles, although not stipulated in the NSNP policy, that I wish to fulfil, but I am unable to implement them due to time constraints. For example, I would like to engage learners on the food that they are allergic to, since the menu does not accommodate or address such aspects.' This implies that some of the roles not stipulated in the NSNP are identified by school principals but, due to time constraints or their workload, they failed to carry them out. Furthermore, nutrition coordinators indicated that their roles were to place orders, check for food quality and shortages, ensure that food is secured and make sure that needy learners get their food. A nutrition coordinator stated: 'I am responsible for the supervision of food-handlers, I receive food from the suppliers, write reports to the principal and the district, and also monitor if all needy learners eat.' Another coordinator voiced her frustration by adding: 'I do not have enough time to teach because of these overwhelming responsibilities.' During our observation and follow-up interviews, it was evident that most of the nutrition coordinators were juggling teaching and nutrition coordination. In response to a question about her role in the programme during a follow-up interview, a nutrition coordinator indicated that 'With the demands on a nutrition coordinator, it requires a full-time person. There is a lot which is compromised regarding adherence to the NSNP menu by food handlers and seeing to it that all learners eat on a daily basis.'

### **Challenges experienced by school principals and nutrition coordinators in managing nutrition programmes in schools**

Principals and coordinators indicated several challenges with regard to the NSNP. The first challenge came from a principal from a secondary school, indicating that the NSNP should also provide breakfast at secondary schools: 'I am not happy that we are not receiving breakfast. We admit the same learners from primary schools and they need breakfast. The Department of Basic Education should do something about this situation, as breakfast is the most important meal of the day, and most of our

learners do not get breakfast at home.' During our observation and follow-up interviews we learnt from the secondary school principals that a non-governmental organisation providing breakfast to primary schools does not supply breakfast to secondary schools. One school principal indicated that 'The department should negotiate with the non-governmental organisation to consider the secondary schools for the purpose of sustaining learners' health and performance'.

Another challenge was the fact that sometimes schools admit more learners than in previous years and the Department of Basic Education does not always make provision for the increased number of learners. In this regard, a principal indicated that, 'Food delivered by the tendered company from the Department of Education does not match with the number of learners enrolled, we always experience shortages. Besides, in many instances, the vegetables are of poor quality.' The lack of a balanced meal and food shortages were seen as a serious challenge by most principals and coordinators since these were regarded as defeating the purpose of the NSNP. During an interview a coordinator stated that 'Our learner enrolment increases every year, and that makes it difficult to feed all learners, since we receive the quantity of food based on the previous year's learner head-count'. This scenario counts against the purpose of the NSNP in the sense that all learners have a right to receive nutritious food. The Department of Basic Education's failure to provide adequate nutritious food to all learners is testament to the concept of injustice.

A different challenge was the workload of coordinators. A principal alluded to the fact that 'There is lack of commitment from the appointed nutrition coordinator, since the programme is viewed as extra work without pay'. This perception was confirmed by a coordinator from a secondary school who stated that, 'It is always difficult to pay attention to complete your syllabus in class and also supervise food-handlers and make sure that learners are getting healthy meals'. She mentioned that she regarded covering the syllabus and teaching her learners as her most important task at school. During our school visits, we observed that nutrition coordinators often left their classes unattended in order to receive food and check how food handlers were preparing meals. This resulted in a disruption of teaching and less learning contact time. One of the coordinators indicated that developmental training could add value to how the NSNP should be managed. She stated: 'We require time management, and human resource management training for us to be able to balance between teaching time and managing the food handlers.'

The development and maintenance of vegetable gardens was seen as another challenge. A principal stated that 'It is a challenge to produce extra vegetables in our gardens due to several reasons such as the lack of land, the time factor and a shortage of water'. This principal showed a willingness to supplement the shortage of vegetables by having a vegetable garden at her school, but admitted that it was not always easy and that this added another management responsibility to her workload. One of the school principals mentioned that 'Vegetables are important since they are on the menu supplied by the NSNP, but we do not get enough supply, hence we establish vegetable gardens. However, we need funds from the department to buy seeds and to employ gardeners.' This indicates that principals were able to identify the challenges that perpetuate the injustice with regard to feeding learners and suggest solutions to sustain the NSNP. Four primary and two secondary schools had functioning vegetable gardens; one primary

school had a vegetable garden that was not functioning. From our observations it was clear that although schools had vegetable gardens, they often were unable to produce enough vegetables due to a shortage of land and water.

We further found that among five primary schools, four had donated kitchens sponsored by NGOs and one had a container that was converted into a kitchen. The three secondary schools had containers for kitchens. In this regard, one of the secondary school coordinators mentioned the lack of this resource as a challenge in properly managing the nutrition programme at her school: 'The challenge is that we do not have a proper kitchen like some primary schools. This results in a challenge and makes it difficult to prepare food properly and on time.' In our observation, schools with donated kitchens were able to manage the preparation of food on time, while those using the converted containers found it difficult. The implications are that, with large numbers of learners to receive food during break-time, some learners might end up being deprived of getting food and go back to class without eating. The injustice in this scenario is that learners' health and well-being is compromised and at risk.

## Discussion

Based on Section 24 of the Bill of Rights,<sup>3</sup> the principle of environmental justice leaves the Department of Basic Education with the responsibility to provide learners with a healthy learning environment. From the findings it is clear that school nutrition programmes in both primary and secondary schools with needy learners are of the utmost importance and contribute to a healthy environment. Principals and nutrition coordinators concurred with Mkosi, Wenhold and Sibanda<sup>5</sup> that this programme was introduced by the Department of Basic Education as an intervention strategy to improve the health and well-being of learners from poor backgrounds. Learners spend most of their time in schools; therefore, schools are the ideal places to ensure that they receive healthy meals. It became clear that the benefits of the programme went beyond the boundaries of the school as principals indicated that food parcels were given to needy learners on Fridays as part of a contribution to the community. Nutrition coordinators further maintained that the provision of food in schools boosts learners' punctuality and school attendance, and improves their pass rate and performance in sport, as well as their general health. These results are similar to a research conducted by Hochfeld *et al.*<sup>15</sup> in the Eastern Cape in South Africa, who found that the NSNP resulted in improved learner results, general health, school attendance, a reduction in the unemployment rate because of the stipend paid to food handlers and improved nutrition education in schools. Although the current study did not focus on the latter benefits, this is an opportunity for further research.

When referring to the purpose of the nutritional programme, the matter of environmental justice was also raised when a participant mentioned that learners had the right to live in a healthy environment with sufficient healthy food. Principals and nutrition coordinators were clear about their respective management roles and responsibilities in the programme. One of the biggest challenges was that of food delivery, which was in many instances inadequate since it was based on the previous year's learner enrolment and not on the current year's enrolment. Vegetables were often of poor quality according to nutrition coordinators. This is in line with Clacherty<sup>22</sup> who found that besides the positive impact of the NSNP in schools, some of the challenges still encountered were poor quality and the intermittent delivery



of food distributed to schools, which impact negatively on how school principals and nutrition coordinators manage the nutrition programme in schools. Although we found that some schools had vegetable gardens to address this challenge, hindering factors such as the lack of land or water or poor management often prevented them from successfully implementing vegetable gardens. The benefits of having functioning vegetable gardens at schools are numerous,<sup>16</sup> therefore it is a pity that these challenges prevented schools in our study from having such gardens. The Public Service Commission<sup>23</sup> supports the views of principals and nutrition coordinators in indicating that, in certain instances, schools do not have adequate infrastructure and facilities to implement the nutrition programmes effectively.

Furthermore, the absence of breakfast for needy learners at secondary schools was raised as a challenge. In this regard, we concur with Hochfeld *et al.*<sup>15</sup> that, in order to promote sustainability in nutrition programmes, NGOs should collaborate with the Department of Education. Their study also showed that learners who received breakfast early in the morning from NGOs performed better in school than those who received only lunch. According to our observations, the contributions of NGOs, which were also responsible for supplying breakfast to primary schools, significantly benefited these schools. On the other hand, secondary school learners were deprived of breakfast as the NGOs did not accommodate them.

Another challenge raised by both principals and nutrition coordinators was their workload. This challenge was raised in the questionnaires as well as in the follow-up interviews. Principals indicated that they would prefer to better manage the NSNP but that they had time only for the most important tasks. Nutrition coordinators had different challenges. They indicated that despite the many responsibilities they had in managing the nutrition programmes, they were expected to complete the syllabus just like any other teacher. This led to frustration as well as inadequate teaching time. As these teachers are appointed by principals, it is imperative that principals should take this into account when the school does its annual work allocation. Exempting them from other work so that they can attend to the important responsibility of coordinating the food nutrition programme will not only ensure the success of the day-to-day operations of the programme, but also make their workload manageable. Alternatively, the Department of Education should appoint full-time school nutrition coordinators.

### Conclusion and recommendations

This study dealt with the management of school nutrition programmes to improve environmental justice in schools, with specific reference to township schools in Alexandra. All learners, including needy learners, have a right to basic nutrition and the success of school nutrition programmes is dependent on the management thereof. Results from this qualitative study suggest that since its implementation in 1994 the NSNP in South Africa has had many positive results. It also indicates that managing school nutrition programmes is complex and holds many challenges. Based on these challenges, this study recommends the following:

- A developmental training programme on time and human resource management should be implemented for nutrition coordinators to assist them in balancing teaching and the management of food handlers.

- Nutrition coordinators should be appointed to support principals and teachers and relieve them of the duty to coordinate the nutrition programme on a day-to-day basis.
- The Department of Basic Education should extend its collaboration with non-government organisations, volunteers and businesses to assist schools with the provision of meals and facilities such as kitchens.
- Vegetable gardens at schools could be used for teaching science, environmental studies and nutrition. Although this was not the focus of our research, no reference was made to this link, and we acknowledge that further research is needed in this regard.

Despite positive social and political changes in South Africa, the struggle for environmental justice and environmental rights remains valid. Poor learners are still disadvantaged by inadequate nutrition. Well-managed school nutrition programmes can make a huge contribution in this regard.

### Note

1. Rural depopulation is the movement of people from rural to urban areas.

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**Appendix A**

**Questionnaire**

**Details of the participant:**

Name:.....

School:.....

Position:.....

Address:.....

Phone number:.....

Email address: .....

This survey is part of a research study to explore the management of the National School Nutrition Programme (NSNP) in South Africa. The questionnaire includes three main questions with sub-questions. It should not take you more than 30 minutes to complete. Each question includes a brief introduction that describes the purpose of the question and the type of

information required. If you find some questions not relevant to your experience, feel free to leave the space blank. The information that you provide in the questionnaire will be compiled and used for the purpose of this study only. Kindly note that an informal and brief follow-up interview will be conducted face-to-face after we have analysed the questionnaires.

**1. The purpose of introducing nutrition programmes in schools**

The NSNP in South Africa was established in 1994 as one of the first initiatives of the first post-apartheid democratic government.<sup>5</sup> The programme, which is fully funded by government through a conditional grant, targets schools with learners from disadvantaged communities.<sup>4</sup>

(a) Outline the purpose of introducing the NSNP in schools as introduced by the Department of Basic Education.

(b) Indicate the benefits to learners with regard to the introduction of the NSNP in schools.

**2. Roles of principals and nutrition coordinators**

The role of the school principal in South Africa is essential in managing school nutrition programmes. In terms of the Schools Act, 1996, for schools to handle their own procurement, they are required to have a Section 21 status which means that they have enough skills and expertise to handle the school finances and procurement.

(a) What is your role as a school principal regarding NSNP?

(b) What is your role as a NSNP coordinator?

**3. Challenges in managing the nutrition programme**

Clacherty and associates<sup>22</sup> indicate that besides the positive impact of the NSNP in schools, some of the challenges still encountered are poor quality and the intermittent delivery of food distributed to schools.

(a) What are the challenges that you are facing as a school principal regarding the management of NSNP?

(b) Are there any other challenges that you encounter as coordinator of NSNP?

Thank you in advance for your availability and the information provided as a participant in this research study.

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