Available on: https://jsshrs.ep-journals.org/ E-ISSN: 3051-3561 P-ISSN: 3051-3553

Journal of Social Science and Human Research Studies

Volume: 01 Issue: 06 December-2025

The Implementation of the National School Nutrition Programme in Selected Education Districts in the Eastern Cape

Mthunywa Hoober Mgudlwa
Department of Public Management and Leadership, Nelson Mandela University, P.O. Box 77000, Port Elizabeth, 6031, South Africa

Akeem Adewale Oyelana
Department of Public Management and Leadership, Nelson Mandela University, P.O. Box 77000, Port Elizabeth, 6031, South Africa

Published Date: December 20, 2025 **Article DOI: 10.65150/EP-jsshrs/V1E6/2025-03**

ABSTRACT: This study aimed to investigate the implementation of the National School Nutrition Programme (NSNP) in rural schools in the Eastern Cape, with a particular focus on the Joe Gqabi Education District. A qualitative desktop research design was adopted to identify the gaps and limitations hindering effective implementation. This study demonstrates that the NSNP functions as a poverty alleviation initiative, aimed at enhancing learners' socio-economic conditions in both the Joe Gqabi District and the broader South African context. However, it emerged that temporary workers often face precarious employment conditions, lacking job security and benefits. This contributes to low morale and hampers the programme's sustainability and consistency. The study further highlighted the critical need for increased financial resources to enhance meal quality and ensure the effective operation of the NSNP in this district. This investigation is vital in guiding the Eastern Cape Department of Education in making informed decisions regarding the province-wide implementation of the NSNP. Accordingly, the study recommends a thorough reassessment of NSNP suppliers to guarantee compliance with acceptable food standards. Furthermore, it calls for active stakeholder engagement in school gardening and overall monitoring processes. The Department of Education is also encouraged to address issues related to theft and corruption to ensure the successful and accountable execution of programmes in rural Eastern Cape schools.

KEYWORDS: Department of Education, Joe Gqabi Education District, National School Nutrition Programme, Poverty, Stakeholders

INTRODUCTION

The Eastern Cape Province is widely recognised for its low levels of human development and widespread poverty, ranking among the most disadvantaged regions in South Africa. In response to this, the National School Nutrition Programme (NSNP) was introduced in 1994 under the leadership of President Nelson Mandela. This government-led initiative aims to reduce poverty and promote children's right to nutritious food that supports learning and development (Department of Basic Education [DBE], 2013). The premise behind the NSNP is that access to healthy meals has a positive impact on learners' cognitive development and academic performance (DBE, 2013). According to the Department of Basic Education (2011–12) and DBE (2020), approximately 9.6 million learners rely on the NSNP across South Africa. In 2020, the programme benefitted around 21,000 schools nationwide (Eastern Cape Department of Education Annual Report [ECDoEAR], 2020–2021). Additionally, the Eastern Cape has the second-highest proportion of learners benefitting from the NSNP, with a 90% participation rate (Province of the Eastern Cape Education, 2021–22: 24).

The NSNP primarily targets learners attending no-fee public schools, specifically those in quintiles 1 to 3, although under certain financial circumstances, it can be extended to quintiles 4 and 5. The programme has three core elements: provision of nutritious meals, nutritional education to promote healthy eating habits, and school food gardens, which aim to impart sustainable agricultural skills to learners, educators, and parents (Sanousi, 2019). The Department of Basic Education coordinates the NSNP in conjunction with provincial education departments, which are responsible for implementation and oversight. These departments are organised into districts that handle budgeting, promote local economic development, and monitor programme delivery (DBE, 2013).

The need to investigate how the NSNP is being implemented in Joe Gqabi Education District arises from persistent challenges linked to poverty and food insecurity. This district, one of twelve in the Eastern Cape, has faced significant socio-economic hardships, with many households struggling with hunger and unemployment (ECDoEAR, 2020–2021). Sanousi (2019) argues that hunger is detrimental to both personal and national development, severely hindering the physical and mental growth of children. Similarly, the World Food Programme (2017) argues that inadequate nutrition impairs cognitive development and educational outcomes in children.

In many developing countries, including South Africa, education is viewed as a crucial means of breaking the poverty cycle. Nevertheless, access to education for children from low-income households remains limited despite the existence of no-fee schooling. The provision of meals through the NSNP serves as an incentive to encourage attendance and reduce dropout rates among these learners (Ahmed and

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

Babu, 2017). By addressing hunger, the NSNP aims to improve concentration, reduce absenteeism, and support educational achievement. However, the programme has encountered a range of implementation challenges, including inadequate food quality, delays in paying service providers, lack of permanent monitors, and weak coordination (Ndilele, 2017). In the Joe Gqabi District, these issues have contributed to a decline in learner attendance and an increase in dropout rates over the past five years (ECDoEAR, 2020–2021). Moreover, the Department of Education has failed to provide meals to learners in non-phased-in grades (Ndilele, 2017). In 2022, approximately 120 learners were hospitalised due to suspected food poisoning linked to the NSNP. Furthermore, reports from the National Portfolio Committee on the Provincial Department of Education revealed systemic weaknesses in the overall implementation strategy, which deviated significantly from established policy guidelines (DBE, 2020).

Hence, it is also important to note that poor monitoring and evaluation approaches, as well as policies that are unclear or poorly defined, have, to this day, hindered the implementation process. Given these shortcomings, this study aims to critically assess the current barriers to implementing and delivering the NSNP within the Joe Gqabi Education District. The objectives of this study are to identify existing barriers in the programme's implementation and to propose practical and sustainable strategies for improvement. This investigation is guided by the following research question: What are the present obstacles in the implementation of NSNP, and how did the programme address issues of quality delivery and accessibility of the NSNP within the Joe Gqabi Education District?

Scope and Context

This review synthesises an array of academic articles, empirical research, policy frameworks, official government publications, and relevant literature that address school nutrition initiatives in South Africa. Emphasis is placed on implementing the National School Nutrition Programme (NSNP) within rural contexts, with a particular focus on the Joe Gqabi Education District. It outlines the genesis and progression of the NSNP, evaluating its significance, execution, and influence within the broader South African educational landscape. The review also examines the collaborative roles of various government entities, presenting a comprehensive view of the NSNP's design and operations. By exploring these dimensions, the literature review lays a critical foundation for the study, shaping both the methodological approach and analytical framework.

School-based feeding interventions are not unique to South Africa. The United States, for instance, institutionalised such efforts as early as 1946 with the nationwide introduction of school lunch schemes (Gunderson, 2011). Two decades later, the Child Nutrition Act of 1966 broadened these efforts to include breakfast, summer food services, special milk initiatives, and maternal-child nutrition programmes (Drake, Woolnough, Bundy & Burbano, 2016). The driving force behind these interventions was the proven link between proper nutrition and the cognitive and physical development essential for academic success (Martin, Booth, Laird, Sproule, Reilly, and Saunders, 2018; Hargreaves, Mates, Menon, Alderman, Devakumar, Fawzi, Greenfield, Hammoudeh, He, Lahiri, and Liu, 2022).

International Cases Informing the NSNP

This section examines school feeding case studies from selected regions across Asia and Africa, offering comparative insights. These include both developed and developing country examples, helping to contextualise the implementation of school feeding programmes globally.

In Asia, Thailand launched its School Lunch Program in 1992, aiming to combat child malnutrition while instilling healthy dietary practices (Ahmed & Babu, 2017). Despite its effectiveness, it struggled with consistent coordination and financial limitations (Drake et al., 2016). On the African continent, Namibia's School Feeding Programme, introduced in 1992, has been cited as a model intervention. It provided regular meals to disadvantaged pre- and primary school pupils, helped reduce absenteeism, and improved academic concentration and achievement (Adair, Keylock & Berger, 2017). A major strength of this programme lies in its solid planning, timely payments to service providers, and the careful selection of competent contractors (Drake et al., 2016), all of which contribute to its success.

Historical Context and Origins of the NSNP

Post-apartheid South Africa undertook significant reforms in the education sector, one of which was the establishment of the NSNP to address widespread hunger and malnutrition among learners (Ndilele, 2017; Tshisikhawe, Runhare, & Litshani, 2024; Mazenda, Monedi, Sari, & Huni, 2025). The programme was formally initiated in 1994 by the Mandela administration, representing a landmark move in the government's poverty alleviation strategy (Adelman, Alderman, Gilligan & Lehrer, 2008). The initiative was grounded in extensive evidence linking child nutrition with academic performance and cognitive development. Poor dietary intake is known to impede intellectual capacity and school performance, whereas children with access to nutritious meals tend to demonstrate better focus, mental acuity, and academic success (Jomaa, McDonnell & Probart, 2011; Best, Neufingerl, van Geel, van den Briel & Osendarp, 2010).

Moreover, beyond its educational impact, the NSNP has served broader developmental goals. School feeding is viewed as an investment in human capital, with long-term economic benefits that include enhanced earning potential (Glewwe, Jacoby, & King, 2001). Initially rolled out in primary schools located in economically marginalised districts, the programme reached around 2.5 million learners in its first year (DBE, 2020). Since then, its coverage has expanded to include all learners in quintiles 1 to 3 schools—essentially the most disadvantaged 60% of the school population. By 2020, approximately 9.6 million children were beneficiaries (DBE, 2020). The growth of the NSNP demonstrates its centrality in South Africa's social development and education strategies (Vermeersch & Kremer, 2005).

Expansion and Adaptation over Time

The NSNP has undergone several stages of evolution, adjusting to changing societal and educational needs. While the programme was initially designed for primary schools, by 2004 it had extended to include secondary schools, reflecting an intensified effort to tackle food insecurity holistically (DBE, 2013). According to DBE (2013), this expansion symbolises an evolving recognition of the symbiotic relationship between nutrition, education, and community empowerment. What was once a basic feeding initiative has transformed into a comprehensive development intervention (Berejena, Kleynhans & Vibetti, 2020; Government of South Africa, 2025). A noteworthy development has been the inclusion of nutrition education, which aims to instil lasting healthy habits in children (Van den Berg & Parry, 2012; Ramugondo, Mushaphi & Mabapa, 2021). Furthermore, Garcia, Coelho & Bogus (2017) assert that school food gardens have been introduced as both educational tools and sources of food. These gardens equip learners, parents, and educators with agricultural skills while enhancing food security at the household level (Richter, Harris, Paine, Hawkesworth, & Lindley, 2014).

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

By 2020, the NSNP had reached millions, with a primary focus on learners in no-fee public schools, but also extending support to other quintiles where resources allowed (DBE, 2020). Its broader reach has had a marked impact on reducing the effects of poverty, poor nutrition, and hunger on children's education (Case, Menendez, & Ardington, 2005). Taken together, these milestones reflect the programme's success in adapting to South Africa's diverse socio-economic realities and in reinforcing children's rights to food and education.

Institutional Framework and Operational Dynamics

The execution of the NSNP is characterised by a multi-tiered governance model involving collaboration among national, provincial, and district authorities (Nomatshila, Apalata, & Mabunda**,** 2021; Pitseng, 2022). At the national level, the Department of Basic Education (DBE) is responsible for overall coordination, policy direction, and performance monitoring (DBE**,** 2013). Provinces, through their respective education departments, are responsible for implementing the programme based on localised contexts and needs (Knipe**,** 2022). This decentralised approach enables flexibility and responsiveness to the specific socio-economic conditions within each region (Wildeman & Nomdo**,** 2007). District offices play an integral role in operationalising the programme, including budgeting, procurement, and oversight functions (Reyneke, 2020). Local procurement of food is encouraged to stimulate economic activity and create employment in nearby communities (DBE, 2013). This aligns the NSNP with broader developmental strategies, including the Integrated School Health Programme, which integrates nutrition with other learner welfare services (Shung-King, Orgill & Slemming, 2018).

Equally critical is the system of monitoring and evaluation (M&E), which ensures transparency and ongoing refinement of the programme. Regular audits, nutritional assessments, and performance reviews are key to identifying challenges and enhancing service delivery (DBE, 2013; Reyneke, 2020). These M&E mechanisms support a feedback loop that helps align implementation with policy goals.

In conclusion, the NSNP represents a complex yet well-coordinated intervention designed to promote educational access and nutritional well-being among South Africa's youth (Mafugu, 2021). The collaboration across government tiers ensures effective service delivery, while embedded evaluation systems maintain accountability and facilitate continuous improvement.

CONCEPTUAL FRAMEWORK

This section discusses the conceptual framework that guides this study. The main concepts that underpin the study are presented in the following sections:

Nutrition Programme

To gain a clear understanding of the nutrition programme, it is essential to define the term' nutrition'. Nutrition is the totality of the processes involved in the intake and utilisation of food substances to achieve growth, repair, healing, and maintenance of the human body (Drake et al., 2016). Ingestion, digestion, absorption, and assimilation are all involved in the process. Several essential nutrients are required by the body to support effective growth and development in children. These nutrients are essential in fighting diseases and also enhance cognitive development in learners, thereby facilitating and ensuring quality education by improving children's learning capacity and addressing nutritional deficiencies (Drake et al., 2016). The nutrition programme is very significant as it encourages regular attendance by learners within schools and ensures punctuality (Sanousi, 2019). Gresse, Nomvete, and Walter (2017) also note that the nutrition programme helps alleviate short-term hunger by providing food that supplies 30% of the child's daily energy requirements.

National School Nutrition Programme

The NSNP was developed by the government to ensure the general well-being of schoolchildren, particularly within primary schools (Gresse et al., 2017). The programme aims to provide proper nutrition to the children, which also contributes to their overall well-being. Undernutrition in early childhood is most severe in rural regions and among children whose parents have a low educational level, little or no money, or live in poor environmental conditions (Gresse et al., 2017). This prompted the researcher to conduct this study to help improve the NSNP and yield better results in enhancing the nutrition of primary school children. The nutritional support of the NSNP could be beneficial in enhancing dietary diversity, general nutritional health, and encouraging more balanced meals later in life.

Theoretical Framework

This concept was first introduced by Najam in 1995, who identified the 5-C protocol, which encompasses content, context, commitment, capacity, and clients (Cloete et al., 2018). The major rationale of the theory is to analyse a programme implementation based on the 7Cs. Brynard added the sixth century, communication, in 2005, and Cloete added the seventh century, coordination. Cloete et al. (2018) postulate that "depending on the specific implementation situation, each of the seven variables is linked to and influenced by the others, to varying extents." The policy may include provisions for implementation capacity.

Additionally, the challenges or successes of policy implementation may be aligned with the institutional context of relevant stakeholders. In the absence of inefficiency or a lack of capacity, the commitment of implementers may close that gap only if there are no opposing actors in the implementation. This highlights the importance of effective communication, which requires that all stakeholders in the policy implementation process understand and accept the goals, objectives, roles, and responsibilities throughout the process. In this study, content refers to the goals of the NSNP and how it seeks to solve the perceived challenges. In addition, context encompasses the nature of the institutional context, the process through which the policy must be implemented, and its limitations. Commitment refers to the obligation of the ECDoE officials who are entrusted to implement the programme, and capacity is related to the administrative capacity of implementers to carry out the desired change. It is worth noting that when assessing the implementation of the NSNP, the research tests it against all 7Cs.

Legislative Framework

The constitution is the first piece of legislation that supports the NSNP among many others. Every piece of legislation created in the nation must comply with the Constitution because it is the supreme law of the land (Sanousi, 2019). Students have the right to basic nutrition under the constitution, as stated in Section 28(1)(c) (Republic of South Africa, 1996). However, Section 29(1)(a) addresses the right to access fundamental education (Republic of South Africa, 1996). Additionally, all children have the right to housing, clothing, and a healthy diet, as stated in Part 2,

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

Article 6 of the Children's Charter, which was adopted at the Summit on Family Life held on June 1, 1992, and is linked to the NSNP (Sanousi, 2019). According to Section 34 (1) of the South African Schools Act of 1996, the state is responsible for funding public schools from public revenue in an equitable manner, ensuring that learners' rights to education are properly exercised and that previous inequitable educational provisions are rectified (Sanousi, 2019).

RESEARCH METHODOLOGY

This study employed desktop research. It involved the review of literature from various published articles, journals, internet sources and dissertations (Oyelana, 2024). The researchers also used their experiential knowledge in public administration, and government publications to discuss issues pertaining to the implementation of the National School Nutrition Programme in the Education Districts in Eastern Cape. The data was then analysed, organised, and discussed in themes using thematic analysis. The researchers also analysed several articles published in peer-reviewed journals relevant to National School Nutrition Programme in South Africa. As this review was performed chronologically, the researchers had to plan, effectively execute, and systematically analyse the results based on the hermeneutic framework. The study employed relevant literature, incorporates the analysis and interpret the results obtained from that literature to discuss the findings. A methodological investigation was conducted between 2 February 2025 and 29 July 2025. The study utilised published materials available in electronic bibliographic databases and various websites and disciplines databases, namely the Applied Social Online Index and Abstracts; Africa Journal Online.

A brief description of Joe Gqabi Education District

To effectively present the NSNP implementation in the Joe Gqabi Education District, it is necessary to briefly discuss the socio-economic conditions in the District, located in the Eastern Cape. According to Ndilele (2017), Joe Gqabi Education District is a rural area characterised by underdevelopment and poverty, which can be attributed to the legacy of apartheid and the history of racial oppression. A great number of citizens in that area are unemployed, and there is a high level of alcohol and substance abuse, leading to social conditions that negatively affect the general behaviour of learners. A report by ECDoE AR (2020–2021) revealed that Joe Gqabi Education District is one of the 12 education districts in the Eastern Cape Province. The district has faced its fair share of challenges stemming from the poverty prevalent in the Eastern Cape Province. Within this district, there are high levels of poverty and unemployment, and hunger is the order of the day in many families (ECDoE AR, 2020–2021). In this section, the researcher endeavoured to find out how the National School Nutrition Programme is being implemented in the Joe Gqabi Education District.

FINDINGS AND DISCUSSION

Implementation of the National School Nutrition Programme in the Joe Gqabi Education District

The implementation of the National School Nutrition Programme (NSNP) in the Joe Gqabi Education District is overseen by the Eastern Cape Department of Education in partnership with the national Department of Basic Education, which mainly serves a coordinating function (ECDoEAR, 2020–2021). However, findings indicate that the programme is being undermined by unethical practices among some individuals involved in meal service (Mafugu, 2021; Nkosi, 2023). These include instances of theft and corrupt behaviour, which result in meals not reaching the intended learners, thereby compromising the programme's purpose (Transparency International, 2023).

According to Sanousi (2019), the NSNP is built around three core pillars: the provision of daily nutritious meals to learners; nutrition education aimed at promoting healthier lifestyle choices; and the development of school food gardens where learners, educators, and parents participate in growing food, thereby supporting household food security in the long term. Observations in the Joe Gqabi District revealed that many schools show high levels of learner participation in these interventions. This is particularly evident in the upkeep of school vegetable gardens, which are supported by well-maintained inventories of agricultural tools listed in school asset registers (ECDoEAR, 2020–2021).

Optimal Implementation of the NSNP in Rural Districts

The NSNP is widely recognised as a poverty reduction initiative that improves the nutritional status and learning environment for children, especially in under-resourced areas like Joe Gqabi. The programme's impact would be more significant if it were integrated with other developmental initiatives, such as replacing unsafe mud school structures with proper infrastructure. Nonetheless, one of the recurring issues identified in the programme is the employment status of the monitors tasked with overseeing daily operations. These monitors are often employed on a temporary basis, resulting in job insecurity, low morale, and inconsistent implementation (Shisana et al., 2013). Research by Ndilele (2017) highlights the need to consider more stable and long-term employment options for these critical personnel. Furthermore, Qila and Tyilo (2014) argue that for the NSNP to be more effective, particularly in the Joe Gqabi Education District, increased budget allocations are necessary to enhance the nutritional quality of meals provided.

In addition, Mafugu (2021) notes a lack of robust accountability systems involving key stakeholders such as School Governing Bodies (SGBs) and parents. To ensure effectiveness and sustainability, establishing dedicated monitoring and evaluation teams within the district is essential. These teams would be responsible for overseeing all aspects of the programme—from meal distribution to food garden management—ensuring greater transparency and coordination.

CONCLUSION

A key finding from the study is that the successful implementation of the NSNP depends heavily on active participation from all stakeholders. As education is a collective responsibility, the involvement of parents, educators, learners, and community members in the Joe Gqabi Education District is vital for sustaining the programme's impact in rural Eastern Cape schools. It has been noticed that this program has been ineffective in some schools or destabilised by some individuals injecting some unethical behaviours in meal services. As a result, theft and highly corruptible practices have always been the mother of the day.

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

RECOMMENDATIONS

Drawing on the findings of this research, several recommendations are proposed:

Strengthen Accountability: It is essential to establish clear and transparent accountability mechanisms. These should not only protect the reputation of the Department of Education but also ensure that all learners consistently receive nutritious meals.

Review and Monitor Suppliers: The Department of Education should reassess the list of suppliers to ensure food quality meets health and safety standards. Regular quality inspections should be conducted, and service-level agreements must include enforceable penalties for non-compliance.

Promote Stakeholder Engagement in Food Gardens: School communities should be encouraged to take collective ownership of food gardens. Teachers, learners, and parents must work together to manage and maintain these gardens. To foster continued interest and engagement, schools could compete for recognition or awards based on garden productivity and innovation.

Institutionalise Monitoring and Evaluation: Each education district should establish a permanent team tasked with regularly monitoring the implementation of the NSNP. This team should be equipped to evaluate all facets of the programme, including nutrition education, food quality, and garden effectiveness.

REFERENCES

1) Adair, M., Keylock, J. and Berger, C., 2017. *Decentralized evaluation*. Rome: World Food Programme.
2) Adelman, S., Alderman, H., Gilligan, D. and Lehrer, K., 2008. *The impact of alternative food for education programs on school participation and education outcomes in northern Uganda*. Kitale: International Food Policy Research Institute.
3) Ahmed, A. U. and Babu, S. C., 2017. *Retooling school feeding programs to achieve sustainable development goals.* Rome: Food and Agriculture Organization of the United Nations.
4) Berejena, T., Kleynhans, I. C. and Vibetti, S. P., 2020. Economic impacts of the rotational policy on the food handlers in the national school nutrition programme in Gauteng province. *International journal of economics and finance*, 12(2), pp. 520-533.
5) Best, C., Neufingerl, N., van Geel, L., van den Briel, T. and Osendarp, S., 2010. Nutritional status and cognitive performance of school-age children in Mozambique. *Tropical Medicine & International Health*, 15(5), pp. 434-444.
6) Brown, L., Beardslee, W. and Prothrow-Stith, D., 2008. Long-term impact of adolescent health behaviors on adult health status and health behaviors. *Harvard Review of Psychiatry*, 16(1), pp. 1-5.
7) Case, A., Menendez, A. and Ardington, C., 2005. Health seeking behavior in Northern KwaZulu-Natal. *African Journal of AIDS Research*, 4(1), pp. 27-37.
8) Cloete, F., De Coning, C., Wissink, H. and Rabie, B., 2018. *Improving public policy for good governance*. Pretoria: Van Schaik.
9) Coovadia, H., Jewkes, R., Barron, P., Sanders, D. and McIntyre, D., 2019. The health and health system of South Africa: historical roots of current public health challenges. *The lancet*, 374(9692), pp. 817-834.
10) Republic of South Africa 1996. *Constitution of the Republic of South Africa.* Pretoria: RSA
11) Department of Basic Education 2011-2012. *The National School Nutrition Programme (NSNP) 2011-2012 Annual Report*. Pretoria: Department of Basic Education.
12) Department of Basic Education [DBE]., 2013. *National School Nutrition Programme*. Pretoria: Department of Basic Education.
13) Department of Basic Education [DBE]., 2020. *Annual Report 2019/2020.* Pretoria: Department of Basic Education.
14) Drake, L., Woolnough, A., Bundy, D. and Burbano, C. (Eds.)., 2016. *Global school feeding sourcebook: lessons from 14 countries*. New Jersey: world scientific.
15) Durairaj, M., Gurumurthy, G., Nachimuthu, V., Muniappan, K. and Balasubramanian, S., 2019. Dehulled small millets: The promising nutri-cereals for improving the nutrition of children. *Maternal & child nutrition*, *15*, pp. e12791.
16) Eastern Cape Department of Education Annual Report [ECDoEAR], 2020-2021. Zwelitsha: Province of the Eastern Cape Education.
17) Eluya, M., 2019. *Dietary intake and nutritional status of primary school children participating in the Botswana school feeding programme, South-east District, Botswana*. Doctoral dissertation, Published. Durban: University of KwaZulu-Natal.
18) Garcia, M.T., Coelho, D.E.P. and Bogus, C.M., 2017. Pedagogical school gardens as a Food and Nutrition Education strategy: perception of parents and educators of their impact on children´ s diets. *Demetra: Alimentação, Nutrição & Saúde*, *12*(1), pp.113-136.
19) Glewwe, P., Jacoby, H. G. and King, E. M., 2001. Early childhood nutrition and academic achievement: a longitudinal analysis. *Journal of Public Economics*, 81(3), pp. 345-368.
20) Government of South Africa, 2025. What is the national School Nutritional Programme (NSNP)? From: https://www.gov.za/faq/education/what-national-school-nutrition-programme-nsnp (Received on 19th November, 2025).
21) Gresse, A., Nomvete, A. and Walter, C., 2017. Situational analysis: Implementation of the National School Nutrition Programme in low socio-economic primary schools in Nelson Mandela Bay. *Journal of Consumer Sciences*. 1(2), pp. 59-68.
22) Gunderson, W., 2011. *The National School Lunch Programs: Background and development.* Washington DC: Department of Agriculture.
23) Hargreaves, D., Mates, E., Menon, P., Alderman, H., Devakumar, D., Fawzi, W., Greenfield, G., Hammoudeh, W., He, S., Lahiri, A. and Liu, Z., 2022. Strategies and interventions for healthy adolescent growth, nutrition, and development. *The Lancet*, *399*(10320), pp.198-210.
24) Hecht, A. A., Pollack Porter, K. M and Turner, L., 2020. Impact of the Community Eligibility Provision of the Healthy, Hunger-Free Kids Act on student nutrition, behavior, and academic outcomes: 2011–2019. *American journal of public health*, 110(9), pp. 1405-1410.
25) Ismail, N. A. S., Ramli, N. S., Hamzaid, N. H. and Hassan, N. I., 2020. Exploring eating and nutritional challenges for children with autism spectrum disorder: Parents' and special educators' perceptions. *Nutrients*, 12(9), 2530. doi: 10.3390/nu12092530.

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

26) Jomaa, L. H., McDonnell, E. and Probart, C., 2011. School feeding programs in developing countries: impacts on children's health and educational outcomes. *Nutrition Reviews*, 69(2), pp. 83-98.
27) Knipe, P., 2022. The Significance of Equal Education and Others v Department of Basic Education and Others. *ESR Review: Economic and Social Rights in South Africa*, 23(2), pp. 27-30.
28) Kwatubana, S. and Makhalemele, T., 2015. Parental involvement in the process of implementation of the National School Nutrition Programme in Public Schools. *International Journal of Educational Sciences*, 9(3), pp. 315-323.
29) Langsford, C., 2012. *Enough on Our Plate? The National School Nutrition Programme in Two Schools in Katlehong, South Africa*. Master dissertation, Published. Johannesburg: University of the Witwatersrand.
30) Leader, G., Tuohy, E., Chen, J. L., Mannion, A. and Gilroy, S. P., 2020. Feeding problems, gastrointestinal symptoms, challenging behavior and sensory issues in children and adolescents with autism spectrum disorder. *Journal of autism and developmental disorders*, 50, pp. 1401-1410.
31) Mafugu, T., 2021. Challenges encountered in a South African school nutrition programme. From: https://journals.sagepub.com/doi/epub/10.4081/jphr.2021.1982 (Received on 18 November, 2025).
32) Martin, A., Booth, J.N., Laird, Y., Sproule, J., Reilly, J.J. and Saunders, D.H., 2018. Physical activity, diet and other behavioural interventions for improving cognition and school achievement in children and adolescents with obesity or overweight. From: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD009728.pub3/full (Received on 16 November 2025).
33) Mazenda, A., Monedi, A., Sari, N.P.W.P. and Huni, C., 2025. Transforming South Africa's school nutrition programme for educational success: A review on challenges and prospects. *Journal of Public Health Research*, *14*(4), p.22799036251380781
34) Mensah, C. and Karriem, A., 2021. Harnessing public food procurement for sustainable rural livelihoods in South Africa through the national school nutrition programme: A qualitative assessment of contributions and challenges. *Sustainability*, 13(24), 13838.
35) Mustafa, N., 2020. Impact of the 2019–20 coronavirus pandemic on education. *International Journal of Health Preferences Research*, 4(1), pp. 25-30.
36) Mwendwa, E. and Chepkonga, S. Y., 2019. Relationship Between School Feeding Programmes and Pupils' Effectiveness in Learning in Public Primary Schools in Kitui County, Kenya. *International Journal of Innovative Research and Advanced Studies,* 6(7), pp. 62-76.
37) Ndilele, S., 2017. *Implementing the National School Nutrition Programme in the Eastern Cape: An evaluation study*. *Unpublished dissertation*. Cape Town: University of the Western Cape.
38) Nkosi, S., 2023. *Evaluation of the public-school nutrition programme in the city of Mbombela, South Africa.* Doctoral dissertation, published. Johannesburg: University of Johannesburg.
39) Nomatshila, S. C., Apalata, T. R. and Mabunda, S. A., 2021. Perceptions of school management on the relationship between school nutrition and development of non-communicable diseases in a rural South African district: a qualitative study. *International Journal of Environmental Research and Public Health*, 19(1), pp. 432.
40) Oyelana, A. A. 2024. The Role of Governments, International Organisations and Non-Governmental Organisations on Xenophobia in South Africa: Impact of Xenophobia. *Artha Journal of Social Sciences*, 23(1), pp.79-105
41) Pitseng, A. N., 2022. *An Assessment of the Implementation and Management of the National School Nutrition Programme in Bakenberg North Circuit Secondary Schools, Limpopo Province*. Master dissertation, Published. *Polokwane*: University of Limpopo.
42) Pivina, L., Semenova, Y., Doşa, M. D., Dauletyarova, M. and Bjørklund, G., 2019. Iron deficiency, cognitive functions, and neurobehavioral disorders in children. *Journal of Molecular Neuroscience*, 68, pp. 1-10.
43) Province of the Eastern Cape Education 2021-2022. Annual Performance Plan 2021-22. Zwelitsha: Province of the Eastern Cape Education.
44) Qila, V. E. and Tyilo, N., 2014. Implementing National School Nutrition Programme (NSNP): How Involved are the Stakeholders? *Mediterranean Journal of Social Sciences*, 5(27 P1), pp. 381-390.
45) Ramugondo, M., Mushaphi, L. F. and Mabapa, N. S., 2021. Salt used for the National School Nutrition Program (NSNP) in rural schools of Limpopo Province, South Africa, has adequate levels of iodine. *Biochemistry Research International*, 2021, pp. 1-9.
46) Reyneke, M., 2020. The Constitutionality of Suspending the South African National School Nutrition Programme during the Covid Pandemic: The Equal Education Case. *International Journal of Education Literacy & Policy*, 16, pp. 223.
47) Richter, L. M., Harris, B., Paine, K., Hawkesworth, S. and Lindley, L. L., 2014. An evaluation of the National School Nutrition Programme in the Northern Cape, South Africa. *Health SA Gesondheid,* 19(1), pp. 1-8.
48) Ruel, M. T., Quisumbing, A. R. and Balagamwala, M., 2018. Nutrition-sensitive agriculture: what have we learned so far? *Global food security*, 17, pp. 128-153.
49) Sanousi, R. M., 2019. The effects of feeding programs on education and the economic development of children in conflict zones: A case study of Darfur. *African Development Review,* 31(4), pp. 430-444.
50) Saputri, T., Afandi, M. D. and Alamsyah, B., 2020. Google class in ELT: A study of Student's Responses in English for Nutrition. *Indonesian Journal of English Teaching*, 9(2), pp. 196-206.
51) Shisana, O., Labadarios, D., Rehle, T., Simbayi, L., Zuma, K., Dhansay, A., ... and the SANHANES-1 Team., 2013. *South African National Health and Nutrition Examination Survey (SANHANES-1). Cape Town:* HSRC Press.
52) Shung-King, M., Orgill, M. and Slemming, W., 2018. Schools as a lever for health system change: The case of the Western Cape in South Africa. In B. Marchal, D. Kegels, & K. Bhojani (Eds.), *Health systems strengthening through primary health care* (pp. 171-187). New York: Springer.

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/

53) Sibanyoni, J. J., 2017. Food *safety and quality assurance measures of the national school nutrition programme in Mpumalanga Province, South Africa*. Doctoral dissertation, Published. Pretoria: University of South Africa.
54) Taras, H., 2005. Nutrition and student performance at school. *Journal of School Health*, 75(6), pp. 199-213.
55) Thomas, K. A. and Nwokocha, J. C., 2021. Food vendors and school management compliance to home grown school feeding programme implementation module in Osun State, Nigeria. *Journal of Agricultural Extension*, 26(1), pp. 64-76.
56) Transparency International 2023. Loothing, Food safety remain a concern in school feeding programme. From: https://www.corruptionwatch.org.za/looting-food-safety-remain-a-concern-in-school-feeding-programme/ (Received 28 February 2024).
57) Tshisikhawe, M.P., Runhare, T. and Litshani, N.F., 2024. Challenges and Opportunities of Utilising School Nutrition Programme to Achieve Educational Goals in South African Rural Communities. *E-Journal of Humanities, Arts, and Social Sciences, 5(5): 751-767*
58) Utami, R. A., Setiawan, A. and Fitriyani, P., 2019. Identifying causal risk factors for stunting in children under five years of age in South Jakarta, Indonesia. *Enfermeria clinica*, 29, pp.606-611.
59) Van den Berg, V. and Parry, S., 2012. Promoting health through the National School Nutrition Programme (NSNP) in South Africa: a partnership approach. *Journal of Public Health*, 20(4), pp. 363-368.
60) Vermeersch, C. and Kremer, M., 2005. *School meals, educational achievement, and school competition: evidence from a randomized evaluation*. New York: The World Bank.
61) Wildeman, R. A. and Nomdo, C., 2007. *Implementation of grade R: Challenges and successes. Commissioned by the Child, Youth, Family and Social Development, Human Sciences Research Council.* Cape Town: HSRC.
62) World Bank 2017. *World Development Indicators 2017*. Washington, DC: World Bank.
63) World Food Programme, 2006. *Food for education works: A review of WFP school feeding in 2006.* Rome: World Food Programme.
64) Zavitsanou, A. and Drigas, A., 2021. Nutrition in mental and physical health. *Technium Social Science Journal*, 23, pp. 67-77.

License: This is an open access article under the CC BY 4.0 license: https://creativecommons.org/licenses/by/4.0/