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Effects of the Ghana School Feeding Programme on Social Protection and the Local Economy and Key Challenges to Programme Implementation

Edem Magdalene Tette[1], Juliana Yartey Enos[2*]

[1]*Department of Community Health, University of Ghana Medical School, College of Health Sciences, University of Ghana, Legon*
[2]*Noguchi Memorial Institute of Medical Research, College of Health Sciences, University of Ghana, Legon*

ABSTRACT *Background:* School feeding is a major social protection intervention employed to improve the nutritional wellbeing of vulnerable children where they live and provide nutrition education. In addition to its nutritional goals, the Ghana School Feeding Programme (GSFP) seeks to reduce hunger in deprived communities, boost domestic food production through increase local demand for farm produce to service the programme, and increase incomes of poor rural households in line with Sustainable Development Goals 1, 2, 3 and 5. This review examined the extent to which these goals were being met and challenges encountered. *Methods:* A desk review was carried out by collating and reviewing all peer reviewed publications as well as reports, both published and unpublished emanating from various studies on the GSFP over the past 10 years. Altogether, 22 articles were included in this review. *Results:* The evidence showed that the GSFP provides protection from hunger especially for children for whom it was the main meal for the day. It also provides significant economic benefit and financial savings for the family. Poor time management by caterers reduced contact hours, meal regularity and size. While delayed and inadequate payments to caterers for services rendered affected program gains in relation to nutrition and education, it also became a major stumbling block to attracting the participation of farmers in boosting domestic food production and increasing household incomes. Better targeting of beneficiaries, improved management and monitoring, funding modalities and exploring alternate models of school feeding are required. Further studies which employ robust methodology to assess the effect of the school feeding program on social safety nets and the local economy are also needed.

Keywords: Ghana; school feeding programme; socioeconomic effects; challenges

INTRODUCTION

School feeding programmes have been shown to offer a regular source of nutrients to vulnerable children, build human capital and provide savings of up to 10% of the household income of poor families *(1)*. According to the World Food Programme, about 0.25 USD is needed for a meal per child and studies have shown that each US dollar invested in school feeding yields a 3-10 USD return on the investment resulting from improved health, education and productivity *(2)*. These programmes are regarded as social safety nets, which ensure that vulnerable children in the population go to school and their learning is improved by avoiding hunger and improving nutritional status *(3)*. Traditionally school feeding programmes, have focused on outcomes related to health, education and social protection *(3,4)*. In recent times, the home grown school feeding model (HGSF) adopted by several countries including the African union, in addition to boosting food production, food security augment the incomes of small holder farmers by providing them with a stable market *(2–5)*. Although implementing this intervention is a complex process, it has been successfully achieved in some settings, nonetheless it has its challenges *(3–5)*.

The Ghana School Feeding programme is a nationwide-wide social protection scheme of the Government of Ghana to support children in the most deprived communities, which became operational in 2005 *(5–7)*. Under this scheme, caterers are contracted to provide school children in selected kindergarten and primary schools with one hot nutritious meal a day, usually served around mid-day *(5,7)*. By 2015, the programme had reached a total of 1,739,357 children in 5,000 schools *(7)*. The Ministry for Gender, Children and Social Protection (MoGCSP) currently has oversight responsibility for the programme and is supported by a Multi-Sectoral Technical Advisory Committee (MTAC) with representatives from the ministries of health, education, finance and other stakeholders *(6)*. Regional secretariats, District Implementation Committees (DIC), School Implementation Committees (SIC), District and Municipal assemblies coordinate and monitor the programme at community level. According to the policy, the principal objectives of the programme are to promote school enrolment, attendance and retention; and improve the health and nutritional status of the pupils, especially in deprived communities *(6)*. In addition to these principal objectives, the goal of the programme was expanded to include, establishing effective local catering services; increase domestic food production and consumption; provide reliable markets for local famers; increase the incomes of poor rural

households; and enhance incomes of local communities (*6*). The policy also focused on addressing sustainable financing and governance at the local level in terms of coordination, management, monitoring, evaluation and information management (*6*). This review examined the extent to which the social protection objectives of the GSFP and effects on the local economy are being met and the challenges encountered.

METHODS

A desk review was carried out which involved the collection, assessment, analyses and synthesis of information from the published literature, grey literature such as Annual reports on the Ghana School Feeding programme (GSFP) and other evaluation reports. The review examined the nutritional and educational effects of the programme as well as its effects on household resources, social protection and the local economy. The effect of the GSFP on local economies, social protection and key challenges mitigating the success of the program are presented in this paper. The outcome measures related to social protection were increased school enrolment of vulnerable children, savings in household income or beneficial effects on family income, gender parity in education, reduction in child labour and reduction in hunger or increased satiety reported by pupils, teachers or parents. Outcome measures related to the effect on local economies included participation of caterers, farmers or other businesses in the locality in the GSFP and income obtained from the GSFP.

Computerised bibliographic medical databases were searched for relevant articles from 2010-2019. These databases were MEDLINE, (Pubmed version), the Cochrane Central Register of Controlled Trials, Google, Google scholar, Hinarii, Scopus and Science Direct. For this aspect of the review the key words used to identify the relevant articles were Ghana school feeding programme, school feeding, school feeding policy, school meals, economy, economic, evaluation, impact, effects, and Ghana. The abstracts of the identified studies were retrieved and studied. Irrelevant articles were excluded and the full text of the remaining articles obtained. The reference list of these articles examined and related articles from data bases were obtained. The bibliography from reports of UN agencies such as WHO, UNICEF, World Food Programme (WFP), Food and Agriculture Organisation (FAO) also searched for relevant articles or the reports were included and similarly, World Bank reports, proceedings of international conferences, meetings and evaluation reports.

Studies included in this study mainly involved recipients of the GSFP who are children in pre-school and school-aged children aged 3 -17 years, stakeholders such as caterers, farmers, parents, teachers and community members. Studies with an outcome measure of interest in quantitative, qualitative and evaluation. Evaluation studies, as well as mixed designs and comparison studies among schools with and without school feeding programmes were included. Studies which failed to meet the inclusion criteria as well as the following exclusion criteria were excluded: student dissertations and thesis; studies with a school feeding programme that was less than a year; and those with a sample size of less than 10 subjects.

RESULTS

A total of 49 articles and reports on the School feeding programme in Ghana were obtained, of which 22 papers were included in this aspect of the study and 27 were excluded. A sub-analysis of a cluster randomised controlled trial showing the effects of the GSFP on local farmers and households incomes reported in an online slide presentation was included due to limited evidence in this area.

Effect on households and social protection

There was little detail on the effect of the GSFP on household income and social protection, however, one study on the views of 30 parents in the Kwaebiribirim district reported that 71% perceived the GSFP beneficial as it reduced their expenses by 25% and made it easier for them to persuade their children to go to school when they were in financial difficulty *(8)*. Teachers and the traditional authority in this locality wanted the programme to be extended to other deprived schools. A longitudinal randomised cluster controlled trial conducted in all 10 regions of Ghana (nationwide) reported an increase in the height for age z-score in children aged 5-8 years particularly among girls and those from households living below the poverty line in this age group *(9)*. The effect sizes were 0.12, and 0.22 respectively. Another study reported an increase in the enrolment of girls in school *(10)*. While another reported mixed effects on gender *(8)*. Studies have consistently reported an increase enrolment of children in schools with the school feeding programme in deprived communities *(8,10–12)*. A policy brief on the GSFP in cocoa growing areas, reported a preference for schools with a GSFP by parents in these areas resulting in a decline in attendance at schools without a programme, but it also made children walk long distances to get to GSFP schools *(13)*. This is likely to have also impacted on child labour as the policy brief reported that self-funded school feeding programmes created in five such districts did not only show an increase in enrolment, but also reported reductions in absenteeism, truancy and other petty child labour issues.

Effect on the Local economy

A cost-benefit analysis jointly done by the World Food Programme and MasterCard found that the GSFP transfers economic value and significant benefits to beneficiaries *(14)*. They estimated that every 1 GHC invested in the programme makes an economic return of 3.30 GHC over the life time of each beneficiary. In economic terms, the estimated Net Present Value (NPV) was USD 1,173 (GHC 5,630) to each beneficiary across their lifetime and the total cost per beneficiary across the 8-year support cycle of the programme was USD 44.4 (GHC 213) per year or USD 356 (GHC 1.708.8). They deduced that the benefits accrued from the programme include a healthier life by providing 30-40% of the child's nutrient requirements and avoiding medical care costs as making the children healthier prevents disease *(14)*. In addition, they found that providing children with a meal at school transfers value to families as the meal can be regarded as additional income for families or savings which they can invest into other productive ventures to yield return. Besides these benefits, they reported GSFP would increase productivity by improving

educational outcomes of participants, giving them an opportunity to earn higher wages and increase their productive years due to increased life expectancy resulting from better health. This will impact the quality of the labour force and local economy, particularly if they work there as adults. By making these benefits equally available to both sexes the GSFP reduces the gender gap and improves access to education and health for the girl *(14)*.

An impact evaluation of the school feeding programme involving 116 schools randomised to include 29 schools which have the standard model of the GSFP, 29 school with the Home grown School Feeding programme which were pilots of the GSFP with agriculture/nutrition packages, and 58 schools with no school feeding programmes was carried out *(15)*. The survey covered more than 5,000 school aged children, in 2,500 households from all regions of Ghana between 2013 and 2016. They found a 5% increase in participation in agriculture among communities which had the pilot GSFP. Additionally, the income of farmers in communities with the standard GSFP increased by 100 Ghana Cedis (GHC), equivalent to 26 USD at the time. They also found an increase in the household incomes in communities with the enhanced programme and an increase in net enrolment in kindergarten by 11%. However, most of the caterers bought their commodities from market women because the farmers do not give them credit facilities *(15)*. Other studies also found that farmers were unwilling to participate in the farm-to-school lunch contracts with no immediate payments *(16,17)*. Besides they needed to sell their wares soon after harvest *(16)*.

By the 2016 budget statement, it was estimated that the GSFP had provided jobs to 20,000 caters and cooks *(6)*. However, the lack of cash flow and irregular payment of caterers made integration of local farmers into the programme difficult, so it became preferable for caterers to buy their commodities from market women limiting the programmes ability to boost the local economy by enhancing the income of farmers. Additionally, locating the farmers by the caterers posed a problem as most of them were not organised into co-operative associations and had to be engaged on their farms individually, highlighting the need for a mechanism to link these two key stakeholders *(16,18)*. A study of 100 small holder rice farmers and 90 individual players in 3 districts in Northern Ghana which assessed the accessibility of rice farmers to the GSFP also found that farmers could not access the GSFP. This was because the caterers preferred milled rice and not the paddy rice produced by the farmers locally. Thus, the GSFP had no effect on their output or productivity*(19)*.

Key challenges and bottlenecks

Caterers serving schools with the GSFP have to pre-finance the meals through loans, personal savings, credit schemes to be later reimbursed by government *(5,7)*. Although successive governments have sustained the funding of the Ghana school feeding programme since its inception in 2005 aided by donor agencies, payments made to key stakeholders such as caterers are usually delayed or insufficient *(5,8,16,18,20,21)*. These payments are not adjusted to cover the fluctuations in fuel and commodity prices and since they are not paid by the number of meals served, it costs the caterers more especially as enrolment increases during the school term *(16)*. This affects the ability to plan, the quantity and quality of food served and its impact on the nutritional status of children. To compensate, caterers reduce the portion sizes or feed the children irregularly instead of five days a week and the small portion sizes do not supply sufficient food and nutrients to the pupils *(5,16,21,22)*. Thus, some children remain hungry after the meal *(8,20,21)*. Additionally, the quantities for the menus were not standardized affecting monitoring and evaluations processes *(16,23)*. It was also observed that most caterers did not follow a meal plan or make provision for those on a special diet in addition to a lack of variety in the meals served *(8,24)*. A lack of interventions to deal with nutrition problems such overweight or obesity, from high energy intakes and iron deficiency anaemia was also found in some communities *(25–27)*.

Since caterers have to pre-finance the food served in the program, their inability to secure funding to purchase in bulk and reduce costs was a limitation *(5,16,28)*. Some caterers also had challenges with storage and cooking on their own premises posed an obstacle to the monitoring and evaluation process *(16)*. Some schools lack canteens where children can eat to avoid using classrooms, and lack of kitchens and logistics such as cutlery and plates were also observed. (8,18,20). While there was a problem of accounting for the effect of increasing enrolment on the catering service, some caterers reported problems with children who were not enrolled participating in the meals and another study reported the participation of underage children *(11,28)*. Some children also attended school for meals and left school after the meals were served *(8)*.

Some schools complained about delays in the distribution of food affecting contact hours for teaching and learning *(8,21,22)*. Lack of effective education of stakeholders such as parents and the local community was also observed *(18,20)*. This affected teamwork and led to a lack of support or misinformation, which caused some parents to send their children to school hungry, expecting that they will be served breakfast at school. This makes the children hungry and find it difficult to learn, especially when meals are delayed *(10)*. Another important observation was that, although increasing enrolment is a desired outcome of the GSFP, it also exerts pressure on the schools resources and authorities as it results in shortfalls of teaching staff, teaching materials, logistics, infrastructure and supporting services such as provision of clean water and good sanitation, which could potentially lead to poor food hygiene and disease outbreaks in schools *(18,20,21)*. Poor management as well as political involvement in the selection of caterers were also observed *(8,10,18,20)*. A qualitative study investigating the operational challenges of the GSFP found a lack of collaboration and coordination among the relevant government agencies and ministries involved and recommended the need for regular monitoring, clarification of roles and reviewing of prices of commodities to reflect actual cost, as well as making timely payments to caterers to sustain the GSFP *(29)*.

DISCUSSION

This review revealed that Caterers benefit most economically from the school feeding programme in Ghana as they are the key players *(6,7,30)*. However, they have several challenges, which need further attention, including financial constraints, storage problems and transportation delays in the delivery of supplies, food hygiene and wastage of academic time due to the feeding program *(3)*. Better oversight, monitoring and time management is needed. Due to the challenges encountered with engaging farmers and issues with cash flow, farmers were not portrayed as major actors in the programme. Therefore, suggestions have been made for a loan system to facilitate payment for goods and services and formation of co-operative associations among farmers to improve coordination with the caterers *(16,26)*.

It is important to note that the GSFP programme provided actual savings to some families and was in high demand. We also noted that gains in height were more pronounced in children living in poverty *(9)*. However, due to the small portion sizes offered by caterers, it appeared that some children's hunger was not always satisfied by the school meals. It is also concerning to note that some children were sent to school without breakfast and remain hungry until meals were served. Better education of parents about the GSFP and the importance of breakfast for the growing child could address this problem. Information on the effect of the GSFP on promoting gender parity in education and the other effects of the GSFP was limited, unlike a study in Burkina Faso which found an increase in the enrolment rate of girls by 3.2 percentage points *(31)*.

Although several challenges with the operations of the GSFP have been outlined, addressing the problems with inadequate and delayed funding to caterers stands out as the most pressing challenge that must to be resolved to maintain the gains of the GSFP. Addressing this challenge will enable children to receive the right portion sizes and quality of food for improved nutrition. Schools must also be supported to receive additional infrastructure to match increases in enrolment, and famers must be motivated and supported to invest in the programme. The GSFP is costly, so the government will have to determine what it can afford, set stringent criteria to target needy children and find alternate and complementary sources of funding to sustain the programme. To this end, needy children can be identified and categorised so that schools with large numbers of very needy pupils can be solely funded by Government, while others are funded by government with support from parents as occurs in Kenya, or the community as occurs in Cote D'Ivoire *(7,32)*. In Cote D'Ivoire, communities contribute to the programme through food stamps, salaries of canteen managers, perishables, cooking fuel and agricultural supports *(7)*. A similar arrangement involving the creation of self-financing school feeding programmes have been tried in Cocoa growing areas in Ghana with success *(13)*.

LIMITATIONS

There were some limitations with this review. The number of papers and the level of evidence available in the literature was limited and populations studied were few in some cases. Most of the studies reviewed were cross-sectional studies and evaluations. Additionally, information obtained on the challenges of the GSFP were mostly collated from reports, which are not subjected to the rigours of scientific research. One (1) randomised controlled trial provided the highest level of evidence.

CONCLUSIONS

This review provides evidence to confirm that the GSFP protects children from hunger and has led to family savings in some settings. It also showed that investment in the programme makes significant economic and social returns over the life time of each beneficiary. The programme has been economically beneficial to caterers and market women but not to most farmers in various localities. Delays in payments to caterers appear to have affected the gains and sustainability of the programme, as some children receive small portion sizes and lower quality of food as a result. It has also affected the ability to engage with farmers. Resolution of the funding problem is likely to improve outcomes and provide necessary infrastructure for the program and beneficiary schools. Better management and monitoring of the programme as well as further research using more rigorous scientific evaluation study designs are needed.

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