Technical Reports Series No. 73

Nutritional Equity and National Food and Nutrition Security Programs: The Case Study of Jamaica

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Nutritional Equity and National Food and Nutrition Security Programs:
The Case Study of Jamaica

by

Susan D. Chan
The technical Reports Series was created by the Public Policy and Health Program/Health and Human Development Division of the Pan American Health Organization (PAHO/WHO) as a means of promoting thought and discussion on the topics analyzed in meetings and seminars and to present the results of research promoted by the Program.

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<th>Abbreviation</th>
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<tr>
<td>ACC/SCN</td>
<td>United Nations Administrative Committee on Coordination Sub-Committee on Nutrition</td>
</tr>
<tr>
<td>CFNI</td>
<td>Caribbean Food and Nutrition Institute</td>
</tr>
<tr>
<td>DES</td>
<td>Dietary Energy Supplies</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<tr>
<td>FSM</td>
<td>Food Supply Model</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GOJ</td>
<td>Government of Jamaica</td>
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<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
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<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education (Jamaica)</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health (Jamaica)</td>
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<td>MOLSSS</td>
<td>Ministry of Labor, Social Security and Sports</td>
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<tr>
<td>NCD</td>
<td>Non-communicable Diseases</td>
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<tr>
<td>NPL</td>
<td>Nutrition Products Limited (Jamaica)</td>
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<td>PAHO</td>
<td>Pan American Health Organization</td>
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<tr>
<td>PCD</td>
<td>Partnership for Child Development</td>
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<td>SLC</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WFP</td>
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EXECUTIVE SUMMARY

The introduction of the macro-economic and stabilization programs in Jamaica has led to increased concerns about the associated social cost and the need of safety nets for the poor and vulnerable groups during the process of reform. This has led to the implementation of three national food and nutrition security programs in helping to contribute and maintain a good nutritional status especially for those nutritionally at risk. These programs are the Jamaican Food Stamp Program, the School Feeding Programs and the Supplemental Feeding Program.

The purpose of this study is to analyze the national food and nutrition programs in the Caribbean Region as part of public policy analysis. Poverty is defined as a state whereby individuals and groups are unable to satisfy basic needs such as food. The analytical approach used in this study combined focus group participation and nutritional data to illustrate (a) whether these programs are alleviating the effects of poverty and (b) if nutritional equity is achieved by access to food, utilization and financing a minimum nutritional package of food at the national intervention level. Jamaica is the first country as a case study to be analyzed. Policy recommendations are stated based on the qualitative inquiry and analyses.

Several interesting assessments of the three programs resulted from the investigations.

Food Stamp Program:

- The beneficiaries and personnel of the food stamp program felt that the program is very good and helpful since it provides a source for purchasing some of the basic and necessary food items.

- There is a high participation rate at every pay cycle in both the rural and urban areas.

- Among the negative aspects about the program the most important were related to the low value of the food stamps in relation to high food prices; and benefits not reaching the most needy due to the fact that it is not properly targeted.

School-Feeding Programs:

- The school-feeding programs comprising of the Nutri-Bun and Milk/Drink Program and the Traditional Cooked Lunch Program were viewed as being very good in providing a snack or meal depending on the type of program.

- The participation rate for the two programs varies with an overall lower rate for the Traditional Cooked Lunch Program. The reasons given for the disparity is the relative high
Cost for the Traditional Cooked Lunch Program compared to the Nutri-Bun and Milk/Drink Program. The latter is also more attractive due to the variety of the product and motivation of the teachers to influence the children to participate.

Meal cost is a main determining factor for access and utilization of the two types of feeding programs among the low-income children with the Nutri-Bun and Milk/Drink Program being more affordable and supporting the poor. Whereas the Cooked Lunch Program is simply not benefiting those children in need due to its high and unaffordable cost.

Supplemental Feeding Program:

It was determined that there is no consistent supply of food items and there is a need for more funds to purchase the necessary food items based on the information from the malnutrition clinic visited.

The qualitative evaluation of the national food and nutrition security programs in Jamaica showed that the programs are partially helping to alleviate the effects of poverty by providing food to the poor. However, whether they are achieving nutritional equity depends on the type of program and beneficiary. With slight modifications to the programs for improvement, effective management, regular monitoring and evaluation, and policies aimed at improving nutrition, the programs should achieve their intended outcome of healthy and nutritional well-being of those targeted.
ACKNOWLEDGEMENTS

The beneficiaries and personnel of the Jamaican national food and nutrition security programs who participated in the focus groups sessions are graciously acknowledged and are thanked for their cooperation.

Appreciation and thanks are extended to the Ministry of Labour, Social Security and Sports; the Ministry of Education and the Ministry of Health for granting permission to obtain relevant information and providing an opportunity to conduct the focus group interviews with the beneficiaries and personnel of the respective programs. Mrs. M. Gardner, Head, Public Assistance Program, Ministry of Labor, Social Security and Sports and Mrs. E. McLean, Administrator, School Feeding Programs, Ministry of Education are gratefully acknowledged for their time and cooperation.
1. Background Context

1.1 Conceptual Basis for the Study

Food security refers to access to adequate food by all people at all times for an active and healthy life and must be consistent with nutritional needs, optimum productivity and the promotion of good health. Access to adequate food at all times is vital to attain a healthy, productive and fulfilling life. Attempting to ensure food security can also be seen as an investment in human capital to aim for a more productive society and to enable people’s full physical and intellectual development. It is also both an important outcome of, and main contributor to the human development process (1,2). By investing in food security this would help to reduce health care costs and the burden of non-communicable diseases (NCD), improve productivity and economic growth, promote education, intellectual capacity and social development. Food security would also promote economic growth by reducing the potential for conflict (3,4).

Root causes of food insecurity are poverty and lack of access to adequate food in combination with related health and socio-economic factors (2). Experiences in Jamaica and elsewhere have shown that structural adjustment programs can further increase the vulnerability of the poor to food insecurity due to such factors as increased food prices, reduction of food subsidies and increasingly precarious incomes. The consequences of food insecurity can affect the nutritional state, physical and mental health, and economic productivity especially in an underprivileged population, and precipitate huge social and economic costs.

Poverty as measured by flows of income is a fundamental cause of food insecurity. Poor households spend as much as 80% of their income on food and therefore, are particularly vulnerable to adverse changes in the price of food. Increasing the incomes of these poor households especially those with malnourished members can improve their access to food since in general the increases in income are associated with improved caloric intake of staple foods (5,6). Income poverty excludes other elements of deprivation such as the lack of access to basic needs and resources such as food, housing, clothing, education and health care. Recently, the definition of poverty by the United Nations System’s Forum on Nutrition (7) stated that poverty exists when individuals or groups are not able to satisfy their basic needs adequately and food was listed as one of the basic needs.

Adequate food is essential for good health, growth, development and productivity. Lack of adequate food causes hunger and traps poor people into a vicious cycle of low-productivity, low wage earnings, and low compromised consumption. Hunger is a constraint to development.
in the long-term and the lack of access to adequate food and nutrition perpetuates poverty. Therefore, the right to adequate food is linked to human rights and its ultimate objective is to achieve nutritional well-being. The right to food implies that people should be able to provide for their own food and nutritional needs in full dignity and in a sustainable manner (8).

Implicit in the characteristics of food security and the human right to food is the issue of “nutritional equity” as an essential aspect for the attainment of good health. This concept has not been explored in the literature. Among the key elements that suggest themselves are: access to food, availability of food, adequacy of food to maintain an acceptable level of nutritional status, and financing adequate food supply. As in the more general case of equity in health, nutritional equity may require an examination of the levels of inequalities in access to food, utilization and financing a minimum nutritional package of food at the national level.

Achieving food security as one form of poverty alleviation requires targeted food and nutrition programs and policies to ensure that the targeted population will consume the essential nutrients in appropriate quantities to maintain good health and development. Food security as part of the poverty alleviation strategy can be viewed as one segment of the decentralized process aimed at achieving good health or health equity among poor and vulnerable groups.

National food and nutrition security programs targeted to vulnerable poor groups are important in helping to prevent malnutrition, improve household food security, and alleviate poverty by providing food and generally improving health. They should be considered important especially in preventing inter-generational poor health outcomes. These programs when properly implemented with effective strategies, commitment and good management practices have positive impacts in helping to combat food insecure related problems.

National food and nutrition security programs can act as a breach to aid in the prevention of deteriorating health outcomes from occurring especially for the vulnerable lifecycle groups (infants, preschoolers, school age, pregnant and lactating women, and the elderly) among the poor by providing food and health promotion if the latter is incorporated into the program strategy. These programs can be very important in preventing inter-generational effects leading to poor health outcomes when specifically targeted to infants, preschoolers, and pregnant and lactating women since it has been demonstrated that there is a link between over- and undernutrition, and their resulting morbidity, and socio-economic factors (9). The effects of early malnutrition on growth and development can start with damage to the genetic potential beginning with fetal malnutrition which reflects in the nutritional status and health of the mother (10). Most stunted children become stunted adults who are physically less productive. Being underweight, even mildly increases the risk of death and inhibits cognitive development in children leading to less fit and productive adults. The problem can be perpetuated from one generation to the next, through malnourished women having low birth weight babies (9,11).
There is encouraging evidence that national food and nutrition security programs can achieve their intended objectives and have positive impacts in improving the health and nutrition status of the targeted population. However, there are certain characteristics that make these programs successful such as clear goals, targeting the vulnerable groups among the poor, good strategic and program planning, effective management, systematic monitoring and evaluation, political commitment, and deliberate policies aimed at improving nutrition. Recent evaluations of programs in Indonesia and Thailand attributed their success in reducing both protein-energy malnutrition and micronutrient deficiencies to the fact that both were addressed through poverty alleviation programs with nutrition programs promoted within this framework and had the above characteristics. Other countries that have successfully reduced child malnutrition through focused programs in recent decades include Chile, Costa Rica, Tamil Nadu in India and Zimbabwe (12,13).

1.2. Purpose of the Study

The purpose of this study is to analyze the national food and nutrition programs in the Caribbean Region as part of public policy analysis. Given the broader definition of poverty of not being able to satisfy basic needs such as food, the analytical approach used in this study combined focus group participation and nutritional data to illustrate: (a) whether these programs are alleviating the effects of poverty and (b) if nutritional equity is achieved by access to food, utilization and financing a minimum nutritional package of food at the national intervention level. The goal is to develop nutrition strategies and policies or update policy outcomes. Jamaica is the first country as a case study to be analyzed.

This study though small attempted to analyze the national food and nutrition security programs in Jamaica by actually dialoguing with the beneficiaries and personnel of the respective programs to obtain their views on specific issues relating to food security and nutritional equity in regard to the programs. It is an approach of going ‘behind the scenes’ of the current programs to obtain the participants and personnel perceptions about the programs, a form of qualitative evaluation and can be viewed as an alternative to quantitative evaluation research. It is also a form of process evaluation and another route for inquiring whether these on-going programs are achieving their intended outcomes.

With this in hand, it is hoped to make rational policy recommendations to improve the programs in order to achieve more effective impact on their intended outcome. Further to this, it is important at this time to take stock of whether these national food and nutrition security programs are achieving their nutritional objectives and why or why not. This is crucial especially at a time when national resources are often limited. For the food stamp program no nutritional related evaluation was conducted since in part it is a difficult issue to evaluate due to the ambiguity of this type of program. However, a nutrition-oriented evaluation was conducted for the school feeding program in November 1989 (14), over a decade ago. As of April 1, 1998, the Government of Jamaica (GOJ) has taken over full funding responsibility for both the food stamp
and school feeding programs since the external agencies, World Food Program (WFP), United States Agency for International Development (USAID), and United Nations Development Program (UNDP) ceased their funding (Ministry of Labor, Social Security and Sports & Ministry of Education, personal communication, 1999).

2. Health and Economic Conditions in Jamaica

2.1 Health and Nutritional Status in Jamaica

The GOJ has placed increasing emphasis on promoting the economic growth through human development concomitantly with efforts to decrease poverty (15). These efforts have been demonstrated in the generally stable health status of the Jamaican population over the past ten years (1989-1998). General health status has been improving judging from infant mortality, infectious diseases, and life expectancy. At the same time, there is an increase in chronic non-communicable diseases among some groups of the population (16). Male/female differences though small have been constant. More females attend health centers and are hospitalized for chronic diseases such as diabetes mellitus and cardiovascular disease, indicating gender differences in the levels of hypertension and diabetes mellitus (15).

There is a high prevalence of anemia among pregnant women of 18.7% in 1997 and there was basically no change over the last five years recorded at 19.1% in 1992 (15,17). Anemia is also increasing among adolescent girls (18). No significant progress has been made in the reduction of anemia over the last twenty years despite fortification and supplementation programs (15).

Trends in exclusive breastfeeding at 6 weeks and at 3 months are considered relatively low at 53.7% and 40.9%, respectively. Parishes in rural areas tend to report a higher prevalence of exclusive breastfeeding at 6 weeks when compared to the urban areas (15).

The prevalence of protein-energy malnutrition using the anthropometric measurement weight-for-age indicator among children 0-35 months who attended child health clinics at the end of the third quarter of 1998 was 4.8% with 4.6% moderately and 0.2% severely malnourished. There is a marked gender difference with girls (5.9%) being more malnourished than boys (3.6%). The prevalence of protein-energy malnutrition seems to be higher than the national average of 4.8% at the end of the third quarter of 1998 in the urban areas when compared to the rural areas. However, pockets of malnutrition still persist in some high risk areas of Jamaica. The peak age for protein-energy malnutrition continues to be the 6-11 months age group suggesting that children are more at risk of becoming malnourished during the early weaning period. There is a take-home supplementary feeding program implemented by the Ministry of Health (MOH) for nutritional rehabilitation of moderately to severely malnourished
children 0-35 months of age and contribute to increasing health coverage particularly of the nutritionally at-risk groups (15).

The Survey of Living Conditions measures the prevalence of chronic (stunting) and acute (wasting) under-nutrition. In 1998, the prevalence of under-nutrition for a sample of 2,453 children 0-59 months was low and was considered generally good when compared to the international nutrition standards. Using the World Health Organization (WHO) reference standards (z-scores) for the nutritional indicators weight-for-age, height-for-age and weight-for-height; 5.2% of the children were low weight-for-age, 5.7% were low height-for-age (stunted) and 2.5% were low weight-for-height (wasted) (15). These low percentages for the weight-for-age and height-for-age indicators were above internationally acceptable standards. The survey also illustrated that more children from the poorest quintiles (I and II) were stunted when compared to the children from the upper three quintiles. In addition, there was also a trend for a higher prevalence of under-nutrition in the 12-23 months age group for all the three nutritional indicators but it was significant for the height-for-age indicator only, suggesting a history of under-nutrition or chronic sub-optimal nutrition in the children measured (17).

2.2 Macro-economic Performance of the Jamaican Economy

During the past ten years Jamaica’s economic development has been influenced primarily by policies aimed at stabilization and structural adjustment. These policies were in direct response to the economic crisis which developed during the 1970s. Following the fairly strong growth during the 1960s, the Jamaican economy declined by 1973-1974 due to the oil shock and did not recover when again it was hit by yet another oil shock in 1979-1980. This was compounded by the consequent hostile international economic environment due to the significant outflow of capital that occurred during mid-1970s. There was also a net decline in the net foreign investment which related to the bauxite industry. The revenues from the tourist industry also decreased drastically along with the poor performance of the export sector. The increased cost of imports, mainly food and oil, and the significantly lower net inflow of foreign exchange led to the deterioration of the Jamaican balance of payment. Policies formulated during this period were therefore intended to deal with the destabilization and deterioration of the economy caused by the two oil shocks. However, by the end of 1983 it became clear that there was no improvement in the balance of payments. Following on a significant decline in 1985, the economy began to recover in 1986. Many positive factors both in the international economic environment and in the domestic economy contributed to this recovery.

Jamaica was recovering in its third consecutive year of economic recovery when it was struck by Hurricane Gilbert in September, 1988 which was considered the worst natural disaster to strike the country in more than a century. The agricultural sector was severely affected by the hurricane and export crops sub-sector also declined. The shortfall in the domestic production resulted in higher food prices. The economic recovery following the hurricane was fairly rapid.

and the economy continued to experience a period of sustained growth. This period of growth was also accompanied in the latter part of 1990 by some improvement in the balance of payments situation and a slowing down in the rate of growth of the external public debt.

In 1989, the current government began to increase the pace of structural reforms in order to stimulate the performance of the economy. This program was supported by the IMF through a three year Extended Fund Facility (EFF), the IDB through an investment sector loan, and the Paris Club with a debt rescheduling agreement. All these three arrangements have now ended. Under this reform program, most of Jamaica’s economic targets were met. Inflation was reduced to 1% per month by early 1995 from the high inflation of the 1991-1994 period.

The economic crisis during the 1970s and first half of the 1980s significantly affected delivery of social services and therefore, the socio-economic status of the Jamaican population particularly affected those in the lower income groups.

2.3 Poverty Assessment of Jamaica

The incidence of poverty has generally been declining over the past 10 years from 30.5% in 1989 to 15.9% in 1998 with the exception in 1991 when it rose to 44.6% (Figure 1). The decline in the incidence of poverty suggests that the combination of efforts from the governmental and non-governmental agencies is having a positive effect (17). Of relevance, one of the government’s strategy for poverty reduction is to improve targeting of the food programs to the poor (19).
2.4 Assessment of Food Security in Jamaica

Assessment of food security was conducted during 1986-1994 using three different methods and arrived at different levels of food insecurity. The first method utilized the model developed by Davies and Witter in 1986 for assessing food supply (20). This method examined the value of food available to the general population during the period of 1986-1994 and is expressed in constant 1986 prices. This formulation illustrated that the value of food increased by 17% from J$1,986.3M in 1986 to J$2,337.9M in 1994 (19). The second method of assessing food availability utilized household consumption data using final prices from the Survey of Living Conditions (SLC) for 1994 and compared it to the Food Supply Model (FSM) which is based on the Gross Domestic Product (GDP) at factor prices. The SLC for 1994 illustrated an estimated food consumption of J$17,462 per annum per capita whereas, the FSM illustrated an
estimate at current prices of J$7,761 per annum per capital (19,21). These methods while both indicate significant levels of food insecurity have yielded different results.

A third and perhaps a more precise method was developed by the Food and Agriculture Organization (FAO) for identifying food inadequacy in developing countries. It compared food balance sheet average per capita dietary energy supply figures with an estimate of the average per capita energy requirement. Applied by the Caribbean Food and Nutrition Institute it illustrated that there is a high level of food insecurity in Jamaica of approximately 30% in 1994. This translated into a figure of 784,000 persons in 1994 and was close to the national estimate of 28% of persons living below the poverty line in 1994. When the estimates of Dietary Energy Supplies (DES) for 1991-1994 was reviewed it indicated an average per capita energy supply of 2,500 calories per capita per day compared to the minimum requirement of 2053 calories per day. This suggested that while overt malnutrition among children and adults is very low, a significant proportion of the population are on average unable to access sufficient food for more than light activity during the course of a day (19).

The MOH has been collecting information on food cost for a family of five to monitor and facilitate comparisons between quarters of the year and to examine the relationship with the prevalence of malnutrition. The least cost basket of food items satisfies the nutritional requirements of a household of five for a period of one week (15). At the end of the first quarter of 1998 the cost of the food basket stood at J$1,554.80 but increased to J$1,733.26 by the end of the 4th quarter of the year. During 1998 the minimum wage of J$800 only allowed the purchase of 46.2% to 51.4% of the food basket. Although inflation has been decreasing the cost of essential food items continued to increase (15). Given the continuous increases in food prices and the national estimate of poverty of 15.9% for 1998 (17), food insecurity still exists at least for this proportion of the population.

Factors contributing to food insecurity in Jamaica include the high level of unemployment, high inflation particularly relating to the cost of food, and the level of inequality in consumption patterns amongst the different income groups (19).

3. Review of the National Food and Nutrition Security Programs in Jamaica

The introduction of macro-economic and stabilization programs in Jamaica has led to increased concerns about the associated social cost and the need of safety nets for the poor and vulnerable groups during the process of reform. Due to the continuous inflation trend in Jamaica to which reference has already being made, national food aid programs were designed to supplement the food intake of persons who are at risk of becoming malnourished and others who have no tangible income such as the poor. This really indicates the necessity for inter-sectoral collaboration to ensure not only the rationalization of resources but also their effectiveness in reaching the target population.
The GOJ in their efforts in attempting to alleviate the effects of poverty among the low-income in Jamaica has implemented three national food and nutrition security programs as food aid to help in contributing and maintaining a good nutritional status especially for those nutritionally at risk. These programs are the Jamaican Food Stamp Program managed through the Ministry of Labour, Social Security and Sport (MOLSSS); the School Feeding Program through the Ministry of Education (MOE); and the Supplemental Feeding Program by the Ministry of Health (MOH). The programs target the vulnerable groups starting with the pregnant and lactating women and continuing through to infancy into the school years and up to the elderly poor.

### 3.1 Food Stamp Program

Food Stamp Programs have been implemented in both developed and developing countries for a variety of reasons. Most of the programs were implemented to increase food availability and consumption by target groups comprising mainly of the poor and vulnerable such as in the United States, Mexico, and Jamaica. Many of the developing countries implemented food stamp programs to buffer the impact of structural adjustment policies which reduced or eliminated general food subsidies, increased taxes and applied other measures to reduce fiscal deficits and restore macroeconomic balance as in Sri Lanka, Jamaica and Honduras. Recently, these programs have been viewed as safety net programs to protect the poor and vulnerable or to promote social objectives such as education and increasing school attendance among poor children.

The food stamp programs in the developing countries were initially viewed as temporary measures to sustain consumption by vulnerable groups during the economic adjustment period. However, they continued after the worst effects had passed (22). Three reasons identified for their continuation are:

- The significant savings obtained from the program relative to previous price subsidy programs;

- To transfer income support to the poor and vulnerable groups in comparison to other in-kind food assistance programs which have higher administrative costs;

- And as an incentive to promote use of or consumption of other social programs or produce savings in other government expenditures. This has been demonstrated with positive results in maternal and child health programs such as pre-natal visits and immunization for children demonstrating significantly reduced curative health expenditures, and also to increase school attendance and improve school performance.
The Jamaican Food Stamp Program was introduced in 1984. It was designed to transfer income in the form of food purchasing power to low income households and especially to vulnerable groups (pregnant women, lactating mothers, malnourished children and elderly) who are at nutritional risk and to mitigate the effects of the structural adjustment. It aimed to protect the poor and the vulnerable groups from the erosive effects of the rising cost of living, especially the cost of domestic and imported food items. For the fiscal year 1998-1999, the program benefited 268,000 persons or 7.4% of the total population. Its supplementary goal is to maintain the nutritional status of the target groups at some minimal acceptable nutritional level. The food stamps are paid in two months increment cycles and the beneficiaries collect their allocated stamps from pay stations within their districts. The food stamps are exchanged for certain basic food items at grocery stores, supermarkets and other food outlets. The beneficiaries currently fall into three broad groups: (a) health related recipients such as pregnant women, lactating mothers, malnourished children under 6 years, attending public health clinics; (b) income related recipients such as elderly and disabled persons receiving poor relief or public assistance, single member households with income below J$7,000 per annum, families with two or more members with income below J$18,000 per annum (family plan) and; (c) those who were previously on kerosene oil subsidy. Box 1 illustrates the grouping and monetary value of the food stamps for the respective beneficiary categories.

One of the suggestions which emerged in a World Bank Review on the poverty situation is the possibility of utilizing the food stamp instrument to generally target not only as a food security program but to include other social sector initiatives such as housing and unemployment benefits.

Box 1. Grouping of the Beneficiaries and Value* of the Jamaican Food Stamps

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vulnerable Groups</td>
<td></td>
</tr>
<tr>
<td>Category 1: Pregnant Women</td>
<td>J$210</td>
</tr>
<tr>
<td>Category 2: Lactating Mothers</td>
<td>J$210</td>
</tr>
<tr>
<td>Category 3: Malnourished Children</td>
<td>J$150</td>
</tr>
<tr>
<td>Low-Income Groups</td>
<td></td>
</tr>
<tr>
<td>Category 4: Elderly and Disabled Poor</td>
<td>J$240</td>
</tr>
<tr>
<td>Category 5: Single Member Households</td>
<td>J$210</td>
</tr>
<tr>
<td>Category 6: Single Parent Households</td>
<td>J$330</td>
</tr>
<tr>
<td>Kerosene Oil Subsidy</td>
<td></td>
</tr>
<tr>
<td>Category 7: Kerosene Oil Subsidy</td>
<td>J$330</td>
</tr>
</tbody>
</table>

* Value of the Jamaican Food Stamps as of 1999.
3.2. School Feeding Programs

International agencies such as the WFP and national governments in both developed and developing countries have been implementing school feeding programs for many decades with the general expectation of improving school performance and the health and nutritional status of school-age children especially those who are undernourished or merely poor. In developing countries, school meals are often regarded as incentives for parents to enroll their children in school and reduce their cost of sending them to school, for children to attend school more often, and be less likely to drop out at an earlier age. On the other hand in developed countries such as the United States, school meals are now regarded to help in promoting lifelong healthy eating habits since it was noted that many young people make poor eating choices putting them at risk for developing health problems in later life. The current radical changes in lifestyle and influences from the media affect their personal preferences about foods, fashion, and physical activity levels.

The United Nations Administrative Committee on Coordination Sub-Committee on Nutrition (ACC/SCN) (23) suggested that if school feeding programs in developing countries are properly designed and effectively implemented, these programs can achieve many goals such as:

- Alleviate short-term hunger, thus increasing attention and concentration span;
- Encourage or be used specifically to encourage enrollment of girls and improve their retention in school;
- Motivate children to attend school and motivate parents to enroll their children in school;
- Contribute to better nutrition and address specific micronutrient deficiencies in school-age children, especially iron and iodine deficiencies which directly affect cognitive development;
- Increase community involvement in schools;
- Combine with other school health interventions such as deworming which are easy to deliver and highly cost-effective, to the already in-placed school population and infrastructure.

In Jamaica, there are two types of school feeding programs comprising of the Nutri-Bun and Milk/Drink, and the Traditional Cooked Lunch Programs. In 1926, the Traditional Cooked Lunch program was the first of the feeding programs to be initiated and was funded by external donors. In 1985 the Nutri-Bun and Milk/Drink Program was implemented and the World Food Program (WFP) funded this program and took over full funding responsibility of the Cooked
Lunch Program. However, at the beginning of 1998 the GOJ took over full funding responsibility for both programs. The Nutri-Bun and Milk/Drink Program entails the provision of snack items such as cake, bulla, or bun and a milk or fruit drink to children at a cost of J$2 per snack. The Nutrition Products Limited (NPL), a government-owned company centrally produces the snack items and processes the milk and fruit drinks, and distributes to the schools. In 1998, approximately 170,000 children benefited from this type of program island-wide (24).

The Traditional Cooked Lunch Program involves the preparation of cooked lunches by the schools. The GOJ provides two types of subsidies for this type of feeding program. The Government helps in the purchase of a few basic food ingredients such as meat, rice, cooking oil, tinned mackerel, fuel for cooking and salaries for the cooks through the School Feeding Unit of the Ministry of Education. The schools also subsidize the program by purchasing other basic food ingredients to complete the preparation of hot meals for the school children. Over 132,000 school children from primary and all-age schools benefited from this subsidy during the 1998 school year. The other type of subsidy comprises of feeding grants given to basic schools island-wide to assist in the purchase of protein foods and in the upkeep of the school canteens. Approximately 126,000 schoolchildren benefited from this type of subsidy. The children can pay anywhere between J$20-$60 for a cooked lunch (24).

3.3 Supplemental Feeding Program

Supplemental feeding is a common type of nutrition intervention in developing countries. It is the distribution of food to supplement energy and other nutrients missing from the diet of those who have special nutritional requirements. The most common purpose for supplemental feeding is to prevent or alleviate malnutrition by filling the nutrient gap between an individual’s actual consumption and their nutritional requirements (25, 26).

The consequences of malnutrition are most serious between the ages of 6-24 months of a child simply because active growth faltering can occur during this age interval especially when the child is no longer being protected by exclusive breast-feeding. During this time, the child is becoming more exposed to disease and infection through water and food contamination. Growth failure is more preventable and reversible at this age (26, 27).

Many studies have shown that promoting dietary consumption through supplemental feeding can have beneficial nutritional effects including positive outcomes on growth, activity level, cognitive development, improved immune system and energy compensation due to illness.

The take-home supplemental feeding program in Jamaica administered by the MOH was implemented in 1984 when the Food Stamp Program was initiated. This program seeks to improve the nutritional intake of moderately to severely malnourished children 6 – 35 months of age and to contribute to increasing health coverage particularly of the nutritionally at-risk groups. Funds are given to selected parish health centers where special nutritional clinics are conducted.
for rehabilitation of malnourished children as identified in the community. The funds are provided on a quarterly basis to purchase a variety of food supplements or basic food items for the distribution to the beneficiaries—moderately to severely malnourished children. Approximately 2,500 children island-wide benefit from this program (15).

4. Methodology of the Study

A qualitative assessment method is used in attempting to answer whether these national food and nutrition security programs are alleviating the effects of poverty and achieving nutritional equity. The approach attempts to answer how these programs are utilized in achieving food security by conducting focus group interview sessions with the personnel who administer the programs and the beneficiaries to obtain their perspectives and contextual information.

The benefits of using qualitative assessment are that they generate results and theories which are understandable and credible to stakeholders. It is a form of formative evaluation, which helps to improve existing practice rather than to simply assess the value of a program being evaluated. It is also a form of engaging in participatory evaluation.

Focus group sessions were conducted with the beneficiaries and also with the personnel of the food stamp and the school-feeding programs. The focus group sessions for these two programs were conducted in five different areas of Jamaica. These areas were selected to obtain a cross-sectional comparison of the geographic and socio-economic implications of Jamaica. The focus group sessions were audiotaped and facilitated by a moderator who directed the sessions.

The focus group and individual interview questions were the same for the respective groups of beneficiaries, personnel and the shopkeepers across the programs to ensure consistency in the questioning. Questions were developed based on the major themes of food security. A semi-structured questioning style was used in the focus group and individual interviews to allow for some flexibility in the topics discussed and level of participation within the interviews. Questions were modified, if necessary, to fit the individual and group dynamics and changes were applied to the remaining groups.

For the food stamp program, a total of six focus group sessions with sample sizes ranging from 4–13 were conducted with the beneficiaries, a diverse group comprising of pregnant and lactating mothers, malnourished children, elderly, single headed households, low-income families, and those on kerosene subsidy; and with the personnel who administer the food stamp program in three areas namely (Figure 2):

a) the semi-urban parish of St. Ann located on the north coast and is socio-economically better off than St. Mary’s parish,
b) the rural parish of St. Mary located in the north-east,
c) a low-income urban area of the capital, Kingston located in the south.

Figure 2. Qualitative Methodological Map for the Food Stamp Program

Food Stamp Program

Parish:  
- St. Ann’s Bay  
- St Mary’s  
- Kingston

Geographic Area:  
- semi-urban  
- semi-rural  
- urban

Focus Group Interview Sessions  
- Beneficiaries (conducted at the pay stations)  
  - pregnant & lactating women  
  - malnourished children  
  - elderly & disabled poor  
  - single member households  
  - single parent households with children  
- Personnel (conducted at the respective shops)  
  - managers  
  - payees

Individual Interviews  
- Shopkeepers (conducted at the respective shops)  
- (1 focus group interview per geographic area)  
- (2 shopkeepers interviewed per geographic area)

The participants were fairly representative from the randomly selected food stamp pay stations within the selected parishes. The parishes were selected to reflect the socio-economic implications.

For the school feeding programs, focus group sessions with a total of eight groups of sample sizes of 6-13 were also conducted with the beneficiaries (school children) of varying ages (age range = 6-15 years), and personnel (teachers and cooks) of the national school-feeding program in four different schools (Figure 3). For the nutri-bun and milk/drink program:

(a) Guyshill Primary School in a rural community in the hills of St. Catherine’s parish located in the south,
(b) Swallowfield All-Age School in a low-income urban area of Kingston.

For the traditional cooked lunch program:
(c) Drapers All-Age School in the rural parish of Portland located in the east,
(d) Cockburn All-Age School in a low-income urban area of Kingston.
Individual interviews (Figure 4) were conducted with the caregivers of the beneficiaries and personnel of the supplemental feeding program for malnourished children at a malnutrition clinic in a low-income area of Kingston. Persons at only one malnutrition clinic were interviewed due to the clinics’ rigid time schedules. The age group of the beneficiaries was between 6 to 35 months of age. Individual interviews were conducted for this program since the Ministry of Health felt that the caregivers of the beneficiaries would feel uncomfortable being interviewed in a group setting due to the nature of the program.
Results and Discussion with Policy Recommendations

Food Stamp Program

Significance of the Food Stamp Program

There is a general consensus from the personnel and beneficiaries that the food stamp program is highly significant in helping the poor to purchase some of the basic food items. To emphasize this view, many of the beneficiaries pointed out that the program helps to “stop a gap” which translates that there are times when there is no household money or when it runs out the beneficiaries can rely on the food stamps to help with the purchasing of basic food items or help to put food on the table.

The personnel have indicated that the beneficiaries particularly those really in need of the program, identified to be the elderly and disabled poor and also malnourished children, appreciate the program especially when there is no other source such as employment or support from family to help them in obtaining food. The personnel indicated that they have also observed, particularly among the malnourished children, an improvement in their health after a few months. However, full credit cannot be solely given to the food stamp program since
concurrently malnourished children up to 3 years are supposed to receive food supplements from their malnutrition clinic in addition to being referred to the food stamp program.

Typical comments made by the beneficiaries and personnel during the focus group sessions on the significance of the food stamp program are listed below.

Beneficiaries

We depend on the program since it helps the family to obtain food.

It fills a need by helping to provide a financial means of obtaining food for the family. Or, when we are really in need, it is there to help us out.

The program is a sure means in helping us to obtain food for the family especially during the times when it is difficult to make ends meet.

Personnel

The ‘needy’ depend on the food stamp program as a sure form of obtaining food and if the program is to stop, the ‘needy’ would suffer and malnutrition would increase or even death would occur among the disabled poor.

5.1.2 Utilization of the Food Stamp Program

According to the personnel there is a high participation rate of at least 75% at every pay cycle in both the rural and urban areas. They also noted that those really-in-need of the food stamp program such as the elderly and the disabled poor, and the caregivers of the malnourished children under 6 years collect the stamps at every pay cycle. Comparatively, the Survey of Living Conditions (SLC) 1998 (17) illustrated that almost 85% of the Elderly Poor and Disabled Poor, and Malnourished Children under 6 years categories utilize the food stamp program in contrast to the other categories.

The younger beneficiaries identified as the single member households allow the stamps to accumulate over 2-3 pay cycles (4-6 months) as allowed by the implementing ministry, the MOLSSS, to compensate for the low value of the food stamps and the high transportation costs to travel to the pay stations. The SLC 1998 (17) has also noted the high rate of missed pay cycles and due to this problem the Ministry plans to introduce a mobile payment system. These younger beneficiaries also indicated that by allowing the food stamps to accumulate more purchases can be made.

It is questionable whether all the beneficiaries use the food stamps for the intended purpose which is towards the purchase of basic food items as listed on the back of the food

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2 Throughout this section of the report information gathered from the focus group sessions are compared to the 1998 Food Stamp Module of the Jamaica Survey of Living Conditions (SLC), 1998.
The food stamp items approved are milk, sugar, bread, cornmeal, flour, cooking oil, rice, meat, and kerosene oil as the only non-food item. Most of the beneficiaries in the focus groups revealed that they buy essential non-food items such as washing soap and soap powder with the food stamp items listed and sometimes buy washing soap and soap powder when needed. The SLC, 1998 has also noted that the Elderly Poor category constantly utilize more of their food stamps towards total household expenditure compared to the other categories over the stamp items listed and also more expensive food and non-food items respectively, such as cornflakes, formula milk and baby diapers. Interestingly, the personnel from the rural area made what the food stamps should be used for. It all depends on the mother for what is important to her to be out there to look good.

The younger categories, pregnant and lactating mothers and single member households would use the food stamps for such purposes to buy box drinks for the infants or to get a

for which they were not intended. In the SLC 1998 (17) in 1998 compared to 13% in 1997 used some portion of their food stamps to purchase non-food items; and approximately 55% used their stamps to purchases other food items than those beneficiaries would want to change the food stamps for cash to enable them to buy liquor –rum. This is supported elsewhere that there is indication of some level of leakage into the purchase of

Table 1 illustrates the type of items typically purchased by the beneficiaries with the food stamps. Note that the beneficiaries from both the rural and urban areas did not admit to buying proportion of the stamps being spent on such items.

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3 These food stamp items are selected on the basis of nutritional content, regular consumption by the poor and in-assistance, and the WFP. Cornmeal, flour and rice respectively were also found to be the most efficient providers of calories per dollar in food purchase. Cited from Castaneda.
Table 1. Items purchased with the food stamps

<table>
<thead>
<tr>
<th>Food Stamp Items</th>
<th>Non-Food Stamp Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural Area</td>
</tr>
<tr>
<td>Milk Powder</td>
<td>+</td>
</tr>
<tr>
<td>Cornmeal</td>
<td>+</td>
</tr>
<tr>
<td>Rice</td>
<td>+</td>
</tr>
<tr>
<td>Sugar</td>
<td>+</td>
</tr>
<tr>
<td>Flour</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat</td>
<td></td>
</tr>
<tr>
<td>Chicken back</td>
<td>+</td>
</tr>
<tr>
<td>Salt fist</td>
<td>+</td>
</tr>
<tr>
<td>Liver</td>
<td>+</td>
</tr>
<tr>
<td>Sardines</td>
<td>+</td>
</tr>
<tr>
<td>Chicken parts</td>
<td>+</td>
</tr>
<tr>
<td>Kidneys</td>
<td>•</td>
</tr>
<tr>
<td>Mackrel</td>
<td>•</td>
</tr>
<tr>
<td>Bread</td>
<td>•</td>
</tr>
<tr>
<td>Cooking Oil</td>
<td></td>
</tr>
<tr>
<td>Yams</td>
<td>□</td>
</tr>
</tbody>
</table>

Legend: + Correlated beneficiaries & shopkeeper responses  
• Only Shopkeeper responses  
□ Only beneficiaries’ responses

5.1.3 Access to Food Using the Food Stamps

Due to the low value of the food stamps, the beneficiaries have complained that the stamps are often only adequate to purchase a few basic food items to provide only one meal for a family. This leads to the problem of ‘non-sustained access to food’ in using the food stamps. Access to food was analyzed from two angles as illustrated in Box 2. One view is access to food from a financial aspect (i.e., are the food stamps adequate to finance a minimal nutritional package) and the other is the actual access to food or ability to acquire food. The analysis indicates that there is a ‘non-sustained access to food’ in terms that it cannot purchase at least minimum\(^4\) or one-third (1/3) of the nutritional requirements between pay cycles, an intermittent of two months until the next pay cycle for neither of the seven food stamp groups. Nor can the

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\(^4\) The minimum nutritional acceptable level is assumed to be one-third (1/3) of the nutritional requirements for normal healthy persons in the general population.
food stamps be used to purchase food to maintain the nutritional status of the target population at some minimum acceptable nutritional level, an objective of the Jamaican Food Stamp Program.

**Box 2. Access to Food using the Food Stamps**

![Flowchart]

**Inadequacy**
Cannot purchase at least 1/3 of daily nutritional requirements of a ‘Least Cost Food Basket’ until the next pay cycle 2 months later
**NOR** can it maintain the nutritional status for the target group at some minimum acceptable level until the next pay cycle

Figure 5 illustrates that the value of the food stamps cannot purchase food to provide the minimum or one-third (1/3) of the nutritional requirements but can only purchase between 16-26% of the minimum nutritional requirements for the beneficiaries in the various food stamp groups. Hence, there is a non-sustained access to food until the next pay cycle. In addition, the program cannot achieve its supplementary goal of maintaining the nutritional status of the target population at some minimum acceptable level.
The Jamaican Ministry of Health has been collecting information on food cost for a family of five for a period of one week called the Least Cost Food Basket. Annex I illustrates the calculations on the costing to feed those receiving food stamps at the minimum nutritional acceptable level using the Least Cost Food Basket. Annex II calculates and compares the percentage points of the food stamps to supply the minimum nutritional requirements between pay cycles.

Anderson (28) also noted that the purchasing power of the food stamps is significantly low despite the value increase in April 1997 with a steep decline in its value over the years. An example given was that in 1991 the food stamp allotment for a Single Person Household amounted to J$720 for the year, and could have purchased 7.2% of the minimum basket of food estimated by the Planning Institute of Jamaica. By 1993, the allotment could not purchase more than 5% despite the increase in the value of the stamp to $900 and three years later in 1996 the purchasing power was reduced to 2.8% under the impact of inflation.

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5 The definition of a Least Cost Food Basket is the information on food cost of a collection of basic food items to satisfy the nutritional requirements of a household of five for a period of one week.

6 There is no indication whether the minimum basket of food estimated by the Planning Institute of Jamaica (PIOJ) is the same as the ‘Least Cost Food Basket’ which is estimated by the Ministry of Health (MOH).
When the value of the Jamaican food stamps towards food expenditure per month is compared to similar food stamp programs in other developing countries such as Honduras and Mexico, it is quite low—less than 5% and even lower—when compared to the United States as a developed country (22). However, no comparison can be made among the various countries with food stamp programs on the nutritional impact since there is not sufficient information available on this aspect.

In terms of Access to Food on the nutritional impact of the food stamp program for children under 6 years in Jamaica, it was reported elsewhere\(^7\) that the available evidence when judged in combination with complementary programs such as the accelerated promotion of breast-feeding practices, supplementary feeding program targeting and immunization, the food stamp program seems to be helping in preventing undernutrition among 0-6 year olds. However, pockets of undernutrition persist in high-risk areas in Jamaica. In general, the food stamp program seems to be providing some nutritional benefits to recipients but the extent of such benefits can only be clarified with further analysis.

During the focus group sessions, the beneficiaries were asked how did they cope in obtaining food given the circumstances that there is a ‘non-sustained access to food’ in using the food stamps. Beneficiaries from the rural area indicated they often have to rely either on their pension or family to help in obtaining food. Whereas beneficiaries from the urban area also have to rely on family or establish their own small business as road-side vendors to help in obtaining food. However, the personnel indicated that there are some groups such as the elderly poor, disabled poor, and malnourished children in both the rural and urban areas who have to solely depend on the food stamp program in helping to obtain food.

Factors mentioned by the food stamps beneficiaries contributing to the ‘non-sustained access to food’ in relation to the \textit{actual} access to food are:

- Food stores in both the rural and urban areas do not like to accept the food stamps since they are not aware of the program. In addition, the shopkeepers felt that it would take them a long time to be reimbursed the actual cash in exchange for the food stamps;

- Some of the small shops that do accept the food stamps in the rural areas do not stock all the basic food items;

- With the high transportation costs incurred from travelling to the pay stations and to low-price food stores which accept the food stamps, the beneficiaries would rather miss payment cycles and collect at most three sets of food stamps at one collection thereby allowing the food stamps to accumulate;

\(^7\) Planning Institute of Jamaica. A Preliminary Evaluation of the Jamaican Food Stamp Program. No date. (Unpublished document).
The beneficiaries indicated that the shops do not like ‘to give back change’ for food stamp purchases less than the actual value of the food stamps, causing them not being able to use the food stamps towards future food purchases;

5.1.4 Negative Aspects of the Food Stamp Program

Negative aspects of the food stamp program were discussed by the beneficiaries and personnel in the focus group sessions. The most discontenting view pointed out by the beneficiaries and personnel was that the value of the food stamps is too low to cope with the high food prices and they often can only buy a few items or just enough for one family meal. In addition, the food stamp payments are too far apart, once every two months, and in combination with the low value of the food stamps it is often difficult for the beneficiaries to cope with the high food prices.

The beneficiaries and personnel indicated that the most needy including the local pensioners in the community, the elderly and the incapacitated are not benefiting from the program suggesting that it is not properly targeted in their perspective. The personnel further indicated that there is no efficient monitoring system to investigate those beneficiaries no longer in need of the program. If the program increases ‘those really in need of the program’ then it would be a more effective and successful program in achieving its objective. To support the focus group view on this point, the SLC 1998 have also indicated a low transfer of food stamps to the poor quintiles (I and II) during the period 1997-1998.

The personnel from the rural areas indicated that there are ‘too many young people on the program’ and there should be a program for this group which trains them for employment. Correlating with this view were the beneficiaries from the urban area indicating that such a program would boost their self-esteem and morality. In 1995, the Government of Jamaica and the World Food Program jointly implemented a program called ‘Skills 2000 Program’ as part of the National Poverty Eradication Program. The Skills 2000 Program was intended to mitigate declining economic conditions in Jamaica, particularly as they affect the poor. The food stamp beneficiaries who no longer qualified to receive food stamps and not currently employed were one of the designated target groups. The program was to provide training in marketable skills to persons who were not accommodated within the regular school system. A recent evaluation of the Skills 2000 Program revealed that the program has not had its expected results whereby the link has not been sufficiently well established between the skills training of the established economic projects and poverty eradication (29).

The beneficiaries from the rural area commented on the unequal value of the food stamps whereby some beneficiaries receive a smaller value of food stamps compared to other beneficiaries. This has led to an unsatisfactory feeling especially among the beneficiaries living within the same communities. The beneficiaries indicated that everyone should receive the same
value of food stamps. However, the government developed different denominations of food stamps for different categories grouped according to their situation.

5.1.5 Policy implications

During the focus group sessions the beneficiaries and personnel discussed ideas and strategies to improve the food stamp program and should be given serious consideration as part of the revised policy implications for the program. Their ideas and strategies are listed and discussed from (a) to (d). Other policy recommendations are also discussed from (e) to (i).

(a) The monetary value of the food stamps should be increased especially for the vulnerable groups namely the pregnant and lactating mothers, malnourished children, and the elderly and disabled poor since they are more in need of the program. By increasing the value of the food stamps it can last for a longer period and purchase more food items in addition to compensating those who have to travel long distances to the pay stations to collect their food stamps. Not only would the increase in the value of the food stamps be achieving the above, but it would also be moving towards the program objective of maintaining the nutritional status of the target groups to some minimal acceptable level by helping in the purchasing and consumption of food.

(b) Accommodating those really in need of the program such as the elderly and disabled poor, and malnourished children. This would be better targeting the program as mentioned by the urban beneficiaries.

The personnel from the urban area also had similar views on how to accommodate those really in need of the program:

The beneficiaries who are ‘not really in need’ or the ‘able-bodied individuals’ should be taken off the program and be trained in a skill to be employable. At the same time this would increase their self-esteem and they would ‘feel better’ about themselves. By taking off the ‘able-bodied’ beneficiaries and training them this would make room for those really in need of program. Also those beneficiaries who are working should also be taken off the program. However, even those who are working for a salary it is sometimes not enough for them to buy the basic food items so they would still need to depend on the program to help them out in purchasing food. This is where the importance of re-certification for the food stamp program is important.

(c) Creating training programs for the young and ‘able-bodied’ beneficiaries to learn an employable skill. The younger beneficiaries indicated that this would be better for their self-esteem instead of having to collect food stamps as a handout.
For recommendation (c), comments were mentioned by the beneficiaries from the urban area regarding inclusion of those really in need of the food stamp program:

The government should develop a program for us young people to provide us with employment to earn a salary. This would be better for our self-esteem instead of having to collect only food stamps as a handout. By earning a salary this would make us feel more financially strong and we would feel better since we can put the salary to different uses instead of being restricted to obtaining food stamp items. By providing employment for us young people the government can then put more elderly persons and the disabled poor on the program.

The above comments indicate that the young beneficiaries are not very interested in handouts as part of the strategies of poverty alleviation. As the SLC 1998 (17) suggested, poverty alleviation programs should be geared towards improving people’s productive and capable capacities such as the recently implemented Skills 2000 government program. However, a recent evaluation of the Skills 2000 program indicated that the program did not have its expected outcome (29).

(d) Dispatching mobile van(s) to rural areas in order to distribute the food stamps. The personnel from the rural area indicated that having a mobile van to go out into the remote areas to pay the beneficiaries instead of having them to come to the pay stations would be helpful in terms of compensating those for the high transportation costs.

(e) To complement the recommendations that the value of the food stamps should be increased and to ensure that the stamps are used for their intended purposes, both the food stores and beneficiaries should be informed on the type of items that can be purchased by the food stamps.

(f) Develop a systematic and uniform monitoring system for the program and to investigate beneficiaries who no longer qualify for the food stamp program.

(g) Have regular and published evaluations of the program. It is important to document both the weaknesses and strengths of the program so that lessons can be learnt, improvements acted upon, and successes replicated elsewhere in other food stamp programs.

(h) Develop clear, realistic and measurable objectives for the program.

(i) Target the program specifically to poor vulnerable groups such as poor pregnant mothers, elderly and disabled poor, and malnourished children. If the program includes otherwise young healthy persons it may serve as a deterrent to behavior such
as dependence and avoidance of better paying jobs which can negatively affect the country’s productivity growth.

5.2 School Feeding Programs

5.2.1 Significance of the School Feeding Programs

The school feeding program beneficiaries and the teachers of the two national school feeding programs who participated in the focus group sessions all expressed satisfaction with the programs. The Nutri-bun participants indicated that the program supports the poor whereby they can still afford to buy a bun and milk and found this to be very beneficial for them. They also mentioned that it is one way for them to obtain food besides being fully dependent on home to bring a snack to school and felt that it is one way to help them to meet their daily nutritional requirements. The teachers who administer this feeding program indicated that the participants look forward to the program and it has helped to increase school attendance. They also noticed better concentration in class among the children who participate in the program.

Below are some comments from the Nutri-bun participants on the significance of the Nutri-Bun Program:

It is important to have this type of program in schools since not all parents can afford to give their children money everyday to buy box lunches. When I was in a lower grade my mother could not afford to give me money everyday to buy lunch and I was able to buy the Nutri-bun at a reduced cost and have it for lunch. Afterwards, I felt good and was able to concentrate better in class.

The Nutri-buns gives us energy and nutrients for a low price and we are able to do our schoolwork in class.

There are some of us who cannot afford to buy the Nutri-buns and the teacher would give us the bun. So if the program was to stop we would not have anything to eat.

Some of our parents can only afford to give us money for bus-fare to and from school and to buy the Nutri-bun.

The participants of the Traditional Cooked Lunch Program stated that the program provides them with a hot and nutritious meal during the school day. By having this program it has helped them from buying “jazz” or dry food (snack food such as chips and biscuits) from street vendors outside the school compound. The cooked lunch participants indicated that the ‘jazz’ is often not economical nor nutritious when compared to the cooked lunch program, and it often does not stop their hunger pains. Also the program offers a variety of nutritious and cooked meals unlike the dry food. Both the participants and the teachers expressed the view that it is especially beneficial to those children who come to school without getting breakfast. By having this program those children have a chance to consume a hot meal, which provides them with
energy to better concentrate and work in class. The teachers further indicated that the lunch may be the children’s only chance for a cooked and hot meal for the day. They also said that the cooked lunches are healthy for the children since they are prepared under good sanitary conditions and are nutritious compared to the lunches bought from the street vendors. The program has also helped to increase school attendance.

Below are comments from the participants and teachers of the Traditional Cooked Lunch Program:

Participants:

The program is nutritious and it provides us with a hot meal for the day.

It helps us to learn by giving us strength and energy to do our schoolwork.

It helps us to save money since buying lunch outside of the school is more expensive and not as nutritious.

Sometimes we come to school without getting breakfast and “gas” builds up in our stomachs and when we buy “jazz” (dry food) sold by the street vendors outside the school compound it does not help to get rid of the gas. But when we buy the cooked lunch it helps to get rid of the gas.

The “jazz” does not satisfy us during the day like the cooked lunch.

When we get tired of buying “jazz” there is nothing else to buy therefore, it is better if the school provides cooked lunches because there is more variety and the lunches are more healthy and nutritious.

Principal (Drapers-All-Age School, Portland)

It is a good and nutritious program because some of the children are not able to have a proper meal at home or they come to school without getting breakfast, and so the program can provide them with a proper hot meal. This may be their only cooked meal for the day. By having a meal they are better equipped to learn in the classroom because if they do not get something to eat before starting their class their attention span is low and they do not learn. Also the school lunches are prepared under good sanitary conditions compared to the lunches sold by the street vendors.

5.2.2 Utilization and access to the School Feeding Programs

Table 2 illustrates the comparison on utilization of the two school-feeding programs. There is a disparity in the utilization rates between the two school feeding programs suggesting that cost is a main factor which influences access to the programs. Logical problems in the
operation of the cooked lunch program were also identified as influencing the utilization rate for this type of program in both the rural and urban schools.

According to the teachers who administer the programs the utilization rate for the Nutri-bun program varied between 25% to 30% in the urban school and 50% to 65% in the rural school. Motivation of the teachers to influence the children to participate in the Nutri-bun program was an identified factor for participation in this particular rural school which was interviewed. However, for the Traditional Cooked Lunch Program the utilization rate varied between 20% to 30%, which was basically the same for both the urban and rural schools. The teachers from the rural and urban schools indicated that approximately 70 to 80% of the children do not participate in the lunch program because they simply cannot afford the cooked lunches and they either go home or bring their lunches. This clearly indicates that cost is a main factor which influences utilization and access to the two types of school feeding programs. Also logical problems in the operation of the cooked lunch program is another factor which is discussed below in more detail. Walker et al. (30) sheds light on plausible factors not mentioned in the focus groups for the low overall utilization rate in both the school feeding programs in the urban area of Jamaica. These factors are greater accessibility to street vendors and shops playing a role in low utilization rates for both the Nutri-bun and cooked lunch program.

Table 2. Comparison of utilization on the two types of school feeding programs

<table>
<thead>
<tr>
<th>Nutr-Bun and Milk/Drink Program</th>
<th>Traditional Cooked Lunch Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher participation rate in the rural school compared to the urban school</td>
<td>Low participation rate in both the urban and rural schools</td>
</tr>
<tr>
<td>- rural school: 50-65%</td>
<td>- 20-30% student population</td>
</tr>
<tr>
<td>- urban school: 25-30%</td>
<td>in both rural and urban schools</td>
</tr>
<tr>
<td>More younger children participate in the program</td>
<td>Reasons for the low participation rate:</td>
</tr>
<tr>
<td>More low-income children participate regularly</td>
<td>- most children cannot afford the cooked lunches</td>
</tr>
<tr>
<td>Reasons for differential participation rate between the two schools:</td>
<td>- lateness of the lunches in the urban school</td>
</tr>
<tr>
<td>- the motivation of the teachers play an influential role in the children’s participation at the rural school</td>
<td>- poor preparation of the lunches in the rural school</td>
</tr>
<tr>
<td>Cost = J$2 per bun and milk</td>
<td>Cost = J$20-60 per lunch (varies according to age and grade)</td>
</tr>
</tbody>
</table>
When comparing the focus groups’ mentioned utilization rates to the SLC, 1998 (17) higher participation rates of 42-55% for the urban schools, and almost 59% in the rural schools were reported in the survey. However, as indicated in the survey their estimation cannot be considered as very accurate since the respondents in the survey were unsure of the type of school feeding program to which the children within their households utilized, especially regarding the cooked lunch program. In addition, the survey reported data which included participation in other supplementary school feeding initiatives and therefore is not solely representative of participation in the two national school feeding programs (17).

When comparing the Jamaican two national school feeding programs (the Nutri-Bun and Milk/Drink Program and the Traditional Cooked Lunch Program) to the United States national school feeding programs (National School Lunch and Breakfast Programs), the former suggests that cost is a main factor which influences utilization and access to the programs, whereas types of meals offered and the children’s predisposition towards dietary intake influence participation in the US programs.

The children who want to participate in the Nutri-Bun and Milk/Drink Program have access to the snacks. However, for the Traditional Cooked Lunch Program cost is a main inhibiting factor for access to food due to the higher price to purchase a cooked lunch. Both the school lunch participants and the teachers admitted that the price for the cooked lunches is an inhibiting factor in access to this school lunch program. The principal from the rural school indicated that there is no policy stipulating the percentage of lunches that can be distributed ‘free’ to school children who cannot afford to purchase a cooked lunch. This is unlike the Nutri-Bun and Milk/Drink Program whereby 10% of the snacks distributed to a school can be provided free of charge to those children who cannot afford to buy a bun and milk. The principal further indicated that the lunch program at this rural school distributes in-kind lunches to a few students who are really in need of a meal, but the school simply cannot afford to provide lunches to all those in need. Factors identified in preventing the program from providing free lunches to all those in need were:

- Small grants from the MOE for purchasing the perishables such as protein foods (meats) and vegetables.
- The limited supplies that are delivered.

A major finding from the qualitative inquiry using focus group interviews indicated that the cost of a school meal whether a cooked lunch or a bun and milk determines access and utilization for the type of school feeding program. There is a lower overall utilization rate of the cooked lunch program compared to the Nutri-bun program. The significant deterrent being the high cost for a box of cooked lunch causing a majority of the low-income student population in both the rural and urban areas not to utilize the program. The cost of a bun and ½ pint (284 ml) of milk/drink regardless of age is J$2 (USD $0.05), whereas the cost for a box or plate of cooked lunch varies according to age and grade of the child ranging between J$20-$60 (USD $0.53 -
$1.58). When one looks at the factor difference in cost between the Nutri-bun and cooked lunch programs, the cost for a cooked lunch is 10-30 times more than that for a Nutri-bun and drink. Although the cooked lunch has a higher nutritional value it is simply not affordable causing those in need not to utilize and benefit from this type of program. The drastic difference in cost for a snack or meal between the two programs underlies the disparity in access to food, consequently it affects the utilization of the respective programs.

This was the same finding relating to the price differential and its effects on segregation in participation between these two school feeding programs in Jamaica from the study conducted by Walker et al. (30) and from an article written by Campbell (31) on an update of school feeding initiatives in the Caribbean Region. Findings from Walker et al. study (30) indicated that meal cost prevented the neediest children from obtaining a school lunch and they participated more in the Nutri-bun program, while those children who had more money to bring to school utilized the cooked lunch program. Compared to a developed country, participation in the National School Lunch Program in the USA was inversely associated to meal price and price has been reported to be the most important predictor of participation (32-35). Other studies in the literature also suggested that raising the student meal price would decrease participation (36).

Logistical problems in the operation of the cooked lunch program were also identified as influencing the utilization rate in both the rural and urban schools. The problems identified were the punctuality and adequate time to consume the lunches as mentioned by the school lunch participants from the urban school. The preparation of the lunches in terms of not being adequately cooked was mentioned by the participants from the rural school.

Typical comments from the cooked lunch program participants on the identified problems in the operation of the program:

Urban school cooked lunch participants:

The cooked lunch runs out even though we place our orders in the morning and have to end up buying dry food and it is not good for our stomachs. What happens is that sometimes they cook too much and the food goes to waste and other times when the food is in demand there is none. Then they tell us that when the lunches run out it is not directly their fault.

The lunch is coming late for the Grade 9 students (14 year olds). There is no good coordination for the higher grades to get their lunch as in a timely manner and without class time clashes, because when the lunches do come to the classroom the class may be in session and the teacher does not allow those students who signed up to participate in the lunch program to have their lunch at this time.

Rural school cooked lunch participants:
Sometimes we do not like how the meat tastes because it sometimes tastes salty.

Or sometimes the meat is not properly cooked especially when it is fried because when we open it we see blood.

Sometimes the rice is not well cooked.

Some children in both the rural and urban schools would utilize the Nutri-bun program by buying more than one bun to take home and share with their family. Also some of the younger beneficiaries from the cooked lunch program would take home part of their lunches to share with their siblings due to the large portion sizes.

5.2.3 Availability of the Subsistence Offered in the School Feeding Programs

There are sometimes inconsistencies in the availability of the food offered by the two types of school feeding programs. The Nutri-bun participants from the rural and urban schools indicated that the buns and milk sometimes are not always available. The problems identified were:

- The delivery truck sometimes does not come;
- There are inadequate quantities of milk to buns;
- The milk sometimes curdles.

On the other hand, many problems were mentioned by the school lunch participants about the availability of the food supplies to provide on-time access to the school lunch program. Issues mentioned were:

- The teachers from the rural school indicated that the supplies for the cooked lunch program are often delivered one to two months after the beginning of the school term causing those school lunch participants to depend on ‘jazz’ or snack food. When the lunches are available and the children participate in the program the teachers notice better attention span and response in class. One teacher further indicated that if feeding for education then the program has to start at the beginning of the school term so the children could benefit from both the feeding program and education at the same time;

- The supplies are also never adequate to last throughout each school term;

- The older school lunch participants from the urban school expressed many issues about the unavailability of the cooked lunches especially for their classes.
Issues mentioned were:

- The lunches are often late and when they are delivered the class may be in session and the teacher does not allow these children who paid for their lunches to consume them;

- Or sometimes the lunches run out before the older participants can obtain their lunches causing them to buy snack food (chips and biscuits).

Comparing to Walker et al (30) study there were similar findings regarding the inconsistencies in the availability of the food supplies especially for the cooked lunch program causing many students to select obtaining food from elsewhere.

5.2.4 Adequacy of the Subsistence Offered by the School Feeding Programs

Many of the older participants in both school feeding programs complained that their portion sizes are often not satisfying to sustain them throughout the school day whereas the younger participants indicated that their portions are often more than adequate for them.

Mentions by the older children in the focus groups consuming either a bun and milk or a box of cooked lunch were often inadequate and did not provide satiety. This is understandable since the adequacy of food is a dependent factor on age, gender, body size and physical activity of the children who participate in either school-feeding program. This relates to the fact that children of this age group are constantly growing and their nutritional needs increase.

5.2.5 Problems and Improvements of the School Feeding Programs

Despite the significance and strengths of the school-feeding program mentioned by the program participants and the teachers in the focus groups, they discussed problems associated with the feeding programs and ideas for improvement. They further stressed that even though they are given the opportunity to mention some of the weak aspects they are still very grateful for the feeding programs.

Of interest, one common suggestion for improvement from both the rural and urban school feeding participants and teachers of the cooked lunch program is to implement a breakfast program since some of the children come to school without getting breakfast at home. The principal of the rural school, Drapers All-Age School in Portland, pointed out that they had independently started a breakfast program and found the children were performing better in class. They had served cornmeal porridge, bread and butter in the breakfast program. However, the school had to end the program due to inadequate finances. The two rural schools interviewed had independently implemented breakfast programs but had to discontinue them due to
insufficient funds. This is an indication that the teachers are aware that at least some of the children are going to school without getting breakfast at home.

The problems and improvements for the two types of the school feeding programs discussed in the focus groups sessions are listed in Table 3. Some of the problems and improvements for the Nutri-Bun and Milk/Drink Program were similar between the participants and teachers from both the rural and urban schools and are combined together below.

Table 3. Problems and Improvements of the Nutri-Bun and Milk/Drink Program

<table>
<thead>
<tr>
<th>Problems</th>
<th>Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor shelf life of the milk, causing it to curdle frequently</td>
<td>Better quality control in the production of the buns</td>
</tr>
<tr>
<td></td>
<td>- improve the shelf life of the buns</td>
</tr>
<tr>
<td></td>
<td>- decrease the sweetness in the buns</td>
</tr>
<tr>
<td>Lack in variety in the different milk flavours offered</td>
<td>旋转六（6）种不同口味的面包和饮料在兑换的基础上</td>
</tr>
<tr>
<td></td>
<td>Increase the variety in the drinks distributed such as the production of</td>
</tr>
<tr>
<td></td>
<td>natural fruit juices from the seasonal fruits grown in Jamaica (eg: pineapple,</td>
</tr>
<tr>
<td></td>
<td>mango, watermelon)</td>
</tr>
<tr>
<td>The program participants receive the liquid milk in plastic bags and</td>
<td>Improve the shelf life of the milk by better pasteurization process</td>
</tr>
<tr>
<td>have to drink from the bags and this can be quite messy and degrading</td>
<td>and invest in delivery trunks equipped with coolers to transport the milk</td>
</tr>
<tr>
<td>for the children</td>
<td>and fruit juices</td>
</tr>
<tr>
<td>Lack in variety of the bun</td>
<td>The schools to provide proper storage for the milk and fruit juices</td>
</tr>
<tr>
<td>The buns are small in size</td>
<td>- the urban school indicated that it can partially subsidize this effort</td>
</tr>
<tr>
<td>Poor shelf life of the buns</td>
<td>Provision of straws for the children to properly consume the drinks</td>
</tr>
<tr>
<td>The buns are often sweet in taste</td>
<td>- this can be partially subsidized by the schools or incorporated into the</td>
</tr>
<tr>
<td></td>
<td>cost of the bun and drink</td>
</tr>
<tr>
<td>No individual packaging of the buns and the beneficiaries have to receive</td>
<td>Single packaging of the buns as suggested by the teachers who administer the</td>
</tr>
<tr>
<td>the buns with their ‘bare’ hands</td>
<td>programs but they further indicated that this may not be cost-effective for</td>
</tr>
<tr>
<td></td>
<td>the government</td>
</tr>
<tr>
<td></td>
<td>- the teachers suggested that the children should make cloth bags in their</td>
</tr>
<tr>
<td></td>
<td>home economics classes, and these can be used to receive the buns and then</td>
</tr>
<tr>
<td></td>
<td>be recycled.</td>
</tr>
</tbody>
</table>


The teachers from the rural school, Drapers All-Age School in Portland offering the cooked lunch program were very vocal in discussing the problems and their recommendations for improving the program as listed in Table 4.

**Table 4. Problems and Improvements of the Traditional Cooked Lunch Program**

<table>
<thead>
<tr>
<th>Problems</th>
<th>Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mentioned by the Personnel:</strong></td>
<td><strong>Mentioned by the Personnel:</strong></td>
</tr>
<tr>
<td>The supplies from the Ministry of Education (MOE) often are delivered late</td>
<td>On-time deliveries of the supplies;</td>
</tr>
<tr>
<td>causing the program to start after the school term has already begun.</td>
<td>Increase the grant for the program;</td>
</tr>
<tr>
<td>This was the case for the rural school.</td>
<td>More quantity and better quality of the delivered supplies;</td>
</tr>
<tr>
<td>The children who fully depend on this type of program are seen not to</td>
<td>Proper equipment for better nutritious meals such as a stove with an oven to</td>
</tr>
<tr>
<td>perform well in class because of short attention spans.</td>
<td>decrease the frequency of frying;</td>
</tr>
<tr>
<td>As pointed out by the headmistress of the rural school, there is no policy</td>
<td>Implementation of a breakfast program since some of the children come to</td>
</tr>
<tr>
<td>by the MOE stipulating the percentage of free lunches that can be provided</td>
<td>school without getting breakfast.</td>
</tr>
<tr>
<td>to those children in need and who cannot afford the lunches, unlike the</td>
<td></td>
</tr>
<tr>
<td>Nutri-bun and Milk/Drink Program. The school can only afford to distribute</td>
<td></td>
</tr>
<tr>
<td>a few lunches to those children who are really in need of a meal and</td>
<td></td>
</tr>
<tr>
<td>cannot afford the cost;</td>
<td></td>
</tr>
<tr>
<td>No sustainability of the program until the end of each school term</td>
<td></td>
</tr>
<tr>
<td>due to the small quantity and poor quality of the delivered supplies.</td>
<td></td>
</tr>
<tr>
<td><strong>Mentioned by the participants:</strong></td>
<td></td>
</tr>
<tr>
<td>Poor preparation of the lunches</td>
<td></td>
</tr>
<tr>
<td>– the food is salty and is often under-cooked;</td>
<td></td>
</tr>
<tr>
<td>Little variety in the protein foods (meats);</td>
<td></td>
</tr>
<tr>
<td>The lunches for the older children in the urban school are often late or</td>
<td></td>
</tr>
<tr>
<td>finish before they can obtain their portion.</td>
<td></td>
</tr>
</tbody>
</table>
5.2.6 Policy Recommendations

School feeding programs are very important in meeting the nutritional and health needs of school-age children and can have repercussions on school performance which in turn can influence future economic developments. This age group (6-14 years) is the future and the window of opportunity for tomorrow and they have a human right to be given that opportunity to be able to grow and develop normally especially those who come from a socio-economic disadvantaged strata. Therefore, there should be more focus on school-age children in helping to meet their health and nutritional needs than is currently on-going. This type of program can also be used as a forum to meet the primary health needs of school-age children by being combined with other health interventions. The school feeding programs in Jamaica have come a long way since they were first implemented in 1926. Today, with minor modifications these programs can achieve and do much more for the school-age children. Policy options are discussed below that can be considered for modification and to help improve the school feeding programs in Jamaica.

(a) The Traditional Cooked Lunch Program should be considered to be eliminated for several reasons:

- The program is very costly to operate and it is not benefiting those in need and who are identified as the low-income school children;

- These low-income children cannot afford the high meal cost for a box or plate of cooked lunch on a regular basis;

- Inconsistent availability and inadequacy of the food supplies, and not starting at the very beginning of the school term;

- Daily on-site preparation of food is involved requiring staffing, equipment and quality control of meals;

- Expertise and management in food preparation at an institutional level is required. From the focus group discussions it became evident that the cooks seem to have poor knowledge in this aspect due to the problems experienced by the program participants;

- Risk of displacing family meal;

- Poor quality control of the meals judging from the problems mentioned by the participants;

- Other problems with the program as mentioned previously in Table 4 by the program participants and the teachers/personnel.
(b) Since the Nutri-bun is widely accepted, affordable for the low-income school children and the infrastructure is already in existence and with the two national production factories, the Nutrition Products Limited (NPL), it is more logical to modify and improve the Nutri-bun and Milk/Drink Program. Modifications including the improvements mentioned by the program participants and teachers are:

- Replace the milk with locally produced fruit juices. Though milk is nutritious and convenient it is expensive for the amount of calories and nutrients, perishable and is subject to contamination (37). Some of the schools interviewed were not equipped with refrigerators and incidentally the program participants did complain of the milk being spoiled. The focus groups had recommended the production of natural fruit juices from the seasonal fruits grown in Jamaica. For example, pineapple, mango, watermelon;

- Better quality control in the production of the Nutri-buns by:
  - Improve the shelf-life of the buns;
  - Reduce the sweetness added to the buns;

- Rotate the six (6) different types of buns on a cyclical basis;

- Single packaging of the buns or have the school children make cloth bags which would be recyclable. The children can make these bags in their home-economics classes;

- Provision of straws for the children to properly consume the drinks. This can be partially subsidized by the schools.

(c) To support and quantify the above conclusions on the two types of national school feeding programs in Jamaica, it would be necessary to conduct a cost effectiveness analysis to assess the costs relative to the impact on nutrition and education outcomes.

(d) The nutritional quality and quantity of the Nutri-bun should be assessed. They should provide at least one-third (1/3) of the recommended daily allowances for energy and protein for the targeted school-age children (37). Larger rations are recommended for older children particularly adolescents to compensate for their increased nutritional requirements. Table 5 lists the mean daily energy and protein requirements for school-age children.
Table 5. Mean Daily Energy and Protein Requirements

<table>
<thead>
<tr>
<th></th>
<th>Pre-Primary 3-5 years</th>
<th>Primary 6-12 years</th>
<th>Adolescent 11-14 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (kcal)</td>
<td>1700</td>
<td>1900</td>
<td>2350</td>
</tr>
<tr>
<td>Protein (grams)</td>
<td>32</td>
<td>40</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: Del Rosso (37).

(e) The Nutri-buns should be offered early in the school day or preferably before classes start since it was mentioned in the focus groups that many children come to school without getting breakfast at home.

Box 3. Importance of Breakfast among school-age children

- Breakfast is important to learning, memory and physical well-being.
- Children who skip breakfast are not as efficient in the selection of critical information for problem-solving, ability to recall, use newly-acquired information, or in verbal fluency as their peers who have had breakfast.
- School breakfast programs are beneficial to nutrient intake, school attendance and academic performance.
- School breakfast programs represent a public health intervention that promotes well-being of children and improves the efficiency of the educational system in developed and developing countries.

Source: Mathews (38).

(f) To develop or improve any existing monitoring system which is to monitor the program operation and processes. This in turn would be used to refine and optimize program delivery. Its purpose is not intended to assess impact of the program but to assess how consistently the program is operated relative to its design. The data gathered from the monitoring system can then be compiled to form a management information system (MIS) which can be utilized for continuous program refinement.

(g) To develop an evaluation system of the on-going school feeding program to assess the impact of the program on some aspect of the school children’s lives, for example, the nutritional status, or school performance. The purpose of this type of system is to explore what effects
have been achieved since its implementation. Evaluation of this type of program should be conducted once every few years instead of once every 10-12 years.

(h) These school-feeding programs should be combined with school-health interventions hence, amplifying their value and usage in terms of health, nutrition and education. Key interventions that have made a positive impact in other developing countries:

1) Micronutrient supplementation and fortification programs.

These programs are based on the premise that a large proportion of the children is deficient in certain micronutrients, especially iron, vitamin A and iodine. Rations that fill the actual micronutrient gaps in the diets of school-age children are higher in nutritional quality and can be expected to have greater impacts on learning (37). Distributing micronutrient supplements can be easily and inexpensively delivered in a school setting. However, fortification of school rations remains the best alternative to alleviating micronutrient deficiencies.

The Nutri-buns should be fortified with iron\(^8\) since there may be existence of iron deficiency anemia among school children in Jamaica as indicated by Morris (39). Table 6 lists the recommended mean daily intakes for Iron.

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Iron (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-primary (1-6 yrs)</td>
<td>10</td>
</tr>
<tr>
<td>Primary (7-10 yrs)</td>
<td>10</td>
</tr>
<tr>
<td>Adolescents</td>
<td>12 (boys: 11-14 yrs)</td>
</tr>
<tr>
<td></td>
<td>15 (girls: 11-14 yrs)</td>
</tr>
</tbody>
</table>

Source: Del Rosso (37).

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\(^8\) There is no indication from the recipes obtained from the Nutrition Products Limited (NPL) which produces the Nutri-buns that they were fortified.
Box 4. Interventions in Latin America and the Caribbean with micronutrient fortified rations

- Snack programs in the Dominican Republic and Chile offer an opportunity to fill the micronutrient gap through fortified rations.

- In the Dominican Republic the corn meal used in the production of the cookies and muffins for the school feeding program is fortified with 100% of the iron requirements for young children. All producers must purchase and use this corn meal in the production of the school ration.

- A case-control study on the impact of providing home-fortified cookies to school-age children in Chile demonstrated significant differences in hemoglobin concentrations. Higher concentrations of hemoglobin were found in children receiving fortified cookies than those who received unfortified cookies. The impact was most significant in adolescent children who have higher requirements for iron.

Source: Ranum (40) and Walter et al. (41).

2) School-based helminth control (deworming)

Intestinal helminthic infection (particularly hookworm, ascaris, and trichuris) are extremely prevalent in schoolchildren worldwide (42). Research in Jamaica and elsewhere indicates that deworming may help cognitive development and school performance at least among helminth-infected children (43). Treatment is inexpensive, safe, easy to deliver, and highly cost-effective (44,45).

Box 5. Examples of integrated approaches to school feeding programs

- Pilot studies in Indonesia demonstrated that combining deworming with the provision of food had an even greater impact on growth compared only to the provision of food.

- In the state of Gujarat, India primary school students participating in a school meal program were provided with treatment for intestinal parasites along with the meal. The evaluation of the study indicated a reduction in parasite infection from 71% to 40% with minimal additional costs since the school feeding program infrastructure was used for implementation.

Source: Satoto (46) and Gopaldas & Gujural (47).
3) Information, education, communication (IEC)

Basically providing information, educating and communicating to school-age children and their parents on specific nutrition and health issues and practices would be a critical element to school nutrition and health programs, including school feeding programs. For example, by promoting the understanding of the benefits of providing meals earlier in the day and encouraging the practices needed to realize early meal preparation. This approach will help change to more cost-effective programs. Furthermore, it may be possible to alleviate hunger in schoolchildren without formal feeding programs (37).

(i) To promote community participation and support. Parents, teachers and parent-teacher associations should be encouraged to play significant roles in school-feeding programs by either volunteering and or ultimately assuming some of the costs. Schools with community support have been more effective than schools with less support (37). A very good example comes from the school lunch program in Dominica as described below.

**Box 6. School Lunch Program in Dominica**

- Evolved from self-help initiatives which came from community interest and support and combined involvement from the government, non-governmental and private (eg: farmers) sectors.

- The self-help initiatives led to construction of kitchens in the schools to prepare the meals on-site, and the development of kitchen gardens for the provision of vegetables to be included in the meals. These initiatives proved very successful in improving the eating habits of not only the school-age children but their parents and the communities at large by adopting many of the menus and food preparation methods. The program also assisted in increasing school attendance and improving class attention spans.

- The integrated strategies ensured that the program was not just a school feeding project but included nutrition education and healthy lifestyle changes.

Source: Campbell (31).

(j) To target the feeding program to schools in low-income areas. These areas are more likely to have children who may be undernourished. Mechanisms that can be used to target the programs are:

- Use of poverty maps: A method by which programming is restricted to areas with a high probability of the poor. Targeting by geographic area is a common method used to target in school feeding programs (37);
- Socio-economics: economic or household income targeting;

- Nutritional status: target the school feeding programs according to nutritional status. This is usually linked to geographic targeting since where the poor exists, there is a high probability of undernutrition.

5.3 **Supplemental Feeding Program**

5.3.1 **Results**

The following are the findings from the malnutrition clinic visited.

There is no consistent supply of food items and a need for more funds to purchase the necessary food items for the beneficiaries. When the funding runs out, the Ministry of Health often has to rely on the Food for the Poor, a non-governmental organization, to provide food items for the program. Many of the caregivers depend on the program to help in providing the basic food items to feed the malnourished beneficiaries.

The method of distribution is not consistent. There is no regular delivery of the food items to the malnutrition clinic, hence the nutritionist in-charge has to go and collect the food items in bulk from the public health unit. This causes the clinic to start late and ultimately shortens the time the nutritionist can spend with each beneficiary. Also the beneficiaries and caregivers have to wait a very long time at the clinic before seeing the nutritionist.

5.3.2. **Policy Recommendations**

The policy recommendations stated below are in relation to the findings obtained.

(a) At first glance the obvious recommendation would be to increase the resources allocated to the program and to use some of the resources to correct the bottlenecks in the delivery of the program.

(b) To justify the need for the increase in resources for the program a formal evaluation is recommended to assess the program’s relevance, efficiency or cost effectiveness, impact and sustainability.

(c) To develop a monitoring system to monitor the program operation and processes. The information obtained should be used to refine and optimize the program delivery.
(d) The types of food offered in the program must be culturally acceptable, energy-dense and micronutrient-enriched.

(e) Using complementary strategies in conjunction to supplemental feeding should be considered since the latter does not offer complete prevention of malnutrition in isolation. The occurrence of malnutrition during this age interval of 6-24 months is due to many inter-linking causes such as the quality of food, child and health care the child receives, and protection from water and food related diseases especially diarrhea. Integrated health and nutrition programs in reducing malnutrition have been associated with greater positive impacts than if either program was implemented separately. Growth promotion and communication for behavior change are also essential complementary strategies to supplemental feeding.

(f) To achieve the intended outcome of improving the nutritional status of the targeted group it is important that both the supplemental feeding program and its complementary strategy are functioning effectively.
6. Conclusion

The national food security situation in Jamaica and particularly relating to the low income groups must be viewed in the context of the economy which in ten years of stabilization and structural adjustment has not demonstrated any drastic improvements. Despite inflation, trends have been gradually decreasing since 1995 from the high inflation period of 1991-1994. The cost of essential food items is relatively expensive especially for low-income groups. This can be illustrated from the fact that the minimum wage of J$800 at the end of 2nd quarter (August) of 1998 can only purchase 48.1% of the Least Cost Food Basket to feed a family of five (15). The high food prices would have a negative impact on the nutritional status of the poor. It rationalizes the need for national food and nutrition security programs targeting the poor. Not only does it emphasize the need for the national food security programs but monitoring and evaluation of these programs are especially essential to stakeholders on whether the intended outcome is achieved, and if not, what needs to be modified. Operating these types of programs is expensive, therefore it is important that those most in need have the opportunity to access and utilize these programs intended for them. In addition, inputs from those directly involved with the programs such as the beneficiaries and those who administer them are important in order to obtain a sense of whether the programs are being properly delivered.

Based on the qualitative inquiry and analyses of the national food and nutrition security programs in Jamaica, these programs are achieving their basic objectives by partially alleviating the effects of poverty by providing food assistance to the poor. However, whether they are achieving nutritional equity depends on the type of program.

The food stamp program in Jamaica is partially helping to alleviate poverty by providing a tangible means of obtaining food through direct income transfer. However, when looked under the lens of nutritional equity in terms of access to food, utilization and financing a minimum package of food, the program has failed in this regard. First and foremost, there is a non-sustained access to food due to the small income transfer or to the low value of the food stamps to obtain adequate food. This is to maintain an acceptable level of nutritional status of the targeted groups until the next pay cycle which is a supplementary goal. This was especially experienced among those who fully depend on the program such as the elderly and disabled poor, and malnourished children who basically have no other source to help in obtaining food as mentioned by the personnel. The non-sustained access to food was illustrated from the fact that the food stamps can only purchase a fraction of the minimum nutritional requirements between pay cycles ranging from 16.4% to 26.2% for a two months period using the costing of the Least Cost Food Basket. In other words, the value of the food stamps is too low to adequately finance a minimum nutritional package of food until the next pay cycle in two months. To support this finding, Castaneda, (22) noted that many food stamp programs in both developing and developed countries have protected the targeted but only partially due to the rapid erosion in stamp values
as they have not been adjusted for inflation and have been relatively ineffective in reducing malnutrition.

Secondly, the beneficiaries are not solely utilizing the food stamps for its intended purpose to purchase food. It was admitted in the focus groups and supported in the SLC, 1998 (17) that the beneficiaries do not solely use the food stamps for the intended purpose to help in obtaining food. Both the beneficiaries and especially the shopkeepers must be informed about the purpose of the food stamps and what they can purchase.

Although the two types of school feeding programs are helping to alleviate the effects of poverty by providing food in general, only the Nutri-Bun and Milk/Drink Program offers nutritional equity to the poor in terms of access, utilization and financing a minimal package of food whereby the bun and milk are still affordable to the low-income school children. Whereas, the Traditional Cooked Lunch Program does not offer nutritional equity. Of importance, meal cost is a main determining factor for access and utilization among the low-income children for this type of program. Also it does not support financing a minimal package of food to those in need since a majority of the low-income children simply cannot afford the high cost for a box of cooked lunch.

Further the MOE indicated that the school feeding programs are not targeted because it is thought that they are self-targeting and that children most in need would choose to access the programs (30). However, knowing the links between low social background and economic status to poor diet and school performance (48), children most in need were not able to access and utilize the cooked lunch program simply because of its unaffordable cost. Therefore, those most in need are not benefiting from the cooked lunch program unlike the ministry’s assumption that those in need would choose to access the program. This clearly indicates that meal cost for the cooked lunch program has to be decreased so that those most in need can benefit from it or entirely eliminate this type of program.

In addition, there are inconsistencies with the availability of the supplies for the cooked lunch program by never being available at the beginning of the school term and are never adequate to last the entire term. Also the older children complained that the portion sizes are inadequate and that the meals are sometimes too salty or not cooked to their liking. When compared to the Nutri-bun program, the cooked lunch program is simply not meeting its intention of benefiting the poor.

The Nutri-bun program on the other hand, is helping to alleviate the effects of poverty by being more accessible due to its low cost and is utilized more by the children of the lower socioeconomic strata especially in the rural area. The beneficiaries in the focus groups have also testified that this program supports the poor.
This study clearly points to the fact that meal cost plays a major role in determining access and utilization especially among the poor for the two types of school feeding programs. If meal cost is unaffordable so causing those in need not to access and utilize the programs, particularly for the cooked lunch, then there would be a very small positive impact, if any on school attendance, health and nutritional status of the intended beneficiaries or on their education, simply because the programs are not being beneficial. Comments from the focus groups indicated that proper nutrition and education are linked and without good nutrition one cannot gain from education.

Since only one malnutrition clinic was interviewed due to the time constraints and the rigid schedules of these clinics in the other parts of the island, valid conclusions cannot be made at this time. Caution should be exercised in generalizing these findings even though the funding constraints are similar in these types of clinics island-wide.

For the respective programs to have their intended outcome on their target population, improvements in their weaknesses should be made. Since low resources were a main problem in all the programs, it should be increased proportionally to the target population and in the context of the economy. Collaboration should be increased among governmental and non-governmental sectors and churches which have more interaction with the communities to help in the goal of alleviating the effects of poverty.

Overall, the national food and nutrition security programs in Jamaica are partially helping to alleviate the effects of poverty by providing food to the poor. However, whether they are achieving nutritional equity depends on the type of program and beneficiary. With slight modifications to the programs for improvement, effective management, regular monitoring and evaluation, political commitment and policies aimed at improving nutrition, the programs should achieve their intended outcome of healthy and nutritional well-being of those targeted.
Annex I. Costing to feed food stamp beneficiaries using the Least Cost Food Basket

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family of five</strong></td>
<td></td>
</tr>
<tr>
<td>For 1 week at 100% of the nutritional requirements</td>
<td>J$ 1733.26a</td>
</tr>
<tr>
<td>For 1 week at 33%b of the nutritional requirements</td>
<td>J$ 571.97</td>
</tr>
<tr>
<td><strong>One person within a family of fivec,d</strong></td>
<td></td>
</tr>
<tr>
<td>For 1 week at 33%b of the nutritional requirements</td>
<td>J$ 114.39</td>
</tr>
<tr>
<td>For 8 weeks at 33%b of the nutritional requirements</td>
<td>J$ 915.16</td>
</tr>
<tr>
<td><strong>Two persons within a family of fivee,f</strong></td>
<td></td>
</tr>
<tr>
<td>For 1 week at 33%b of the nutritional requirements</td>
<td>J$ 228.78</td>
</tr>
<tr>
<td>For 8 weeks at 33%b of the nutritional requirements</td>
<td>J$ 1830.24</td>
</tr>
</tbody>
</table>

b The minimum nutritional acceptable level is often assumed to be 1/3 or 33% of the nutritional requirements.
c Assuming that members of a family of five have the same nutritional requirements for simplicity in the calculations.
d Applicable to Food Stamp Groups: 1 (pregnant women), 2 (lactating women), 3 (malnourished children), 4 (elderly & disabled poor), 5 (single member households with income below J$7000 per annum).
e Length of period between pay cycles.
f Applicable to Food Stamp Groups 6 (single parent households with children with income below J$18,000 per annum), 7 kerosene oil subsidy (families of two or more members) previously on the kerosene oil subsidy.
Annex II. Calculates and compares the percentage points of the food stamps to supply the minimum nutritional requirements between pay cycles

<table>
<thead>
<tr>
<th>Food Stamp Categories</th>
<th>Percentage Points of the Food Stamps to supply the minimum nutritional requirements between pay cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single member groups:</td>
<td></td>
</tr>
<tr>
<td>Categories 1&amp;2: Pregnant Women/Lactating Mothers</td>
<td>J$ 210/915.16 = 22.9%</td>
</tr>
<tr>
<td>Category 3: Malnourished Child under 6 years</td>
<td>J$ 150/915.16 = 16.4%</td>
</tr>
<tr>
<td>Category 4: Elderly and Disabled Poor</td>
<td>J$ 240/915.16 = 26.2%</td>
</tr>
<tr>
<td>Category 5: Single member households</td>
<td>J$ 210/915.16 = 22.9%</td>
</tr>
</tbody>
</table>

At least two persons within the group:

- Categories 6 & 7: Single parent households with children/Kerosene Oil Subsidy

| |
|-----------------------|--------------------------------------------------------------------------------------------------|
| J$ 330/1830.24 = 18.0% |

** Information is plotted in Figure 5
***Refer to Box 1 for the grouping and monetary value of the food stamps received by the respective beneficiary categories
REFERENCES


