



Globalization Challenges to Family Nutrition in the Caribbean: The Way Forward

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Abstract

Good family nutrition is a major public health goal in the Caribbean but obesity is the dominant nutritional outcome in all age groups. Overweight / obesity prevalence in preschool children is up to 14%. For adolescents it is 30% and adults over 60%. Unfortunately, the region is far from where it needs to be in making major inroads into coping with this problem, particularly in children. Obesity reflects economically and culturally driven shifts in dietary practices towards over consumption of energy coupled with shifts towards lower levels of physical activity. Globalization tends to fuel these shifts. Because the causes are multi-factorial, the preventive intervention actions are not always clear cut. But we are not powerless in developing policies, strategies and activities that can make a substantial impact. This paper outlines some specific actions which can help stem the increase in obesity and improve family nutrition in the Caribbean.

Keywords

Caribbean, Family nutrition, Food safety & security, Globalization

Introduction

Globalization - the inexorable interconnectedness of people and nations through the massive spread of knowledge, technology and culture - has beneficial and harmful effects on health and nutrition. In the Caribbean, the agreements with the World Trade Organization at the global level; the Free Trade Area of the Americas at the hemispheric level and the Caribbean Single Market and Economy at the regional level are all expected to reform the economies in keeping with the imperatives of globalization. There is concern, however, that the Caribbean has entered these agreements at a time when their technological capacity and level of competitiveness cannot match the requirements of a fierce-trading globalized world. But apart from the direct commercial impact, globalization affects several spheres of social development including food and nutrition. This paper examines the past and present interactions between globalization and family nutrition. Family nutrition will be considered from 5 perspectives - young children, adolescents, adults and the cross cutting issues of food safety and food security.

Impact of Globalization on Nutrition

Young children

Despite dramatic declines in infant and child mortality and

morbidity in the Caribbean over the last several decades, the region now faces a startling setback - an enormous rise of childhood obesity. For the first time in human history, the world has more overweight than underweight people [1]. The decline in under-nutrition is notable with most Caribbean countries now having less than 4% children undernourished. The remarkable finding is the rapid increase in overweight and obesity where rates changed from 6% to 14% during the last decade [2]. Although the global prevalence of overweight amongst preschool children is estimated at about 5%, and the rate is declining in some countries [3,4], the data show that obesity in Caribbean children is much higher than the global average. Even more worrisome is the observation that the risk of adult obesity is several times greater in obese pre-school children than in non-obese pre-school children [5-7].

Several factors are believed to be contributing to this rise in childhood obesity and the main causes in youth are similar to those in adults. Family circumstances, particularly those of the mother, are central influences. Genetics may play a part in childhood obesity as children of overweight and obese parents are more likely to be overweight and obese [8]. While physiologic and genetic factors are important it has been noted that the behavior of the family is critical [9]. Parents and the child share the same environment, and parents often feed their children the same fattening foods that they eat and expose them to the same inactive lifestyle. These behavior patterns are strongly influenced by the globalization process mainly through food marketing, the built environment and new technology. Similar dietary behaviors are noted in the older age groups and the paper later outlines strategies to reduce the effect of these adverse behaviors.

The evidence is clear that breastfeeding protects against childhood overweight and obesity [10,11]. However, trade agreements can be used to deter the development and enforcement of national infant feeding policies which cover exclusive breast feeding, indigenous complementary foods and the labeling of infant foods and food safety standards. With globalization one can easily see how the code on marketing breast milk substitutes can be manipulated and interpreted as a restriction on the rights of formula manufacturers to compete freely in the market place. The relevant clause in agreements refers to "trading in like products" [12]. Breast milk cannot and should not be compared with infant formula as a "like product" hence any such interpretation of the WTO agreement cannot and should not stand.

In the workplace the chief reason why breastfeeding mothers

are not adequately protected by employers is because of the need to maximize the time at work in productive activity. Managers are ever so aware of the fierce economic competition in the marketplace and ultimately, therefore, profits come before people. And this will increase as globalization intensifies. It is unfortunate that the protective effect of exclusive breastfeeding on infant health is greatest during the precise period when women are most likely to abandon this behavior. The characteristics of globalization impose a special responsibility on all in the Caribbean to safeguard breastfeeding and the wellbeing of women. This can be done by assuring access to a safe and adequate food supply throughout the life cycle and the provision of adequate time, space, and social, cultural and economic support to women and their families.

Adolescents

Adolescents in the Caribbean have to navigate through the challenges of unwanted pregnancies, crime and violence, sexually transmitted infections and substance abuse. But the main nutrition challenges are unhealthy eating, lack of exercise, obesity, anemia and eating disorders. Low income and poor education contribute disproportionately to the risk of these conditions and globalization factors influence much of adolescent nutrition.

Research in the Caribbean shows that in early adolescence there is a high prevalence of overweight and obesity of 27% among boys and 33% for girls [2]. Teenagers both male and female are quite sensitive about the way they look and worry about their development and their weight. Many have taken steps to lose or gain weight using various methods. Anemia is another major nutritional problem for adolescents in the Caribbean because of its negative effects on their cognitive development and growth. Teenage pregnancy is relatively high in this region so anemia in adolescents can not only increase maternal mortality but also increase the incidence of poor birth outcomes such as low birth weight and prematurity. And anemia in pregnancy may negatively impact infant iron status [2].

During adolescence and youth, health promoting or compromising behaviors are learned and reinforced. These behaviors not only impact young people's present health but also their health into adulthood. To address these challenges the region needs to promote and secure the development of enabling environments and the implementation of effective, comprehensive, sustainable and evidence-informed policies on adolescent and youth health. But globalization often penetrates these very environments in a negative way through fast foods, automobiles, television, among others [13].

The general need is to invest in protective factors at the individual, family, peer, school and community level to maintain and promote good health in this age group and prevent risk factors. The specific need is to promote healthy eating, exercise, positive peer group activities and norms, and to integrate health and education through health promoting schools and promoting healthy families as a protective factor for adolescents. Instilling positive habits of good nutrition, health and lifestyle can reverse this trend of adverse nutritional outcomes in adolescents.

There should be clear policies to support healthy diet and lifestyle choices developed by school management teams. These policies should be supplemented by principles, concepts and skills training about healthy eating and regular physical exercise made mandatory in all levels of school, from pre-school to tertiary institutions. Further, nutrition education and physical activity must be incorporated into a healthy lifestyle programme in schools.

Community action is critical to reinforce actions in schools to control obesity. The community has formal institutions such as church; town hall and school, where families live and whose values are rooted in shared history. This setting is the bedrock from which individual initiatives can be spawned to improve dietary and other lifestyle habits. For example, through organized individual and group action the community can provide excellent reinforcing environments to support the activities in schools detailed above.

Childhood and adolescent obesity must be tackled from within families, communities and the general public. Many people in the Caribbean are not convinced of the lifestyle behaviours that can increase the risk of such devastating diseases as diabetes, high blood pressure, heart attack, stroke and cancer. The need is to inform and encourage the entire population to eat healthily and regularly engage in physical activities to improve their chances of a healthier life.

Adults

Many of the nutrition challenges in early childhood and adolescence are expressed forcefully in adulthood. More than 60% of the adult Caribbean population is overweight, and obesity is now the region's most important underlying cause of death [2].

There is a difference in obesity prevalence rates by age and gender and this has clear implications for intervention strategies, however, it is the high prevalence of adult obesity in both males and females that is of major concern. The predominant driving force for obesity is the pattern of food consumption.

The excess availability of calories which was critical for the rapid decline in under-nutrition, also contributed to the indiscriminate consumption of high-energy foods in large sections of the Caribbean population. Two major contributors to this over supply of calories are fats and sugars [2] for fats the region now has available more than 160% of average requirement for good health. For sugars, the excess is 250%. Both global and local forces drive these excesses in fat and sugar consumption. It is noted that although the WHO's global strategy on diet, physical activity and health was adopted [14] compromises on the limits of sugar, salt and fats had to be made [15]. So this is not just a public health issue, the economic and political ramifications are profound [16,17].

The discussion on globalization in the Caribbean in relation to food and agriculture has focused largely on the impact of WTO agreements on the sustainability of the banana, sugar and rice industries. Insufficient attention has been given to the relationship between globalization and the distribution, marketing and consumption of food within the context of obesity and its comorbidities. It is here that the nexus between diet and globalization occurs. It is here the global impact on local availability, affordability and consumption is felt.

Globalization has led to the transformation of the food markets through the rapid growth of processed foods, often expensive, at the expense of unprocessed foods and basic commodities. Multinational companies have established foreign presence to harness the potential of a huge market. Globalization gives these companies a powerful means to promote consumption of foods and drinks that replace healthier traditional food choices [1]. The savings in preparation time, the convenience and sometimes the value for money of street and fast foods are other important reasons for the rapid changes in diet. This is reflected in the phenomenon of fast food domination of the world eating patterns. In the Caribbean we have quickly imbibed the fast food culture in this global process and our eating habits and dietary intakes are changing rapidly from traditional diets rich in fiber to substantial increases in the intakes of fats, refined sugars and salt. This unbalanced nutrition had fueled an obesity tsunami in the region and extols significant societal and personal costs in the form of increased risk of disease and death and health care costs.

The individual, environmental and social determinants of obesity are therefore embedded within the political, cultural and economic realities of a global environment. The rise in obesity across the world is not merely coincidental with the rise in individual countries, rather there are cross country forces which create this global epidemic [1]. These global forces must be recognized if national policies are to succeed. The penetration of Western food systems, labor saving technological advances and consumer culture into societies has led to an obesogenic global environment.

Food safety

The liberalization of trade has led to the massive expansion in food distribution and this means that a greater probability exists for

unsafe food to reach the Caribbean. In recent years the world has increased its capacity to produce food however our capacity to ensure it is safe has lagged behind. Food safety concerns among consumers are high and consequently their confidence in the safety of foods is correspondingly low. Quality and food safety standards in the food sector are increasingly important components in the demand for, and consumption of, food. As a consequence food poisoning at a local food festival or convulsions resulting from unscrupulous peddling of harmful food supplements are images that cannot be allowed to be a regular part of the Caribbean consciousness.

Unsafe foods: The Caribbean region has long recognized that the solutions to addressing food safety issues lie with collaboration and interaction of many partners, particularly by those linked to food production, and all its variables inclusive of animal feeding practices, animal and plant husbandry, the use of antibiotics, pesticides and other chemicals, food preparation, storage, distribution and consumption while not overlooking the importance of the overall environment. But central to all the links from the farm to the table are the persons involved in the food chain, whether farmer, veterinarian, animal attendant, vegetable growers, livestock and crop producers, among others.

There is a clear need to enhance the capacity of policy makers and producers to comply with internationally accepted standards for production, marketing and trading of foods. In light of the current expansion in globalization with free trade and free markets for products there is a more urgent need for Caribbean countries to legislate, implement, monitor and regulate food labeling and marketing procedures.

An essential part of the farm-to-table continuum is the need for closer collaboration between the ministries of health and agriculture, among others. To ensure coherent enforcement of such legislation, all countries should consider the formation of a national food agency as an effective means to monitor compliance and serve as a conduit to exchange critical food-related information.

Coupled with the legislation there is further need for a consumer education program which is science-based, where product compliance and handling can foster the right climate by which policy makers, regulators, producers and consumers at the national level can become receptive and motivated towards the adoption of internationally accepted food safety concepts and standards.

Dietary supplements: The explosion of marketing and consumption of dietary supplements in the Caribbean present a major dilemma to family nutrition. How can the authorities ensure that the public is not being exposed to harmful substances? Views vary about what ignited this explosion. Some consumers believe the cost of traditional health care has risen to an extent that forces them to look for cheaper alternative remedies; some are persuaded that these products can solve almost every health or emotional problem; others believe the fear of invasive medical procedures lures the public to claims of cure with simple natural supplements they think have no side effects. But regardless of the origin, regulatory authorities are faced with many challenges in their quest to protect the public from questionable ingredients and misleading claims relating to these dietary supplements and unsafe products entering the marketplace. Many products escape being regulated because there are not enough specific product standards for dietary supplements. Further, some products are neither drug, food or dietary supplement hence it is difficult to regulate them.

Food security

Globalization has direct implications for food trade and national food policy in the region but it would be a mistake for Caribbean planners and policy-makers on food security to focus narrowly on increasing agricultural production and productivity alone. Globalization presents an opportunity for policy-makers to reassess the role of agriculture and its relationship to other sectors - health in particular.

Since WTO, regional and bilateral trade agreements give little or no consideration to food and nutrition but almost exclusively to establishing macroeconomic fundamentals as the main policy driver. Indeed, the “trickle down” dimension of this approach to development assumed that increased production and growth would lead to reduction in malnutrition and better health. Even the negotiations for agreements on agriculture policy give insufficient attention to nutrition and health. Writing about the USA a leading scholar there poignantly noted “As a nation, we must understand that farm policy is public health policy” and further “We need to transition from a cheap calorie farm policy to one that nourishes our children’s health. It’s going to take steps across the health system and at every level of government to not only bend the curve on the obesity epidemic, but to reverse it” [18,19]. The need to link agriculture and nutrition in the Caribbean represents a multidisciplinary challenge of no small magnitude and therefore requires a multi-disciplinary approach to find a solution.

These issues beg for a conceptualization of agriculture policy that combines food access and availability with nutritional and health considerations, and for forging links among agriculture, health and nutrition, trade and other sectors. These multi-sectoral interactions remain to be fully appreciated and exploited by regional policy makers. This is an urgent task in light of the globalization process that is expected to take deeper root as countries emerge from the recent economic downturn.

Caribbean countries are food import-dependent. Since 1971, the Caribbean region has been a net food importer, and currently spends well over \$US 4.5 billion annually on food imports to close the gap between food consumption and domestic food production (FAO, 2015). [Figure 1](#) shows that, with the exceptions of Guyana and Belize, CARICOM countries import in excess of 50 percent of their food and seven of the countries import over 80 percent of the food they consume.

These are incontestable reasons upon which to argue for a new paradigm in agriculture, building upon the production and sustainability orientation that already exists, but incorporating issues related to diets, health and nutrition. This new paradigm must begin with a fresh conceptualization of this multi-faceted problem.

The globalization of food trade presents challenges and opportunities for more healthy foods to be made available to the Caribbean family, if the appropriate policies are adapted. Needed is a systems approach which would clearly demonstrate that family health and nutrition issues cannot be mere appendages to agricultural policies but must be an integral part of policies and strategies of several sectors of the economy. In the past, the issues of family health status, food security, diets, and agricultural trade have been approached as originating from disparate, unrelated sectors of the economy. However, there are strong links between and among these sectors, and recognizing and acting upon them can contribute to the sustainability of development and to the enhancement of health status in the Caribbean.

The Challenges of Globalization on Nutrition

Young children

In this globalized environment the needs of mothers and children can easily be jeopardized and breastfeeding-friendly practices can be lost, while the commercialization of infant feeding practices through breast milk substitutes intensifies. The challenge is:

1. To ensure that the globalization process through trade agreements do not supersede the international code of marketing of breast milk substitutes.
2. To get businesses in both the public and private sector to provide adequate leave, safe working conditions before and after childbirth, freedom from discrimination and remove the mother’s fear of losing her job.

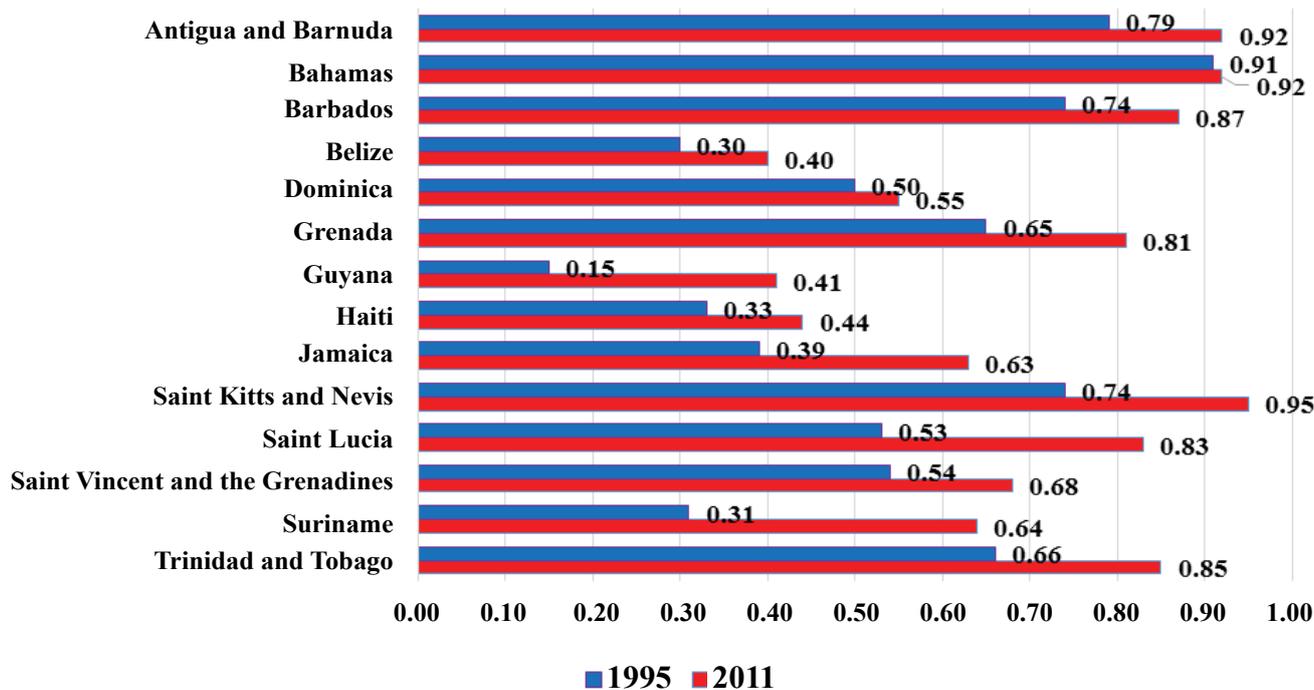


Figure 1: Food Dependency Ratio in CARICOM Countries, (1995 and 2011).
Source: FAO (2015)

Older children and adolescents

Some major nutritional challenges in the Caribbean emerging from globalization include:

1. Numerous television channels around the clock:- With the availability of cable television with programs from across the world, children can sit and watch cartoons all day, every day – not just on Saturday mornings as in the past. Obesogenic foods are incessantly advertised on these programs.
2. Vastly increased quantities and variety of energy dense foods available:- With unbridled expansion of food trade, there are a multitude of different candies and sweets, chocolates, cookies, cakes breakfast cereals available today.
3. Unrestricted marketing of energy-dense foods:- Many of these energy dense foods are marketed directly to children.
4. Widespread food purchasing opportunities:- Children can buy foods at all times during the school day from vendors at the gate or vending machines.
5. Expansion of fast food restaurants:- They are cheap, attractive and offer a wide variety of foods. Fast foods are marketed particularly to children.
6. Increased portion sizes:- As the price of food declines and there is increased competition portion sizes have increased.
7. Increased opportunity for eating:- Eating, often unhealthy eating, is the major part of celebration at almost every event for church, school, family of friends.
8. Replacement of water with soft drinks:- This includes sweetened juice drinks and syrups also marketed to children. They taste more exciting, and children more often choose them.

Adults

The solution to the nutrition problem in the Caribbean cannot be narrow and individualistic, as in the past. There is a clear need for multi-level and multi-sector strategies that can impact on the global and local forces. The challenge is:

1. To recognize that the traditional narrow approach of nutrition education alone, in the absence of cultural, economic and

environmental considerations, is likely to have limited impact on dietary behavior.

2. To formulate and implement public policies which will better support individual behavior change.
3. To overcome the World Trade Organization agreements that may limit the ability of governments to formulate these essential public policy responses to these changes in diet.

The following intervention options are therefore proposed to meet these nutrition challenges across all age groups:

- Develop regulatory guidelines for people in the food service sector taking into account nutritional considerations, e.g. legislation on nutritional labeling, code of advertising, healthy choices for fast food franchises.
- Strengthen regulatory bodies through training and monitoring the use of dietary guidelines in the food industry and trade.
- Require that calorie and fat content is prominent on marketed foods so that the public can make healthy substitutions.
- Require manufacturers to use national dietary guidelines on product packages.
- Set standards that restrict the promotion of foods high in sugar, refined starch and saturated fat and trans fat to children on television and elsewhere.
- Levy taxes on selected foods high in fat, sugar and calories.
- Create incentives that subsidize low calorie, nutritious foods.

Food safety

With the massive expansion of global food trade countries must be interdependent to protect our food supplies. There must be a concerted effort at all links in the food chain from global to national to the home. Because quality is related both to the production process as well as the final product it means that national authorities, farmers, processors, retailers, distributors, the catering sector and the consumers themselves must play critical roles. The challenge is:

1. To develop and maintain procedures, standards and legislation for food safety and nutrition labeling.

- To increase awareness of internationally accepted standards in the development, processing, manufacturing and marketing of foods and supplements.
- To strengthen capacity to promote food quality and safety and to develop and disseminate relevant resource materials regarding health claims of foods and supplement.

Increased information on the importance of food safety is helping consumers to be more selective of food products, but much more needs to be done to protect the Caribbean family. One of the most important protective aspects is that of food control management. This entails:

- Developing and implementing an integrated national food control strategy and operation inclusive of risk analysis principles.
- Setting regulations and standards based on sound science and in accordance with international recommendations.
- Enforcing food legislation policy including preventive approaches.

Food security

The spectre of agricultural growth in the absence of nutritional considerations continues to stare at the Caribbean people. The picture is frightening and costly because with the significant increase in food availability over the last few decades the people of this region have concomitantly experienced a massive increase in obesity and co-morbidities, the consequences of which overwhelm our health budgets and more importantly undermine our economic growth. The challenge is:

- To align food imports and local production policies, in the context of global trade, to the recommended population food goals.

Possible interventions:

- Review national food policies from a nutrition/health needs perspective and support the production of affordable complex carbohydrate foods.
 - Examine food availability imports and assist in the development and implementation of incentives to balance the importation and local production of high and low fat foods.
 - Promote the production, supply and consumption of legumes, ground provisions, fruits and vegetables and low fat foods to meet the recommended national dietary goals.
- To ensure that the private sector fully participates in the implementation of the dietary recommendations for the improvement of public health.

Possible Interventions:

- Create awareness among the private sector food trade groups (producers, importers, manufacturers, retailers and vendors) about the relationship between diet and nutrition-related chronic diseases and promote increased production of a wide variety of appealing low fat, high complex carbohydrate and high fiber foods.
- Train private sector entities in the conservation of nutrients in the manufacturing, processing and packaging of foods.
- Encourage food service establishments (hotels, restaurants, fast food outlets and vendors) to offer a variety of health-promoting foods.

Conclusion

Globalization has improved the quality of life for many people but it has also increased access to cheap, unhealthy foods and brought with it more sedentary, urban lifestyles. This paper shows through the examples of - young child nutrition, adolescents, adulthood, food safety and security that the need for economic gain attempts to put profits before people. It is argued here that the implementation of effective policies can ensure that benefits outweigh the losses resulting

from globalization and consequently the nutrition and health of Caribbean families will be significantly improved.

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