

Kelly Huan He  
A&M Consolidated High School  
College Station, Texas, USA  
Brazil, Dietary diseases/Malnutrition

### **Brazil: The balanced nutrition and educational program for a healthy and sustainable society**

With the rapid advancement of industrialization in recent years, feeding the world with a balanced diet is emerging as critically important to eradicating hunger. Over-nutrition and health problems associated with lack of proper physical activity are overwhelmingly concerning in many developing countries. Brazil is among many countries experiencing this problem. Brazil can combat over-nutrition by implementing strong policy and working with the private sector to make junk foods less attractive, educate on healthy lifestyles, and increase accessibility to healthy foods.

Brazil, geographically covering 47.3% of South America, is the fifth-largest country by area with 8.5 million square kilometers. It borders all other countries except Ecuador and Chile in South America with a long coastline by the Atlantic Ocean and contains the second largest river in the world. Its Amazon River Basin includes a vast tropical forest, home to diverse wildlife, a variety of ecological systems, and extensive natural resources spanning numerous protected habitats. The climate in Brazil is mainly tropical. This unique and enriched environmental heritage makes Brazil one of 17 megadiverse countries (Brazil Geography Introduction, 2010).

Brazil is the fifth most populous country with over 208 million people. A family in Brazil is typically three people. Most Brazilians live in Sao Paulo, Rio de Janeiro, or along the Atlantic Ocean. Most of Brazil is uninhabitable rainforest land. The country has an extremely diverse culture and rich history, and their diet draws influences from Africa, Asia, and Europe. Root vegetables like cassava are commonly used. Fruits like mangos, papayas, and acai grow well in the tropical climate and are used in cooking. Most dishes use rice or beans as staple. Common meats include beef and pork.

Brazil is considered an advanced emerging economy and a newly industrialized country. It has the ninth largest GDP in the world. Brazil is one of the world's major breadbaskets and is the largest producer of coffee for the last 150 years. Brazil has had recent successes in combating food insecurity and hunger. Brazil is the world's eighth largest energy consumer and tenth largest producer - with much of its energy coming from renewable sources, particularly hydroelectricity and ethanol (Brazil Perspective Energy, 2015). Brazil has a federal representative democratic republic, which is similar to the democratic system in the United States.

Brazil has seen great improvements in under-nutrition in the past couple of decades. In 2010, Brazil included the human right to food in its constitution, becoming one of only three countries to do so (FAO, 2010). Additionally, stunting rates fell from 19% in 1989 to 7% in 2007. Brazil's economic development and social mobilization have allowed improved conditions for many impoverished people. However, with the rapid development, not all changes have been positive or sustainable. Among the many problems facing Brazil, the paradox of poor people being over-nourished is a major concern. The current fight against hunger has changed. Only about 6.9% of Brazil's population is affected by hunger. Meanwhile, adult overweight and obesity rates are now at 56.5% and 22.1% respectively (WHO, 2016, World Population Review, 2019). About one in three children are overweight (Telegraph, 2015). The numbers are sharply rising. Brazilians of **all socioeconomic classes** are getting more access to unhealthier food. Overnutrition is no longer a disease only affecting the rich man, the world is now facing an emerging threat of over-nutrition impacting anyone. Currently, two-thirds of the obese population live in the developing countries (WHO, 2018). Across

the world, more people are now obese than underweight. People now have easy access to high calorie and poor nutrient foods.

Several factors escalate the problem of unbalanced nutrition. Many giant companies- such as Nestle, PepsiCo and McDonald's- that produce and sell highly sugary and processed foods, have been expanding their growth in developing countries due to recent slow growth in wealthy countries. As highly developed companies, they are able to produce and deliver processed foods with competitive prices to serve poorer communities in Latin America, Africa, and Asia (World Population Review, 2019). Companies use strong marketing strategies to make junk foods more accessible and attractive than fresh fruits and vegetables. Although the campaigns often claim to offer nutrition, health, and wellbeing to the remote communities, their products are mainly high calorie and low nutrient products, such as ice creams, candies, cookies, and burgers. As people move away from traditional livelihoods in farming to more sedentary ones in offices, the consumption of high calorie foods and lack of exercise increases the rate of over-nutrition.

The mission of feeding the world involves providing people access to nutritious goods. That is why combating over-nutrition needs to be an organized effort at a large scale that targets the whole population with active involvement of the Brazilian government. There are three sustainable, actionable, and impactful solutions that can combat over-nutrition.

1) Implementation of strong policies to tax junk food.

One cause for the increasing consumption of calorie dense foods is their cheap price and easy accessibility. If unhealthy foods become taxed and thus more expensive, people will be more interested in alternative healthy foods, such as locally produced fresh vegetables. The concept behind this is modeled off the tobacco tax, in which people tend to buy less of goods with higher prices. There has been historical proof that this strategy works. Denmark was the first country to implement a sugar tax on sugary drinks and sodas in 1930. Since then, places all around the world, from France to Mexico, have implemented a sugar tax. When Mexico put in place a 10% tax on sugary drinks in 2014, consumption was decreased by 12% in only one year (Colchero et. al, 2016). Brazil needs to implement strong policies on taxing sugary goods and highly processed or fried food.

2) Subsidies and implementation of educational campaigns on healthy foods.

The monetary benefits from the implementation of taxes on junk food could be used to subsidize farmers who produce, supply, or sell fresh fruits and vegetables. The reduced price for healthy food and low carb diet makes them more attractive to Brazilian people. Education is another key factor to encourage people to consume healthy food. Instead of fast food commercials, educational campaigns on healthy foods and living styles need to be enforced by the Brazilian government. All foods should be clearly labeled with calorie consumptions and health-related warning signs. Programs teaching people how to eat healthy should be implemented at schools and communities. In addition, the government should limit the advertisement of unhealthy foods. One of Nestle's largest markets for advertising is Brazil. If Brazilians are exposed to more educational advertisements on the negative impacts of high calorie products, then junk foods will lose their market. Chile in 2016 is a successful case study of how limiting marketing efforts by companies is impactful. In an effort to combat over-nutrition, Chile banned mascots from all product packaging and enforced food labeling with high calorie warning signs. Companies were also banned from advertising certain products between 6 am and 10 pm (Taillie et al., 2019). The country saw a substantial reduction in consuming high calorie foods and drinks due to this effort.

3) Improvement of infrastructure and education programs on physical exercise.

The Brazilian government should provide educational programs on the importance of exercise on physical health. Simply being active can lower the risk of heart disease, diabetes, high blood pressure

and certain cancers (Harvard Health Blog, 2019). However, children and young adolescents tend to spend more time with electronics rather than playing outside. A study showed that a major barrier for people without active exercise is the limited access to conditions and opportunities for physical activities. Therefore, the Brazilian government needs to improve infrastructure, such as building more parks, bike lanes, outdoor recreation and communal gardens. Communal gardens serve the citizens not only nutritious fresh produce but also the chance for outdoor activities and exercises. Brazil has an abundance of fertile soil that could be used for communicable gardens in every neighborhood.

Finally, in addition to a strong policy implementation and educational program, a robust and sustainable financial sponsoring chain is needed to support the above mentioned solutions. The followings are some avenues for financial support:

1) Foundational support from the taxes.

The extra tax money collected on sugary goods and commercials will provide essential support for the healthy life initiatives. This could be a significant source of income for the Brazilian government. For example, surveys reported that the government could generate \$14.9 billion in the first year if a sugar tax was in place in the US (Brownell et al., 2009).

2) Engagement of the private sector in health and education campaigns.

The world's largest food and beverage companies, such as Nestle and Pepsico, should be encouraged to join these health initiatives and pivot their business models. Parks, communal gardens and educational programs could be sponsored directly by these companies. For instance, in 2012 Brazil's National Health Regulatory Agency (Anvisa) hosted the "Lose Weight Brazil" anti-obesity exhibit to encourage exercise and ways to solve obesity mainly sponsored by Coca-Cola. Additionally, the negative impacts of consuming too much sugary and processed foods should be stated by the sponsor companies (New York Times, 2017). Big companies could shift the focus on direct selling of processed foods and sugary drinks, and instead transporting clean water, nutritious dairy products and fresh produce to regions with less accessibility. It would be profitable for businesses to pursue more health conscious business strategies. 90% of millennials say that they would switch to buying from a company that has social impact (CSIS, 2017).

3) Cost saving on health care.

Currently the Brazilian government spends \$270 million a year on healthcare expenses related to obesity (Griffiths, 2015). The Brazilian government can use these healthcare savings to support future healthy living programs.

Since 1975, the worldwide obesity rate has tripled (World Population Review). Brazil has transformed from an under-nourished country to an over-nourished country with a population experiencing obesity. This is largely attributed to the aggressive marketing of sugary foods and drinks, arrival of fast food restaurants, and less outdoor activities. The implementation of higher taxes on junk food, strong educational programs on healthy living styles, and improvement of infrastructure for physical activities are solutions to solve this pervasive problem. This will make the fertile and beautiful lands of Brazil a wealthy and healthy country.

## Work Cited

- Brazil Geography Introduction, 2010, <https://www.brazil.org.za/brazil-geography-into.html>
- Brazil Perspective Energy, 2015,  
[https://www.copenhagenconsensus.com/sites/default/files/brazil\\_seminar\\_resource\\_guide.pdf](https://www.copenhagenconsensus.com/sites/default/files/brazil_seminar_resource_guide.pdf)
- Brownell et al., 2009, The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages. *N Engl J Med.* 2009 Oct 15; 361(16): 1599–1605.
- Colchero, et al, 2016, Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study, *BMJ* 2016;352:h6704.
- CSIS (2017). What is Social Impact Anyways? Retrieved August 30, 2020, from <https://csis.upenn.edu/news/what-is-social-impact-anyways/>
- FAO, 2010, The right to food is now in the Constitution of Brazil,  
<http://www.fao.org/right-to-food/news/detail-events/en/c/157360/>
- Harvard Health Blog, 2019, Lifestyle changes to lower heart disease risk,  
<https://www.health.harvard.edu/blog/lifestyle-changes-to-lower-heart-disease-risk-2019110218125>
- New York Times, 2017, How big business got Brazil hooked on junk food?  
<https://www.nytimes.com/interactive/2017/09/16/health/brazil-obesity-nestle.html>
- Oliveira, M. L., Santos, L. M., & Silva, E. N. (2015). Direct Healthcare Cost of Obesity in Brazil: An Application of the Cost-of-Illness Method from the Perspective of the Public Health System in 2011. *Plos One*, 10(4). doi:10.1371/journal.pone.0121160
- Taillie et al., 2019, Governmental policies to reduce unhealthy food marketing to children, *Nutrition Reviews*, 77:787-816. <https://doi.org/10.1093/nutrit/nuz021>
- Telegraph, 2015, A third of children overweight when they leave primary school,  
<https://www.telegraph.co.uk/news/health/children/11961986/A-third-of-children-obese-when-they-leave-primary-school.html>
- WHO, 2016, Global Health Observatory (GHO) data,  
[https://www.who.int/gho/ncd/risk\\_factors/overweight/en/](https://www.who.int/gho/ncd/risk_factors/overweight/en/)
- WHO, 2018, Obesity and overweight,  
<https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
- World Population Review, 2019, Most Obese Countries 2019  
<http://worldpopulationreview.com/countries/most-obese-countries/>