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Mexico, Malnutrition

Healthy Food Provides Hope for Mexico's Malnutrition Issue

Mexico, a country known for its signature cuisine, faces grave problems with the traditional diet of its citizens.

Recently, I had the opportunity to go to Vicente Gurerro, Baja, Mexico on a mission trip. During this trip I worked with a team to build a house for a family in need. Baja is one of the poorest areas in Mexico. With me being in this area I was able to see firsthand the problems that citizens in this area face on a daily basis, some problems being things we would never even think about in the United States. As I researched Mexico I found that many of the statistics regarding poverty, access to water, sanitation, roads, and electricity did not line up with what I experienced in Baja. It is important to remember that Mexico is a country with a major wealth gap. This wealth gap is important to keep in mind when analyzing the problems that Mexico faces as it can lead to skewed data. Going to Baja opened my eyes to the struggles that families in Mexico face on a daily basis when it comes to sourcing a nutritious meal for their families.

Mexico is a country located in North America just south of the United States, with an economy that depends largely on tourism and agriculture. Mexico's population is 127,276,000 with 80.2% of its population being urban. (Willy)

Mexico has a total area of about 761,610 square miles (Willy). About 13% of the total land in Mexico is fit for cultivation. With that being said, only 1.4% of their total land is cultivated on a long-term basis ("Mexico geography"). The average farm size in Mexico varies greatly based on the location of the farms. Farms in northern Mexico, along the border, average 100 hectares and can be as large as 250 hectares. Farms that are further south in Mexico can be as small as 5 hectares (Burton). For context, The average farm in the United States is about 444 acres, when converted that's approximately 180 hectares ("Farming").

Mexico's culture is very family-oriented. The average household size is just under four people at 3.6 people ("Average household"). Traditionally in Mexico households would contain three generations of a family, the oldest set of parents (grandma and grandpa), then one of their children and their spouse (mom and dad) and finally their kids. However, as the data reflects

nowadays households contain less than four people, showing that families are going away from the more traditional, extended family way of living. They typically live in “hacienda” style homes with exposed beams, stucco walls, small windows, clay tile roofs, and round doorways (Medlock). The main staple items in a Mexican diet are corn, beans, and meat. Mexicans use tortillas and flatbread made from corn in almost every meal. They eat beans at all three meals and they consume chicken, beef, and seafood frequently. They also eat fruits and vegetables, but these are less prevalent in their diet (“Food”). Although many know and love Mexico for their world-renowned culture, cuisine, and compelling coastlines, in the poorer areas of Mexico many faces daily food insecurity.

Common cooking methods in Mexico include frying, grilling, and broiling. Mexican families have fairly good access to grocery shopping with many large-chain supermarkets and smaller, local markets. During my time in Mexico, even in one of the poorest areas of the country, there was access to a grocery store, market, or gas station in walking distance from all homes almost everywhere. Most stores in both urban and rural areas in Mexico supply a good variety of nutritious foods, at the gas stations and grocery stores I went to there were always fruits and vegetables in stock, things like avocados and bananas were very prevalent. However, also prevalent was a great amount of junk food, things like chips, candy and sugary drinks were most popular. I witnessed many citizens that were more drawn to the junk food, rather than a fresh fruit or vegetable. Products like dairy, meats, fat sources, and carbohydrate sources are available almost everywhere (“Mexico food”).

The service industry is Mexico’s largest employer, with 62% of workers employed in that field. These jobs are very popular thanks to the great tourism industry in Mexico. They include things like food service workers, mariachi players, shoe shiners, and tour guides. Additionally, many Mexicans work in the agriculture industry (“Most Popular Jobs in Mexico”). On average, the household income is about \$2,529 quarterly, this totals out to about \$10,116 yearly (“Mexican households”).

Health care in Mexico is very inexpensive when compared to health care in the United States. In addition, medical care and resources are mostly on par with those in the United States. However, with cheaper public healthcare, there is more demand for it, making it less accessible (“Guide to Healthcare in Mexico”).

Mexico is continuously working to improve the accessibility of quality sanitation and water. They have started to create waste management facilities and they currently have a 93% accessibility rate to piped water. However, the country still is challenged with water quality issues on a regular basis (“Sanitation in Mexico”).

These issues all stem from the fact that many families struggle financially and cannot afford to purchase healthier foods. So in return they either end up malnourished, meaning they don't consume enough calories and nutrients. Or, they turn to cheaper, more convenient options like fast food or high-carbohydrate foods. These food choices lead to obesity because although they are not malnourished, they instead are consuming too many calories and too much fat and sugar. On both ends of the spectrum, the issue is the same: Mexicans are not getting balanced meals, with the nutrients and variety to stay healthy. The double burden of food insecurity - malnourishment on one side and obesity on the other is an extremely serious and prevalent issue in Mexico.

With good accessibility to food in Mexico, the main barrier to better nutrition is poverty. The main problem with access to food is poverty. About 18.2% of families in Mexico experience food poverty ("Mexico Food Security"). The term "food poverty" means even if a family were to spend their whole income solely on food, they would still not have enough to feed their family. With most families in Mexico spending about half of their yearly earnings on food, it is clearly a challenge to simply subsist and have enough to eat. Additionally, food prices continue to rise, which in turn also causes more problems when it comes to low-income families trying to purchase food.

Mexico deals with a wide range of nutrition issues: malnutrition with 13 percent of kids younger than the age of five experiencing malnutrition ("Malnutrition in Mexico"), high anemia rates with about 22 percent of the population being anemic ("Determinants of Anemia"), and obesity with approximately 73 percent of the population being overweight (Gurriea) are the main three.

There are efforts being made all around the country to combat hunger, obesity, and dietary imbalance. But currently, trends are staying relatively the same in Mexico as it takes lots of time and effort to combat food insecurity issues.

One effort that was working very well in Mexico was the [PROGRESA] project. This program focused on educating the poor about nutrition and health. Additionally, they gave money to the poor to help them apply what they learned about nutrition and health to make changes in their diets. PROGRESA was working very well and clear positive changes were being made. However, as the project has continued, momentum has slowed, and engagement with the Mexican citizens has dropped ("Community-based").

Perhaps they were trying to do too much at once. To make major, sustainable changes, we need to come up with smaller changes that will last. My plan will be to essentially do all of the things that the PROGRESA project did, but to make each change individually over a longer period of time. Although it will take longer to see significant changes, the changes will be more sustainable and longer-lasting.

My first solution would be to combat both obesity and malnutrition through Mexico's school lunch program. Studies show that children in school consume about 50% of their daily caloric intake at school. This means that if we start providing healthy lunches at school we are able to ensure that at least 50% of the food children are consuming is nutritious (Donze).

Life for children will stay virtually the same, their lunches will just change. A major drawback to this solution is that this only impacts children and it only would change what they are consuming for lunch.

Currently, many students in Mexico pack their own lunches, these typically consist of a ham and bean sandwich and chips. Fruits and vegetables are not prevalent in school lunches. School lunches would include more fruits and vegetables, and less junk food. Hopefully, over time exposure to more fruits and vegetables will make students enjoy these foods more, and lead to them eating them more often. The Mexican government would manage and fund this project. One concern with changing school lunches is that children may be opposed to eating new foods that they don't have regularly and foods that they have had in the past that they have disliked.

While healthier school lunches is a great start to instilling better eating habits in Mexican children many wonder what will happen on the weekends and breaks when students are away from school.

To combat this, Mexico could start a backpack program where students take a backpack full of nutritious foods home every Friday for their meals over the weekend. The benefit of this is that the government could influence what children eat, and it would take very little effort or money from families to make this solution work. Funding for this project will come mostly from donations from charity organizations, wealthier businesses and people with a more disposable income. The schools in Mexico would organize and execute this effort as school would catch the most children possible to hand the backpacks out to. In my school in the United States we have a backpack program that is run solely off of generous donations from community members and is organized by the school and it works very well to ensure students are getting proper meals on the weekends and breaks away from school.

Hopefully, with the change in diet at a younger this will be able to change students' eating habits before it is too late. Although adult malnourishment and obesity will have little to no improvement with this solution by changing the eating habits of the children in Mexico, these children will likely become healthier adults and have an influence on their children and so on. This would change the diets of Mexicans for generations. Ultimately, instilling healthy eating habits in children at a young age is something that will have extremely positive, long-term affects.

A second solution to Mexico's lingering obesity and malnutrition problem is planting community gardens. The main barrier when it comes to eating healthier foods, like fruits and vegetables, in Mexico is the cost of such foods. If community gardens were implemented and everyone in the community pitched in to help grow produce, the cost to citizens would be virtually nothing, except for their time, labor and expertise. There are many benefits to this solution. One benefit is that Mexicans would become more self-sufficient and they would gain new skills. Another benefit is that it cuts the cost of fresh produce to virtually nothing. The main pitfall to this solution is that it would take support and work from all Mexican citizens. A community garden would be a lot of work and would take a lot of organization. However, the culture in Mexico is hyper-focused on community and family so working together to help one another shouldn't be a major issue.

Education should not be a big concern with this solution, as many Mexican citizens work in agricultural jobs and already have the skills necessary to plant and harvest a garden. Eventually, the community gardens will become self-sustaining through volunteer labor and marketing excess produce for money.

If the organization and educational aspect of the community gardens does end up being a major roadblock, mimicking the extension and outreach programs in the United States that work very well would be a great way to get this project started in Mexico. Extension would be able to provide the organization and leadership to get the gardens started in communities, while also providing education to hopefully one day make each community self-sufficient.

This solution would provide the opportunity for all Mexican citizens to incorporate more fresh foods into their diets. Additionally, the increased amount of labor and physical activity could help combat Mexico's major obesity problem. The management of this solution would be more localized and mostly executed by individual communities.

I propose that Mexican cities provide incentives, such as monetary payment and additional resources, to citizens willing to lead and organize community garden projects. This project initially will need funding from either the government or an outside organization. For example, The World Bank has many grants and funding available for community gardens. Additionally, some of the produce from these gardens could be sold to help make money for continuous planting in later years. This project is very reliant on community support. Mexican citizens must be willing to pitch in and work hard.

The work to reverse the malnutrition issues in Mexico will not be easy. However, the benefits will be evident. Longer lives, fewer health problems, and happier people will be worth the toil. It

will require community and government cooperation, but with these solutions Mexico's future is bright.

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