**Dietary Practices In the Face of Globalization: Preserving Culture Among Indigenous Communities of Pueblo Kichwa Ecuador to Promote Health**

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“*Los que tienen tienda, no tienen hijos y ellos traen los caramelos”* [Those who own stores don’t have children, and they bring the candy], one mother reported, expressing her frustration with storeowners who sell chips, sodas, and candy at a store less than a five-minute walk away from her home. Another mother expressed anger saying her children pass these stores on their way home from school every day and buy junk food with coins they find on the dirt road. Over the past 25 years, Pueblo Kichwa, Ecuador has witnessed a dramatic rise in the presence of stores selling junk foods, ranging from Coca-Cola to Bolos (frozen sugary ice pops). With this has come the increasing incidence of severe tooth decay, oral infection, mouth pain, and malnutrition in children.

For a little over two weeks I was able to witness an epidemic of horrific tooth decay in children of Pueblo Kichwa, Ecuador after visiting over 20 different communities, seeing over 500 children, and helping to interview over 300 mothers in semi-structured qualitative interviews. Working with Dr. Karen Sokal-Gutierrez of the UCB School of Public Health, volunteers, and Ecuadorian community health workers, I helped provide an oral health intervention for children and families—oral health/nutrition education, toothbrushes, toothpaste, and fluoride varnish—for free. Additionally, I interviewed four mothers in various communities and several Ecuadorian community health workers who have been working on the project over the last year, in unstructured interviews to try and understand the transition from a traditional and natural food diet to the current junk-food-ridden diet.

“When we were young we ate *yuca*, *platanos*, other fruits and vegetables for snacks, now our children don’t like to eat these things [translated].” This concern was a general theme expressed by mothers and community health workers, many of whom have noticed that local stores no longer sell natural foods, but junk foods instead. Preliminary analysis of semi-structured interviews with mothers highlight this trend with approximately 50% of children consuming frozen sugary ice pops and 30% consuming candy at least two to three times per week. When asked about the consumption of sugary ice pops, several of the mothers expressed that this is one mechanism to deal with the heat of the jungle for their children, along with drinking a cold soda from the local store. Drinking cold water is a hassle because there isn’t a clean water supply and water requires boiling, which is difficult in an already hot climate.

Mothers have noticed the effects of junk food consumption on the health of their children. “It’s scary for us because our children’s teeth start to rot because of the candy, and we can’t do anything about it [translated],” expressed one mother whose son required several fillings for cavities. In this village, the closest dentist is in Archidona, a city about 10 miles away. To get to the dentist requires a two-mile hike to the nearest bus stop, a trip most families in the community cannot afford. Junk food consumption has definitely taken a toll on the oral health of children in Pueblo Kichwa. Seventy-four percent of children had tooth decay with an average of 6 to 7 cavities; 19% of children with cavities had 10 or more, which is half or more of all baby teeth.

The complications from severe tooth decay are widespread, causing constant mouth pain, disrupted sleep, and difficulty eating. “Sometimes my daughter cries because the pain in her mouth is so bad,” said one mother. Thirty seven percent of mothers reported that their children complain of mouth pain; 28% reported mouth pain in their children while they eat; and 25% indicated that their children have trouble sleeping because of mouth pain. This has a tremendous toll on a child’s ability to consume food, resulting in malnutrition and stunted growth. Additionally, disrupted sleep hinders a child’s ability to focus in school, causing chronic exhaustion and making the child prone to other infections. Respiratory and fungal infections were quite common in each of the villages we visited. Mothers had a difficult time seeing their children as healthy, with only 32% of all mothers reporting their child’s oral health as excellent, and only 31% reporting their child’s overall health as excellent.

Empirical observations from the project over the past year have lent support to the notion that boys have more cavities and poorer oral health compared to girls. Overall, boys had an average of seven cavities compared to six in girls. Additionally, of those children who had 10 or more cavities (representing serious tooth decay), 53% were boys and 47% were girls. Though these differences might not seem too significant, boys were also more likely to consume sugary ice pops at least two to three times per week at 49% compared to girls at 45%. When asked about any differences between boys and girls in the consumption of junk foods and oral health, one mother said, “My sons just like to eat more than my daughters, and this includes junk foods.” This may reflect a cultural practice in the differential treatment of boys compared to girls, as several mothers also indicated that their sons play outside more than their daughters, thereby increasing the likelihood of running into the local store for junk foods.

While there is much more work left to combat what has truly become an epidemic of tooth decay in Pueblo Kichwa, the project has made great strides since its implementation over a year ago. The Ecuadorian team has grown significantly, with over 10 community health workers that go back into the communities throughout the year to provide all components of the oral health intervention. Additionally, there has been a reduction in tooth decay from 81% in 2011 to 74% this year, and the mean number of cavities has dropped from 8 to 9 cavities to 6 to 7. Mothers and children in Pueblo Kichwa know the Alli Kiru volunteers and look forward to the visit each year: “We’re so grateful that you come and care about our children and little by little we can work together to improve our children’s teeth and health.” Results from the project will be presented to the Ecuadorian Ministry of Health and will be used to inform the development of an educational toolkit that can prevent this highly preventable disease in children.