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## Healthy Casetas: A Potential Strategy to Improve the Food Environment in Low-Income Schools to Reduce Obesity in Children in Guatemala City

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### Abstract

Developing countries have undergone rapid transitions driven by globalization and development, which have accelerated increases in prevalence of overweight and obesity among children. Schools have been identified as effective settings for early intervention and favorable arenas in which to target children's dietary behaviors. In Guatemala, public schools commonly have food kiosks (*casetas*) which provide food and drink for sale to children. From July through October 2013, observation during recess, in-depth interviews with school principals (n=4) and *casetas* vendors (n=4), and focus groups with children (n=48) were conducted. This paper explores products currently available to children at *casetas*. We found that current factors that impact what *casetas* offer and subsequent nutrition habits of children at school include: regulations and enforcement; vendor investment and earnings; vendor challenges related to resources (i.e. refrigeration); the current economy and product demand; product pricing; and children's product preferences. These factors influence the products that are available and children's tendency to purchase them. Potential strategies that emerged include healthy food preparation to improve product health and quality, price manipulation and promotions, raffles and games to encourage healthy product consumption, as well as government and corporate involvement to push policy toward development of healthier products.

### Background

Guatemala suffers from the double burden of malnutrition. The country has the third highest rate of chronic malnutrition (stunting) in the world while 67% of Guatemalans aged 15 and

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above are overweight, of which 29% are obese (World Bank, 2009). The overweight and obesity prevalence can be partly attributed to the Guatemalan urban food environment which is closely related to national development (Way, 2012). The neo-liberal economic policies of the 1970s caused an explosion of the informal sector dominated by privately owned *casetas* (food kiosks) (Green, 2003; Way, 2012). *Casetas* predominantly sold products influenced by US companies appealing to the urban idea of a developed Guatemala (Artiga, 2008; Way, 2012). Urban residents moved from traditional fare toward western foods like fried chicken, hot dogs, chips and soda (Green, 2003; Way, 2012). Some continue to eat traditional food at home, but in public and at schools it is more common to eat from *casetas* (Artiga, 2008). *Casetas* are one of three principal sources of food for children at Guatemalan primary schools. Others include food from outside school grounds (from home or purchased in street), and free snack provided by the school. The popularity of *casetas* makes them a promising setting for positive dietary change.

Literature has identified schools as effective settings to intervene, especially using structural interventions (Verstraeten et al., 2012; Wang et al., 2013). An international review demonstrates that overweight/obesity rates were lower at schools with healthy menu alternatives compared to schools without a nutrition program (Veugelers & Fitzgerald, 2005). Similarly, students attending a school that did not offer sugar-sweetened beverages and fried foods significantly reduced their calorie intake according to Briefel, Crepinsek, Cabili, Wilson & Gleason (2009). Yet, to date, very few structural interventions have been researched or implemented in Guatemala and other developing countries. A review by Verstraeten et al. found 25 school-based interventions in low- and middle-income countries that met their inclusion criteria, 12 in Latin America (2012). Results showed these interventions have potential to improve dietary behaviors and prevent excess body weight in children (2012). Only two studies in Latin America implemented structural changes; most studies focused on education to impact nutrition (Verstraeten et al., 2012).

The Guatemalan government has made limited efforts to control products sold in schools. In 2011 and 2012, two programs were established to reduce the sale of junk food in schools in two regions (Huehuetenango and Sololá) (PACE, 2012; Heisse, 2012). However, no outcome studies have been done. In Guatemala City, the Ministry of Education (MINEDUC) has dispersed general *casetas* guidelines, but implementation and enforcement is inconsistent.

Research is lacking in Guatemala concerning school food environments, particularly *casetas*. Although programs are surfacing, there remains a gap in information on the context in which these *casetas* function - information necessary for program sustainability. This study's main research questions include: (1) What are current *casetas* regulations and enforcement? (2) What are children eating from *casetas* (product availability and children's preferences)? and (3) What environmental and economic challenges or barriers exist for *casetas* vendors? This study's data is valuable to inform recommendations for future program implementation for a healthier school food environment to potentially curb the rate of increase in childhood overweight and obesity in Guatemala and similar developing countries.

## Methods

### Research Setting

Qualitative research was conducted from July to October 2013 in two low-income, peri-urban municipalities (Villa Nueva and Mixco) in the outlying areas of Guatemala City. A purposive sample of four public primary schools was selected based on the following criteria: 1) the presence of at least one *caseta*; and 2) principals and vendors were willing to participate (Table 1).

### Participants and Recruitment

The study sample consisted of school principals (n=4), *caseta* vendors (n=4), and children 7-12 years of age in 1<sup>st</sup>-6<sup>th</sup> grades (n=48). Principals and vendors were recruited individually for in-depth interviews (IDIs). Children were randomly selected for focus groups (FG) from student lists provided by principals. The children's parents were invited to a meeting about the study and FG.

### Approval and Consent

Approval was granted by the Institutional Ethics Committee of the Institute of Nutrition of Central America and Panama (INCAP) and Johns Hopkins School of Public Health Institutional Review Board. Vendors and principals were required to give verbal consent while children's participation required written informed consent from their parent(s) and verbal assent of the child before the FG, at which point they could decline to participate (n=1).

### Study Procedures

An emergent design approach and iterative process of collection and analysis was practiced throughout the study to allow for flexibility and informed induction (Maxwell, 2005). Data collection and analysis occurred simultaneously, permitting reflection and modification of research tools.

Three study phases were completed to conduct the IDIs and FGs. All were audio recorded and handwritten notes were taken (Table 2). Informal observation was also done at each school during recess to observe students at the *caseta*. Hand written notes were taken and data was compared to that from IDIs and FGs as a form of methodological triangulation.

**In-depth interviews**—A total of four IDIs were conducted in Spanish, one with each school principal. Principals were asked about their experience with school *casetas*, *caseta* regulations and enforcement, and opinions about the school food environment and children's nutrition.

A total of eight IDIs were conducted in Spanish with four vendors. The initial IDI asked vendors about store contents, purchasing decisions, regulations, and perceptions of kids' food preferences. The second focused on healthy food options, challenges/barriers to improvement and vendors' willingness to participate in health interventions.

**Focus groups**—A total of eight FGs were conducted, two at each school. The first FG was conducted with 1<sup>st</sup>-3<sup>rd</sup> graders (27 total participants, 6-8 at each school), and the second with 4<sup>th</sup>-6<sup>th</sup> graders (21 total participants, 4-7 at each school). Children were asked what foods/drinks they like, what they bring from home, what they buy at *casetas* (how often, how much they spend, opinions about products) and what they wish was sold at school. These children also participated in two interactive pile sorting activities. The first asked participants to sort 12 pictures of products sold at *casetas* into three piles: products “I love,” “I like,” and “I don't like.” The second activity asked children to select 5 of 10 healthy products uncommonly sold at *casetas* that they wish were sold at school. Verbal explanations about why they liked, loved and disliked the products proved difficult for children, so a poster activity was created where children were asked to mark 3 of 6 positive reasons and/or 6 negative reasons for their sorting decisions (e.g. taste, nutrition, etc.). At the termination of the FG children received a snack.

**Direct Observation**—Two direct observations were conducted at each school during recess to observe what children purchased, how much they spent, and their interactions with *casetas* vendors. Permission to take pictures of *casetas* was received from all vendors to document available products.

## Data analysis

All IDI and FG recordings were transcribed verbatim. From close review of transcripts the development of a detailed codebook emerged using elements of grounded theory (Maxwell, 2005). From main themes, axial codes were created to identify key categories and connections. A final coding scheme was shared amongst research advisors to ensure comprehensiveness. Spanish transcripts were coded using Atlas.ti Version 7. Each transcript was reviewed 3-4 times and queries of main themes were run through Atlas.ti. The finalized list of main themes were those that yielded significant data through queries and included wide spread data from participants across all four study sites. Select quotes were translated to English by the first author. Data from pile sorting and poster activities was assessed with Excel software.

## Results

### General

Guatemalan children have various sources of food that make up their daily in-school food environment (*casetas*, food brought from outside school grounds, snack provided by school) (Pehlke, et. al. 2015). Children attend school in morning or afternoon sessions, eating lunch after or prior to classes. Therefore, all items purchased from *casetas* are additional snacks unless children are not receiving proper foods outside of school grounds (Pehlke, et. al. 2015). The focus of this research is school *casetas*. There are often multiple *casetas* on school grounds. Our 4 participant schools had from 1-5 *casetas* (Table 1). Data gathered from vendors and children suggest that about 75% of students purchase at least 1 product and spend around 1-3 Quetzales (Q) per day at *casetas* (1Q=\$0.13).

## Current Caseta Regulations and Enforcement

MINEDUC has outlined prohibited products for sale at school *casetas* which include sodas and chips/processed snacks. Some *casetas* offered prohibited products while others offered few or none.

MINEDUC also provides a list of recommended products which include: *panes* (sandwiches), *tostadas* (fried tortillas), *chuchitos* (Guatemalan tamale), *atoles* (traditional hot beverage), *frescos* (sugar-sweetened fruit beverage), *dobaldas/tacos* (fried tortilla with chopped meat), *mixtas* (hot dog with tortilla), as well as fruits and vegetables. This list demonstrates the prevalence of traditional Guatemalan food and the fact that general concern remains focused on undernutrition, as these food items are known and encouraged for their caloric density.

Enforcement varied greatly among schools. Principals and vendors said government representatives visited, however not more than twice a year and not necessarily to monitor *casetas*. All principals said they visited *casetas* and three of four schools had committees to ensure available products are permitted; however, supervision varies in seriousness and frequency. If *casetas* were selling prohibited items, some schools enforced stricter approaches to address this than others. For example, the school B principal had little awareness of regulations and mentioned no enforcement strategies. Whereas principals at C and A schools said they asked vendors not to sell certain products and they complied. School D had stricter enforcement as the principal believed that greater enforced consequences motivated the sale of better products and explained the process of warnings, written records and the permanent closing of *casetas* (Table 3).

## What are Children Eating from Casetas?

**Products sold in casetas**—The most common product sold at *casetas* are *panes* filled with ham, chicken (chicken salad with mayonnaise), or *frijoles volteados* (refried black beans), and less commonly egg or cheese. These were made with white bread, mayonnaise, tomato sauce, and sometimes guacamole. *Panes* were viewed by principals and vendors as the healthiest option at *casetas* along with fruits and vegetables. Vendors reported offering *ricitos* (chips/salty snacks), *tostadas*, *mixtas*, *chuchitos*, candy, shaved ice, *frescos*, and pure water. Some sold *tacos*, *dobladas* (fried tortilla with chopped meat), cookies, sodas and cakes/pies. All *casetas* reported offering 1-3 types of fruit per day, however, one store never had it available during data collection. Other items included hamburgers, pizza, cereal, hot dogs and fruit cocktails (Table 4).

**Health concepts and vendor's role**—Vendors realize they are a source of children's nutrition and want children to be healthy; however, they continue to provide *ricitos* as they are popular sale items. As undernutrition is still a concern, a common health concept categorizes foods with eggs, beans, meat and corn as nutritious due to their protein content. Vendors showed no concern about food preparation (i.e. fried versus steamed) in relation to nutrition – in their perspective, all items regardless of preparation style provide healthy energy to children.

**Children's product preferences: vendor's perspective**—All vendors reported that low prices allowed most children to buy one or two products and a drink. Kids were accustomed to paying certain prices and would not pay more.

Vendors agreed that children loved packaged salty snacks (*ricitos*)- these are what children looked for and most often purchased. Those with brand names, such as Doritos or *Tortrix* (Guatemalan brand of tortilla chip) were more expensive and were therefore only affordable to some (Table 5).

Vendors said that kids only like certain fruits. They reported creative ways of selling them (e.g. chocolate-covered) though children got bored and stop purchasing these. Vendors also reported that children like *mixtas*, *tostadas*, *tacos* and *dobladas*. *Panes* were what most children brought to school; therefore, they tended to be bought more often by those without snacks from home. Vendors agreed that children like yogurt; however high cost lessens demand.

To drink, vendors agreed children like *frescos*, especially packaged *frescos* that vendors believed children preferred because they are sweeter. Vendors said that children like soda, but are unable to purchase it due to expense. At school B sodas were cheaper as compared to other schools and therefore popular.

**Children's self reported product preferences**—Children's reported preferences were collected through an interactive pile sorting activity. Overall, children 'loved' cucumber-radish salad, *tostadas*, peanuts, and mango. The products students 'liked' included *Tortrix*, tortillas with beans/cheese, pure water, and *panes* with beans. Products that students 'did not like' included candy, tortillas with beans/cheese, *panes* with beans, cola, cookies, and Cheetos.

This data demonstrates wide ranging preferences. The products preferred by all students across schools were mango and *Tortrix*. Products 'liked' in three of four schools include *panes* with beans, cucumber-radish salad, and pure water. Healthy products children wish were sold at *casetas* were yogurt, natural *frescos* (e.g. watermelon), and peaches.

The most common positive reasons children gave centered on flavor and nutrition. Products perceived as healthy were fruits "with vitamins" and products with beans "for protein". Common reasons kids disliked products were flavor, product appearance and that their hunger wasn't satisfied.

### **Caseta owners' challenges and barriers to improvement**

**Challenges of Environment: space, time and resources**—Many vendors complained their lack of space made it difficult to store and prepare foods at the *caseta*. Three of four vendors prepared products at home which limited what they could offer. A related challenge for two vendors was lack of electricity and refrigeration at the school.

Another challenge was lack of time. Vendors reported that certain products (e.g., natural *frescos*, steamed *chuchitos*) took longer to prepare than packaged/fried options. Another concern was that of product shelf life (e.g. rotting produce).

**Challenges of Money: pricing, earnings, investment and demand**—According to vendors, the economy was “bad” and prices of foods continued to rise. Vendors reported significant differences in prices outside school grounds compared to their *casetas*. Pricing norms at *casetas* limited vendors to preparing only what they could offer for 1-2 Quetzales (\$0.13-\$0.26).

All vendors said that sometimes fruit can be unaffordable to offer since one bag (1Q) fits 2 mangos, 2-3 apples, etc. Vendors also pointed to inevitable loss with produce (i.e., fruits come rotten or they don't sell before they spoil).

Vendors said that children eventually get tired of things, even products they like. They handled fluctuating demand by changing what they offered daily. This was difficult when they had to decide whether to invest in a product, especially since prices of ingredients, supplies, and gas for cooking add up, putting pressure on profit margin (Table 6).

Vendors struggled to offer products at such cheap prices. This pricing game was further complicated in schools with multiple *casetas* where it was possible for them to out sell each other.

**Vendors' attitudes toward improvement**—Despite plentiful challenges, all vendors were positive and willing to implement programs aimed at improving children's nutrition. They were optimistic about ideas to promote and motivate children to purchase healthier foods. Concerns mentioned were those of high investment and cooperation amongst *casetas* at schools where multiple operate. Overall, vendors were motivated to improve their *casetas* as long as it was done in a productive and lucrative way (Table 7).

## Discussion

This study is the first to gain a deeper understanding of *casetas* in Guatemalan primary schools – from the perspectives of the principals, the vendors and the children who frequent *casetas*. Our findings demonstrate the context within which *casetas* function with varying levels of regulation and enforcement. Stricter regulation is needed. Peru, Chile, Colombia, Costa Rica and Brazil are among the Latin countries that have some level of food legislation, most commonly aimed to control products offered in schools (Fraser, 2013). Also, Mexico has passed an 8% tax on junk food in attempts to fight obesity (Mallén, 2013). Most of these efforts are new, therefore further policy and research is needed.

Our results highlight vendor challenges concerning investment, demand and earnings. Vendors admit they would improve the quality and nutrition of their products if they could afford to do so. This is similar to findings in low-income areas where corner store owners report being hesitant to stock healthier items due to low consumer demands (Gittlesohn et al., 2008).

It is evident there still exist worries of undernutrition which seem to overshadow concerns about healthy food preparation. Additionally, the culture of snacks is strong and vendors report that children prefer chips and *frescos* over healthier options. Research done in New England has identified unhealthy snack carts as barriers to healthful nutrition as children



admit they will eat junk food over a nutritious lunch (Bauer, Yang & Austin, 2004). Additionally, the presence of unhealthy snacks at school is negatively associated with fruit and vegetable (F/V) consumption (Rasmussen et al., 2006).

### Recommendations for future program implementation

Recommendations described in this section were inspired by feedback and information gathered from study participants during the course of data collection and analysis. They were informed by a review of literature, then developed and articulated by the author team of public health professionals.

**Creative and healthy food preparation**—Increased resources and education could improve food preparation. With refrigeration vendors could provide options that children report enjoying (e.g, yogurt, natural *frescos*). Updated cooking instruments such as Teflon pans could reduce the amount of oil and fry time. Creative recipes/ideas could also be explored. The idea of fruit skewers was welcomed as they would attract children and reduce the portion of fruit offered to ensure vendor profit.

Research has shown that increased availability of healthy foods in schools and small stores is linked to increased sales and consumption (Gittlesohn, Rowan & Gadhoke, 2012; Rasmussen et al., 2006). Research by Bauer et al. found similar findings to ours in that students say they would eat healthy foods if they were more accessible and palatable (2004).

**Price manipulation and promotions**—Price manipulation and promotions could spark demand for healthier options. Powell, Han & Chaloupka found that lower prices and greater availability of F/V and higher prices on fast food were associated with higher F/V intake and lower BMI among teens (2010).

In our context, categorization of *caseta* products as “healthy” and “unhealthy” could be fixed with increases of prices on “unhealthy” products to enable promotions of “healthy” products (e.g., two-for-one, half price). Promotion variation could engage children and attract them to healthy foods while higher prices could deter them from unhealthy alternatives.

**Promotional materials, games and raffles**—Point of purchase and vendor promotions, motivational activities, and positive messages have been successful in improving dietary behaviors and influencing children's food habits (Gittlesohn, Rowan & Gadhoke, 2012; Perry et al., 2004). Vendors thought the idea of a raffle would be effective where children would be rewarded tokens for purchase of healthy items. Tokens would be drawn and those selected would win a prize. This approach is used by major companies. Pepsi-Cola boosted sales and increased brand awareness by using an ‘under-the-cap’ promotion that received over 20 million entries (SCA Promotions, 2013). When implemented with appropriate prizes, this marketing approach creates significant motivation at a small price - a potential tool in the context of low-income schools.

**Large company involvement, product development and advertising**—An upstream approach would require the government to present product companies with stricter regulations and enforcement; in one instance, legislation about restrictions on food for sale



in schools appears to have influenced product development. In Costa Rica, the Minister of Education pushed legislation that set maximum levels of energy density on products sold in schools which motivated one corporation to launch 20 products that complied with new standards (Fraser, 2013).

As the rate of increase of childhood overweight and obesity in developing countries is far greater than that in developed countries, it is crucial that work be done at high policy and government levels in order to slow it down (Onis & Blössner, 2000). Working with policymakers, economic motivators, new product developers and advertisers could potentially curb the rate of increase in childhood overweight and obesity.

### Study strengths

The use of methodological and data triangulation increased the study's credibility (Guion, Diehl, & McDonald, 2002). It allowed for multiple perspectives as well as the ability to check data for consistency and patterns. An emergent design approach provided flexibility to modify/improve FG and IDI guides for richer data collection (Maxwell, 2005). All IDIs were conducted by the lead author who developed significant rapport with participants.

### Study limitations

The greatest limitation was the small purposive sample as well as the inability to include parents and teachers as participants due to budget and timeline constraints. However, parental influences (e.g. money/food given to children) were explored through information given by vendors, principals and children themselves. Although multiple researchers approved the final coding scheme, another limitation was the lack of investigator triangulation during data analysis (Guion, Diehl, & McDonald, 2002). A final limitation was the potential outsider bias during FGs and observations. Students' awareness that researchers came from a nutrition institute may have altered answers toward selection of healthier products and explanations focused on health.

### Conclusions

Results demonstrate various factors that impact *casetas* and influence children's nutrition choices. Other sources of food (from outside schools grounds and school provided snack) require further research to improve the overall nutrition integrity of these schools. Nonetheless, with 75% of children purchasing from *casetas* everyday, this study suggests that the improvement of *casetas* is a viable approach to positively impacting the food environment and diets of children in Guatemala and similar settings. Promising approaches that could be valuable for improving the nutrition environment include resources for healthier product preparation, price manipulation, raffles and promotions to incentivize healthy choices, and government and corporate involvement for stricter policy and healthier product development.

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**Table 1**  
**Research Setting**

| Reference | School     | Location (municipality) | Number of casetas (food kiosks) | Approx. # of students (grades 1-6) (size of student body) |
|-----------|------------|-------------------------|---------------------------------|---|
| A         | <i>VN</i>  | Mixco                   | 2                               | 675   |
| B         | <i>B</i>   | Mixco                   | 1                               | 650   |
| C         | <i>F</i>   | Villa Nueva             | 5                               | 850   |
| D         | <i>TUB</i> | Villa Nueva             | 5                               | 900   |

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Table 2

## Information on study phases, participants and activities

| Study Phase | Study group      | Number of participants | Activity                      | Location          | Duration   |
|-------------|------------------|------------------------|-------------------------------|-------------------|------------|
| 1           | School directors | 4                      | In-depth interviews           | Private office    | 35-50 mins |
|             | Food vendors     | 4                      | Initial in-depth interviews   | <i>Caseta</i>     | 30-80 mins |
| 2           | Children         | 48                     | Focus Groups                  | Private classroom | 35-60 mins |
| 3           | Food vendors     | 4                      | Follow up in-depth interviews | <i>Caseta</i>     | 30-60 mins |

**Table 3**  
**Select quotes from principals concerning caseta regulations and enforcement**

| Participant         | Context   | Quote  |
|---------------------|---|--|
| Principal, School C | Some <i>casetas</i> offer prohibited products while others offered few or none.                         | “Thank God we have eradicated all the junk food, but here we sell <i>elotitos</i> (fried corn) and peanuts, but we believe these aren't bad products.”   |
| Principal, School C | Government representatives visit schools infrequently and not necessarily to monitor <i>caseta(s)</i> . | “I feel (MINEDUC) gives the orders because they send them in writing, but there is no supervision... They care, but not <i>that</i> much, because who knows whether or not the schools are following orders.”                  |
| Principal, School D | If <i>casetas</i> are caught selling prohibited items, enforcement differs.                             | “The first time will be a verbal warning with a written record, the second time is a written warning, and the third time the vendor is asked to vacate the property and will no longer be allowed to enter the establishment.” |

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**Table 4**  
**Available products observed at casetas**

| Products available at 1 caseta  | Available at 2 casetas  | Available at 3 casetas   | Available at 4+ casetas  |
|---|---|--|--|
| <ul style="list-style-type: none"> <li>- <i>pan</i> with cheese</li> <li>- <i>pan</i> with egg</li> <li>- cereal with milk</li> <li>- hot dogs</li> <li>- tortilla with cheese</li> <li>- hamburger</li> <li>- juice</li> </ul> | <ul style="list-style-type: none"> <li>- <i>pan</i> with beans</li> <li>- <i>pan</i> with chicken</li> <li>- pizza</li> <li>- tortilla with guacamole</li> <li>- <i>tostada</i> with chow mein</li> <li>- shaved ice</li> <li>- <i>chuchitos</i></li> <li>- fruit cocktail</li> <li>- <i>ricitos</i></li> </ul> | <ul style="list-style-type: none"> <li>- <i>tostada</i> with beans</li> <li>- fruit</li> <li>- <i>dobladas</i></li> <li>- <i>tacos</i></li> <li>- soda pop</li> <li>- cake</li> <li>- cookies</li> </ul> | <ul style="list-style-type: none"> <li>- <i>pan</i> with ham</li> <li>- <i>tostada</i> with guacamole</li> <li>- <i>mixtas</i></li> <li>- candy</li> <li>- water</li> <li>- <i>frescos</i></li> <li>- <i>elotitos</i> and peanuts</li> </ul> |

\* *Pan*- sandwich, *chuchitos*-Guatemalan tamales, *ricitos*- salty snacks/chips, *tostadas*- fried tortilla, *dobladas*- fried tortilla with chopped meat, *tacos*- fried tortilla with chopped meat, *mixtas*- hot dog with tortilla, *frescos*- sugar sweetened fruit beverage, *elotitos*- fried corn kernels



**Table 5**  
**Select quotes from caseta vendors concerning children's product preferences**

| Participant      | Context  | Quote  |
|------------------|--|--|
| Vendor, School C | Kids are accustomed to paying certain prices and will not pay more.  | "I price it (fruit cocktail) at 1Q. If I tell them 1.50Q, they do not pay."  |
| Vendor, School A | Salty snacks like chips are what children look for, ask for, and most often purchase according to vendors. | Guatemalan culture is like that, it cannot be changed...If we do not sell <i>ricitos</i> here, moms will buy them in the street and put them in their kid's backpack to bring. You could say it's the culture. Since kids are little, you can see in Guatemala, the kids have a bag of chips, and if not, the mom is eating them and giving them to her child. |

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**Table 6**  
**Select quotes from caseta vendors concerning the challenges of money: pricing, earning, investment and demand**

| Participant      | Context  | Quote   |
|------------------|--|---|
| Vendor, School A | Vendors report significant difference in prices outside school grounds compared to their <i>casetas</i> .            | This <i>pan</i> with ham out there costs 2.50-3Q, 1Q here. This bag of oranges out there is 1Q, here it's 0.50Q. This bag of mango out there, 2-3Q, here 1Q. This bag of watermelon out there is 2-2.50Q, here 1Q. So yes, this is how it is.     |
| Vendor, School D | It is difficult for vendors to decide whether to invest in a product. This vendor speaks about offering mixed fruit. | You have to invest in buying watermelon, melon, and papaya and sometimes you invest in each fruit, each fruit costs about 10Q, so you have to sell a minimum of 40 bags just to earn 10Q. You might sell at least 10-12 bags if the kids like it. |
| Vendor, School D | Prices of ingredients, supplies, and gas for cooking add up putting pressure on profit margin.                       | I have to invest in: tomato, 10Q, if it has cabbage, a cabbage around 7-10Q, cheese, 5Q. If I prepare 25 <i>tacos</i> , that will be around 6-7Q for tortillas, plus the bags, the time, gas, oil, it's a lot."                                   |

**Table 7**  
**Select quotes from caseta vendors concerning their attitudes toward improvement**

| Participant      | Context  | Quote  |
|------------------|--|--|
| Vendor, School C | When asked about willingness to participate in future programs   | “Sure! I always say that here (at school) you live for the kids and for the kids you are willing to give them the best.”   |
| Vendor, School C | Concerns about health interventions included cooperation amongst <i>casetas</i> at schools where multiple operate. | “..as long as it is done in general, that the 5 <i>casetas</i> sell the same things, because if they demand me to sell nutritious foods and my colleagues sell chips/snacks, I won't sell anything.” |

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