

# ***HAMBRE CERO*** **AND ITS IMPACT ON THE HOLISTIC HEALTH OF ITS FEMALE BENEFICIARIES**

A study by Chelsea Duttweiler



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## ABSTRACT

This investigation focused on the study of *Hambre Cero* (meaning “Zero Hunger”), an anti-poverty program funded by the Nicaraguan government which gives voucher packages to poor rural women. Items given include pregnant cows, pigs, chickens, seeds, and technical assistance with the goal of generating profit for use by the families and women’s cooperatives. The study of this program is important for government accountability, and will also add to the body of knowledge concerning rural development, sustainable health programs, and the feminization of poverty so that more effective development programs can be developed in the future. I specifically studied the program’s impact on the holistic health of the female beneficiaries through a case study of 10 communities in Jalapa. My research included interviews, as well as participant observation during vaccinations and *capacitaciones* (health education classes).

In terms of physical health, the program has lead to significant changes in health and prevention activities. Mental health has improved in terms of self-esteem and changes in family and community dynamics. The most important result of the study was the impact seen in the empowerment of women through the addition of resources and agency. With the power to advocate for change and defend their rights as citizens of the government, the women can now demand changes in access to health services. The program has many faults, including its partisan nature and failure in cost-effectiveness and efficiency, but by forming a relationship between government employees and individual women, there is great potential for long-term, positive change in health through *Hambre Cero*.

## **ABSTRACTO**

Esta investigación se enfocó en el estudio de *Hambre Cero*, un programa anti-pobreza del gobierno nicaragüense que da bonos productivos alimentarios a la población rural y pobre. Los bonos incluyen vacas y cerdas preñadas, gallinas, semillas, y asistencia técnica con la meta de ganar ganancia para el uso de las familias y cooperativas de mujeres. El estudio de este programa es importante por la contabilidad del gobierno, y también para añadir al cuerpo de conocimiento temas como desarrollo local, programas de salud sostenibles, y la feminización de la pobreza. Estudié específicamente el impacto del programa en la salud holística de las beneficiarias, a través de un estudio del caso de Jalapa. Mi investigación incluyó entrevistas, y también observación participativa durante jornadas de vacunación y capacitación.

Con respecto a la salud física, el programa ha hecho cambios significativos en dieta y practicas en la prevención de enfermedades. La salud mental ha mejorado con respecto a la autoestima como un resultado de cambios en el papel de la mujer en la familia y organización social. El resultado más importante fue el impacto en el otorgamiento de poderes de las mujeres a través de la adición de recursos y agencia. Con el poder de realizar un cambio y defender sus derechos como ciudadanos del gobierno, ahora las mujeres pueden demandar cambios en el acceso a servicios médicos. El programa tiene muchos desafíos, incluyendo su partidatismo y la falta de costo efectividad y eficiencia, pero, como resultado de la formación de la relación entre empleados del gobierno y mujeres individuales, hay un gran potencial de cambios positivos en salud a largo plazo.

*”She declared in no uncertain tones that only one thing mattered in the world: the revolution which would feed all the starving people of the earth. I retorted, no less peremptorily, that the problem was not to make men happy, but to find the reason for their existence. She looked me up and down: ‘It’s easy to see you’ve never been hungry,’ she snapped.”*

*-- Simone de Beauvoir, writing of a conversation with Simone Weil<sup>1</sup>*

## **INTRODUCTION**

This study seeks to analyze *Hambre Cero* (meaning “Zero Hunger”), an initiative of the Nicaraguan government which provides assistance packages (including such items as cows, pigs, seeds, cement, and technical assistance) to poor rural women. The research focuses specifically on the perspectives of the women receiving the aid and how that aid is affecting the health of those beneficiaries. This relates themes of sustainable economic development and the feminization of poverty, and also explores government versus civil society as different engines for social change.

To begin, it is necessary to first provide a background to Nicaragua’s history and the history of the *Hambre Cero* program. Because the program is a recent initiative of the Sandinista government, this information is crucial to understanding the political and historical atmosphere in which the program is being implemented.

### **Recent Nicaraguan Political History**

A review of Nicaragua’s political history shows frequent regime changes, involvement of varying foreign bodies, and the struggle of multiple actors to gain and retain power. Recently, Nicaragua experienced the 43-year dynastic dictatorship of the Somoza family (1936 to 1979), during which the Somozas managed to gain control of a significant percentage of the nation’s land and enrich themselves through the control of resources and public works. They perpetuated themselves in power through their control of the National Guard and their close relations with the U.S. at the beginnings of the Cold War. During this

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<sup>1</sup> Beauvoir, Simone De. Memoirs of a Dutiful Daughter. Trans. James Kirkup. New York: HarperCollins, 1974.

period, the nation's gap between rich and poor grew tremendously as a result of the exploitation of the work force and corruption in the government, which was made especially evident following the misuse of donor funds meant for reconstruction after an earthquake in Managua in 1972. The people's response to this dictatorial regime was the formation of the *Frente Sandinista de la Liberación Nacional* (Sandinista National Liberation Front, or the FSLN), named for a famous anti-imperialist leader, Augusto Cesar Sandino. After years of intense repressions and public assassinations, the prolonged military offensive finally proved successful on July 19, 1979 when the FSLN took the city of Managua and Somoza fled the country.

Once in power, the FSLN created a temporary nine-person junta to govern, and quickly began to enact massive reforms. Health and education services became the responsibility of the State and were provided free to all citizens, and lands previously held by the Somozas were distributed through a new land reform process. However, despite much popular support, many policies of the regime were controversial; relations with Russia and Cuba, as well as the regime's delay in holding democratic elections, brought criticism from both home and abroad. A counterrevolutionary guerilla group, named the Contra, began attacks in the northern part of the country. The group was based in Honduras and financed by the Reagan administration, at first openly and then through covert operations, as a weapon to prevent the spread of communism in Latin America. The Contra War continued until 1990 when Sandinista president Daniel Ortega lost in the elections to Violeta Barrios de Chamorro, a former member of the junta who ran with an alliance of parties in opposition to the FSLN.

During the subsequent 16 years (1990-2006), Nicaragua experienced a demobilization process and wide economic reforms under three non-Sandinista presidents.<sup>2</sup> Following the neoliberal economic policies of the World Bank and International Monetary Fund at the time,

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<sup>2</sup> For more information on the governments of presidents Violeta de Chamorros, Arnaldo Aleman, and Enrique Bolaños, please see: Kinloch Tijernino, Frances. Historia de Niaragua. Managua: IHNCA-UCA, 2005. 357-76.

many of Nicaragua's public services, including health and education, were again privatized. State employees who previously worked for these institutions were "encouraged" to find work in the private sector during a process called *compactación* (literally, "compactation", or the compacting of the government-employed workforce). Leading economic experts at the time insisted that the "structural adjustment" and open markets would offer everyone equal opportunities for development and, eventually, would lead to economic growth at all levels. The FSLN, however, now credits these same policies for "eroding our forests, drying up our sources of water, privatizing our health and education, condemning more than one million Nicaraguans to move to the exterior, [and causing Nicaragua] to become the poorest country in Latin America."<sup>3</sup> In 2006, Daniel Ortega once again won the office of the presidency after 16 years of Liberal rule. The FSLN attempted to reverse the changes brought by neoliberalism, which led to the de-privatization of health and education.

This is the situation in which Nicaragua currently finds itself – the Sandinistas are trying to reassert their power as the leading political force and garner the support of the lower classes, calling itself the *Gobierno de Unidad y Reconciliación Nacional* (or the "Government of National Unity and Reconciliation"). This involves the building of many public works in rural areas, but the nation is also fighting against a national debt which accounts for 62.9% of the Gross Domestic Product (GDP), and a per capita GDP of \$2,800, which is the third-lowest in the Western Hemisphere. The infant mortality rate in Nicaragua is 25.91 deaths for every 1,000 live births (compared to 6.3 deaths in the United States).<sup>4</sup> These are just a few statistics, but one can see that Nicaragua is struggling to hold together its national unity while lessening the gap between rich and poor through rural development and relations with other Latin American nations.

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<sup>3</sup>Information from a packet distributed to all engineers: *El Programa Hambre Cero*. Nicaragua. MAGFOR. 2007.

<sup>4</sup> "Nicaragua." *CIA World FactBook*. Nov. 2008. United States Central Intelligence Agency. <<https://www.cia.gov/library/publications/the-world-factbook/geos/nu.html>>.

## **The *Hambre Cero* Program**

The *Hambre Cero* program is an antipoverty project started by the Ortega administration in 2007. It serves as a replacement to the *Red de Proteccion Social* (Social Protection Network), a conditional cash transfer program started by the Bolaños government. *Hambre Cero* was designed by Sandinista economist and CIPRES<sup>5</sup> director Orlando Nuñez. The ideological focus is on building the economy from the ground-up, as opposed to the previous neoliberal, “trickle-down” approach to economic development in place in Nicaragua between 1990 and 2006. Therefore, rather than focusing on business expansion or growth in GDP as signs of development, leaders of *Hambre Cero* point to “alimentation, together with education, health, and technological applications, as the base of all development”, specifically in rural areas.<sup>6</sup> The program is also described as a crucial part of gaining financial independence from foreign, subsidized products and developing Nicaragua into a supplier of foodstuffs to the entire Central American region.<sup>7</sup>

The project aims to achieve these development goals through the distribution of *bonos productivos alimentarios* (alimentary productive vouchers) to 75,000 poor rural families over the course of five years. The vouchers promise the beneficiary families a list of items, including animals (typically a pregnant cow, a pregnant pig, and chickens), seeds, fruit trees, materials for constructing stables and a *biodigestor* (a container which converts cow feces into gas for cooking), among other things. The hope is that the items will not be treated as a gift, but rather an investment which will lead to a sustainable future income. The families agree to not sell the animals, but they may sell their animals’ products (including piglets, eggs, etc.). The total cost of the items, including expenses for delivery, administrative costs,

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<sup>5</sup> CIPRES stands for the *Centro para la Promoción, la Investigación, y el Desarrollo Rural y Social*, or the “Center for Rural and Social Promotion, Investigation, and Development,” a non-governmental organization based in Managua.

<sup>6</sup> El Programa *Hambre Cero*.

<sup>7</sup> *Ibid.*

and classes on health and farming, is estimated to be about \$1500 USD per family; this puts the program's budget at about \$150 million USD over the course of five years.<sup>8</sup>

An important aspect of the program is that the items are only given in the names of the women. This has a dual purpose: first, practically speaking, the women are less likely to sell the animals right away,<sup>9</sup> and studies of similar programs have shown that women are more likely to spend money on the family rather than status symbols.<sup>10</sup> Secondly, the program hopes that giving the items to the women will empower them by giving a leadership role in the family and raising their self-esteem.<sup>11</sup> The women must form cooperative groups with other local beneficiaries and agree to contribute 20% of the amount they receive from the program (about \$250 USD) into a communal fund. This fund can be used for community projects, and is administered by an elected directive junta.

The administration of the *Hambre Cero* project is worth mentioning, as the organizations through which the program has been implemented has drawn controversy from civil society. The Agricultural and Forestry Ministry (MAGFOR) coordinates the program at a national level and works locally with Citizens Power Councils (CPC). The CPC are responsible for selecting which families in each community will be beneficiaries of *Hambre Cero*, and they work with MAGFOR to monitor the progress of the project and aid in *capacitaciones* (training classes).<sup>12</sup> Funding from the program comes from various sources, including the World Bank (which has approved \$50 million USD in loans to the program),<sup>13</sup> as well as a petroleum loan deal between President Ortega and Venezuelan president Hugo

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<sup>8</sup> Combate a la Pobreza, *Hambre Cero*. Nicaragua. MAGFOR. 2007.

<sup>9</sup> El Programa *Hambre Cero*.

<sup>10</sup> Juan A. Rivera; Daniela Sotres-Alvarez; Jean-Pierre Habicht; Teresa Shamah; Salvador Villalpando. Impact of the Mexican Program for Education, Health, and Nutrition (Progesa) on Rates of Growth and Anemia in Infants and Young Children: A Randomized Effectiveness Study. *JAMA*. 2004;291(21):2563-2570.

<sup>11</sup> Téllez Robleto, Delmira Francisca. Pobreza, Autoestima, Salud, e Higiene. Nicaragua. Instituto Nacional Tecnológico. Departamento de Comercio y Servicio. Jalapa, 2007.

<sup>12</sup> See the "critiques of the program" section for more discussion about the CPC, as well as a more complete description of their structure and purpose.

<sup>13</sup> Sandoval, Consuelo. "Cincuenta Millones de Dólares en Condiciones Blandas." El Nuevo Diario 2 Feb. 2007.

Chavez.<sup>14</sup> There are currently two groups of beneficiaries, those who began receiving benefits in 2007 and those from 2008, with another round of beneficiaries scheduled to begin receiving the benefits of their vouchers in 2009.

### **Justification for the Study**

Now, with the framework of the political and historical climate of Nicaragua, as well as the ideology, structure, and goals of the *Hambre Cero* program, the questions arise: why should one conduct a study of the program, and why focus the study specifically on the health of the female beneficiaries? To begin, accountability and outside observance are always important for government programming, especially programs of such a large scale. *Hambre Cero* has already been criticized for such things as authoritative control of the CPC,<sup>15</sup> the use of Venezuelan funds which do not have to be reported to the National Assembly,<sup>16</sup> showing favoritism to Sandinista party members,<sup>17</sup> spending too much on administrative expenses, and creating dependency on the State.<sup>18</sup> These criticisms will be discussed further in the “Critiques of the Program” section. In light of these critiques, there is presently a great opportunity to study the project in its early phases so that problems can be adjusted before the program is expanded.

Next, why focus on the *health* of female beneficiaries when the program is meant to aid in rural *economic* development? This study begins with the foundational belief that economic status and level of health are inherently connected.<sup>19</sup> Low incomes correlate with low living standards and low levels of health and little access to curative healthcare. In turn,

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<sup>14</sup> Equipo Nitlapán-Envío. "Esperanzas, Temores, y Espejismos en el Horizonte." *Revista Envío* Jan. 2007.

<sup>15</sup> Cuadra, Rosario, and Damaris Ruiz. "CPCs Around the Country are Waiting for 'Guidance' from Higher Up." *Revista Envío* Mar. 2008.

<sup>16</sup> McKinley, Jr., James C. "Nicaraguan Councils Stir Fear of Dictatorship." *New York Times* 4 May 2008.

<sup>17</sup> Equipo Nitlapán-Envío. "Sixty Days On: Signals, Seals, and Superficiality." *Revista Envío* Mar. 2007.

<sup>18</sup> Alvarez, Gustavo. "Desinformación Opaca Programa 'Hambre Cero'" *El Nuevo Diario* 7 May 2007.

<sup>19</sup> Knowledge about the connections between educational level, socioeconomic status, and level of health was gleaned from a class taught at Emory University in Spring 2007 entitled GHCS 101: Introduction to Global Health, taught by Peter J. Brown.

low health leads to lost income because of medical costs and days unable to work because of sickness. The poor are further trapped in this cycle by limited access to credit and lack of agency by which they may advocate for their rights in government.<sup>20</sup> Therefore, I argue that it is justifiable to study the health effects of an economic development program because one should affect the other, and vice versa.

Also, the women are an important focus of this research because of the global impact of the “feminization of poverty” phenomenon. According to a pamphlet distributed to the employees of the *Hambre Cero* program, the feminization of poverty is “the category of analysis that alludes to the disproportionate representation of women among the poor of the world and of Nicaragua.”<sup>21</sup> Not only are there more women counted among the world’s poor, but a majority of poor households are headed by single women. Women are particularly affected by poverty because they suffer more from early pregnancies, low levels of education, and lack of career expectations and opportunities. The gender gap in poverty is also made worse by the cycle of poverty, “in which the factors contributing to and the consequences of being poor become self-perpetuating and lifelong.”<sup>22</sup> Because of the influence that women have on children, giving women opportunities to break out of this cycle can have positive effects for both the women and their families.

Finally, because the *Hambre Cero* program is so new to Nicaragua, there has been very little formal research conducted on it. There have, however, been similar program implemented and studied in other Latin American countries, including the PROGRESA program in Mexico<sup>23</sup> and the *Hambre Cero* program in Brazil.<sup>24</sup> The success of these

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<sup>20</sup> Myers, Jane E., and Carman S. Gill. "Poor, Rural, and Female: Under-studied, Under-counseled, More At-risk." *Journal of Mental Health and Counseling* 26 (2005): 225-42. See Image 1 on Page 31 for a visual representation of this cycle.

Also, see figure 1 for a visual model of this cycle.

<sup>21</sup> *El Programa Hambre Cero*.

<sup>22</sup> Myers and Gill.

<sup>23</sup> Behrman, Jere R., and Piyali Sengupta. "Progressing through PROGRESA: An Impact Assessment of a School Subsidy Experiment in Rural Mexico." *Economic Development and Cultural Change* 54 (2005): 237-75.

programs and the information shared about them through research has been helpful in the formation of other public health and development programs throughout Latin America, including in Nicaragua. Hopefully the information gained through the study of *Hambre Cero* in Nicaragua will add to the general body of public health knowledge and be considered in the development of other programs in the future.

## **Methodology**

### Setting

My research focused on a case study of *Hambre Cero* beneficiaries in Jalapa, a town in the northwestern part of Nicaragua in the province of Nueva Segovia. Jalapa is located near the Honduran border, and was therefore the setting of much guerilla and military activity during the Contra War. Political sentiments in the area are mixed, although the town recently elected a Sandinista mayor. The area's main economic activities include the production of tobacco and coffee; corn and beans are also grown, but usually as a subsistence crop. The *Hambre Cero* program in the area currently has 740 registered beneficiaries in 76 communities.<sup>25</sup> Some started receiving benefits in 2007, and another group was added in 2008.

### Method

This study was conducted as part of an Independent Study Project through the School for International Training in Nicaragua. Funding assistance was provided by a grant from CIPA (the Center for International Programs Abroad at Emory University) and the Institute for Developing Nations. Research was limited to four weeks between November 4 and

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<sup>24</sup> Takagi, Maya, Mauro Eduardo Del Grossi, and José Graziano Da Silva. La Reunión de 2006 de la asociación de Estudios Latinoamericanos, Mar. 2006, San Juan, Puerto Rico. El Programa *Hambre Cero* dos años después.

<sup>25</sup> Reporte de Beneficiarios por Area de Ubicacion. Nicaragua. MAGFOR. Programa *Hambre Cero*. 5 Nov., 2008.

December 4, 2008 with the goal of a written essay and oral presentation to conclude the study. Under the guidance of Engineer Saul Octavio Vivas, I focused my research on data from 10 of Jalapa's surrounding communities.<sup>26</sup> My visits to the communities included participation in *capacitaciones* regarding safe food preparation and storage. I spoke with the women about their perspectives on the program in the form of interviews and focus groups. Participant observation was also a significant part of my study, as I spent a lot of time in the communities and helped in animal vaccinations. All of the names of the women studied have been changed to protect their confidentiality. I also spent time in the *Hambre Cero* central office in Jalapa in order to observe the government perspective and the structure of the program's implementation.

### What I Hope to Include in my Analysis

Because of the political nature of this program, this research began with the need to investigate exactly what the program does, who does it, what they hope to accomplish, and what is the current status of the beneficiaries. Much of this background information has been included in the history and methodology sections. I then used this foundation to analyze how all of this may have changed the health status of the beneficiaries and their families. I use a broad approach to "health" for this analysis which looks beyond the traditional definition of health as merely a physical state of well-being. Because of the links between health and economic status, as discussed in the justification section, a holistic analysis of health should include physical as well as social and emotional health.<sup>27</sup> I also approached my research with the desire to understand the political climate and power dynamics which affect the women's level of empowerment and, therefore, their right to demand health services. Social impact and

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<sup>26</sup> These communities include Tauquil, San Antonio, San Rafael, Siuce, Namasli, Tastali, Las Neblinas, Linda Vista, and El Corozo.

<sup>27</sup> For further reading on holistic health and the importance of social impact analyses for health and development programs, see the following article: Steinemann, A. "Rethinking Human Health Impact Analysis." *Environmental Impact Assessment Review* 20 (2000): 627-45. Abstract. [Science Direct](#).

empowerment are more difficult to quantify than disease incidence rates and morbidity statistics, but they are equally valid and of great importance to the progress of public health. In summary, this project began with the goals of studying the prevention and control of disease in the communities, as well as the general state of holistic well-being as a result of the program. The final section also includes a brief analysis of critiques of the program to address not only areas where it is impacting health, but areas where it has the potential to do so and is falling short.

## **Biases**

### Personal Biases

In any research project attempting to analyze subjective responses to a program based on interviews and observation, it is necessary to also analyze the biases of the researcher and how those biases affect the interpretation of data. During my data collection process, my background and prior experiences, as well as my motivations for research, may have created biases in my analysis. To begin, I am a middle class white person from the United States, which obviously separated me from my interview subjects as an outsider and created a power dynamic with me as the teacher, rather than the student as I intended. Also, as a person from the United States investigating a program of the Ortega government, I entered with a lot of skepticism about the Sandinista party as an effective vehicle for social change, and tried to remain as nonpartisan as possible. I also carry the label of a journalism student, so I am generally cynical of government programming and was constantly fighting the urge to be an investigative journalist and dig for secrets. I am also a young woman, which affects this project specifically in that I have a bias towards programs which claim to focus development efforts on women. As a young person, I also tend to be more idealistic and focus on good intentions and visions rather than practicality and feasibility. I am also affected by the

institutions to which I will present by research, specifically SIT and the Carter Center, because I must seek to report the truth without the bias of what I may think they would like to hear.

### Biases of the Study

Unfortunately, due to time constraints, the reports of this study are based only my personal experiences from a handful of communities. Because I was traveling with an employee of the program, my interview subjects may have felt the need to report only good things for fear of losing benefits. Although interviews were conducted in private, women may have been afraid to speak about machismo and family dynamics which occur behind closed doors. There is very little data available about health statistics *before* the program, so any *changes* in physical health are self-reported by the women.

## **RESULTS OF THE INVESTIGATION**

### **Physical Health**

#### Preventative Care

From a public health perspective, preventative health and education are crucial to the long-term success of rural development. Changes in attitudes and practices are difficult to achieve, but they can continue to affect the communities in positive ways, even after the chickens and seeds provided by the government have run out. The first major step in disease prevention that the program has achieved has been the dietary changes of the beneficiaries and their families. This may seem obvious since the purpose of the program is to provide foodstuffs, but its importance should not be downplayed. Most women reported that their typical diet before the program, as well as that of their families, consisted of corn tortillas, beans, rice, and coffee with sugar. With very little variation, this was eaten for all three

meals. Doña Flor reported that her family, like many others, tried to grow other foods such as tomatoes, but it was difficult to get the money to buy the seeds in advance, and they risked losing money if the harvest was lost.<sup>28</sup> Now, beneficiaries of the program can *immediately* add eggs and milk to their diets, with the hope that in the *future* the animals will multiply and one day provide a source of chicken, pork, and beef. Also, Doña Elena, who has only been a beneficiary of the program for three months, is already eating tomatoes, onions, and ayote from seeds provided by the government.<sup>29</sup> The nutritional effects of this are obvious, and food diversity is crucial to preventing disease caused by lack of nutrients. Anemia and spina bifida were only two common diseases that were mentioned by the women which could be prevented with proper nutrition. From my own personal experience living with a beans-and-rice-based diet in the campo for several weeks, I can understand the excitement, as well as the changes in physical energy, that comes from eating new foods. Doña Elena, who is still waiting to receive her cow, reported, “We don’t have the cow yet, but we have the hope for a glass of milk.”<sup>30</sup>

Additionally, the changes in food diversity are not limited to those foods which are provided by the program; the idea of *Hambre Cero* is that the animals would be an investment which can bring additional income, rather than a gift. The products can be sold and the money used to buy other foods, which will hopefully be a long-term change. Doña Elena explained that she can sell her eggs for three *córdobas* apiece (about 15 cents), and buy “soap, a pound of sugar, anything.”<sup>31</sup> The freedom to buy varied foods, along with the encouragement of the engineers to eat more fruits and vegetables, is changing eating habits for the better.

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<sup>28</sup> Flor. "Interview with Doña Flor." Personal interview. 16 Nov. 2008.

<sup>29</sup> Elena. "Interview with Doña Elena." Personal interview. 14 Nov. 2008.

<sup>30</sup> Ibid.

<sup>31</sup> Doña Elena.

Something important to note in this section is that the addition of livestock to households without previous experience in this field can also be a serious *risk* to health, and should therefore be accompanied by sufficient technical assistance and training. For example, I regularly observed chickens in the kitchens of many of the homes. Occasionally, women would forget to wash their hands after removing the chicken from the kitchen, and then return to cooking, thereby risking contaminating the food with any disease the animal may have been carrying. Also, pigs are known to be a risk for carrying parasites, which would be dangerous if those parasites were to be transferred to members of the family. Classes emphasizing proper hand washing, cleaning of the animals' living areas, and vaccinations of the animals are crucial to preventing this opportunity for positive change from becoming a negative health hazard.

An additional positive change in disease prevention is the implementation of the *biodigester*, an apparatus in which cow feces is collected in order to channel natural gas to power a stove (see Image 2 on page 32 for a diagram). Normally, women in Jalapa use wood-burning stoves made of clay, which require a significant amount of firewood and produce smoke in the enclosed kitchen. The *biodigester* is a great tool for preventing respiratory diseases which result from smoke inhalation in the kitchen, and it also encourages sanitation practices since the cow feces must be collected and placed in the *biodigester*. This is also a good strategy for reducing the amount of firewood used for cooking and improving environmental health. Unfortunately, very few women have actually made use of the apparatus, and have still not even completed its construction. An engineer reported that this is usually due to one of three reasons: Firstly, the women are afraid that their food will taste like cow feces because it is cooked with the gas. Doña Magda, however, who owns a working *biodigester*, was happy with how her stove cooks and did not mention any irregular tastes.<sup>32</sup>

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<sup>32</sup> Magda. "Interview with Doña Magda." Personal interview. 24 Nov. 2008.

Secondly, many women are afraid that the *biodigestor* will explode because it is a large quantity of gas covered only by plastic. I was assured that with basic safety precautions, this was not a great risk. And thirdly, an engineer reported that some women simply do not put in the work to maintain it and make it work. Unfortunately, because of the lack of use, the program in Jalapa has decided to no longer provide the *biodigestors* on the list of items for new beneficiaries, or at the very least provide a cheaper version with a thinner form of plastic.<sup>33</sup> This is a missed opportunity for the program; it seems that with a little more education concerning the device, there could have been a positive change for preventative health.

### Curative Care

Curative care is less related to the program than preventative, and there have been fewer changes in this regard. Health services have been offered for free since the election of the Sandinista government in 2006, although transportation to the hospital in Jalapa is difficult for some communities. The ways in which the program has led to changes in access to care, specifically the building of roads, will be discussed later in the “‘Political Health’ and Empowerment” section. Immediate, local care for diseases such as malaria and dengue fever, common near the Honduran border, is currently being addressed by another government program which utilizes local health promoters. It would be unnecessary to replicate this type of service with *Hambre Cero*. In general, the project has seen more advances in long-term, preventative care than short-term, curative relief due to the focus of the program.

### **Mental Health**

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<sup>33</sup> In my opinion, this is not a solution to the problem because the women who were afraid of explosions will now only have more reason to be skeptical. Perhaps women who have been in the program for some time and proven themselves responsible can request a (normal) *biodigestor* to be installed.

Another aspect of health to consider is the mental health of the beneficiaries, since this is a key factor in the cycle of poverty and a necessary part of working towards empowerment.<sup>34</sup> *Hambre Cero* aims to empower women by giving them ownership of the animals and that responsibility in the family, so I sought to investigate whether it has, in fact, changed the emotional health of the women, as well as investigate what the men think about this new role change.

### Emotional Health and Family Dynamics

Nicaraguan men, especially in rural areas, have a reputation of *machismo*.<sup>35</sup> When I asked one woman about what she normally does for work, she simply replied, “I work in the kitchen.”<sup>36</sup> Doña Elena also commented that “there are men that say, ‘I am the head, not the tail.’ So they don’t let women develop themselves...There still exist people who say that the woman is for making tortillas...cooking beans...being the mother...and the men bring soap and sugar and everything home. And a lot of times they’re drunk.”<sup>37</sup> Thus, an important part of mental healthcare in this context is building the self-esteem of the women and leading them to feel that they have a purpose beyond the kitchen. One of the ways in which the program is doing this is by making the women responsible for reporting to the engineers, so that the women must be kept informed about family finances. Although the men typically take care of the animals given by the program, all reports of births, infections, vaccinations, etc. are handled by the women. I observed vaccinations of chickens and cows, and the women always chose the date of the vaccination, collected the animals, provided their own *cédula* (identification number), and most importantly, paid for the medicine. This means that the

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<sup>34</sup> Myers and Gill.

<sup>35</sup> Machismo is a societal system of sexist attitudes and practices favoring men, which is very common in Nicaragua. For literature concerning this theme, see Lancaster, Roger N. Life Is Hard - Machismo, Danger and the Intimacy of Power in Nicaragua. New York: University of California P, 1994.

<sup>36</sup> Aida. "Interview with Aida." Personal interview. 16 Nov. 2008.

<sup>37</sup> Doña Elena.

men must become accustomed to sharing roles with the women, and the animals are not the property of the women in name only. Also, training classes on hand washing and storage of food were taught to women, but there was much discussion about the importance of enforcing the rules for the entire family. Doña Martha recognized that although she always remembers to cover the food, she also needs to take more of a leadership position in encouraging her family to do it, as well.<sup>38</sup>

All of these things show small changes in the efficacy and self-esteem of the women personally. However, one concern I had at the beginning of the project was that the men would not be receptive to the changes and would take over responsibility for the vouchers. In my investigation of the *men's* reactions to the women as beneficiaries, I discovered that men generally reacted in one of three ways:

1. The first group of men consists of those who are supportive of the women receiving the benefits because they see the structure as mutually beneficial; because their wives (or mothers, aunts, etc.) are beneficiaries, they help share responsibilities so that they and the rest of the family profit. Doña Flor said, "Of course my husband is happy [that I am a beneficiary] because in a way if I am blessed, he has to be blessed, right? Because we're spouses. You know that the Bible says that from the moment we unite, we're no longer two, but one. So if I gain, he gains, and my children gain."<sup>39</sup> Doña Camila added that her husband has helped her build all of the stables,<sup>40</sup> which she would not have been able to do on her own. So in general, this group of men has no problem with the women as beneficiaries because they believe that they themselves are benefiting equally.

2. The second group of men includes those whose wives have *not* been chosen as beneficiaries, and therefore think negatively of the program. Because research was generally limited to interactions with the beneficiaries and their families, it was difficult to get an idea

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<sup>38</sup> Martha. "Interview with Doña Martha." Personal interview. 15 Nov. 2008.

<sup>39</sup> Flor. "Interview with Doña Flor." Personal interview. 16 Nov. 2008.

<sup>40</sup> Camila. "Interview with Doña Camila." Personal interview. 18 Nov. 2008.

of the opinions of non-beneficiary families to determine exactly what they thought and how they treated the beneficiaries. In general, the feeling was that there were men in the communities who were bitter that they (or their wives, for whatever reason) had not been chosen, and therefore were not supportive of the women as beneficiaries.

3. The third group is the nonexistent men. This is to say that a significant number of beneficiaries are single mothers who may not have received benefits had they only gone to men. It does not matter to these women what the men may think, because they act as “both man and woman” in the house, as one of the single women explained.<sup>41</sup> For one woman, Aida, it is crucial that the animals are her property since her husband left with another woman just weeks after she started receiving benefits. She is now a young, recently-single mother but is continuing in the program.

These three groups are limiting and cannot represent the opinions of all men in Jalapa, but they are three common reactions to the women’s new role as beneficiaries and owners of property. My general analysis is that the men are generally supportive and helpful, but still learning to accept this new role for the women.

### Social Health

Women in the rural communities suffer isolation, physically because they live away from large population centers, but they also suffer isolation from other women because of the work for which they are responsible. The great amount of time necessary for travel, as well as cooking, means that many women do not have a lot of social experiences, and therefore poor social health. A crucial part of the sustainability of the program is the formation of cooperatives; this is an opportunity to improve the social health through the communication of the women within and between communities. The cooperatives, which meet about every 15

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<sup>41</sup> Susana. "Interview with Susana." Personal interview. 21 Nov. 2008.

days, bring together women of every stage of life – from young, single mothers to experienced grandmothers – to share experiences and support each other. Doña Camila, who worked at a hospital, and Doña Elena, who worked at a restaurant in the city, both emphasized how important it has been for them to share information on sanitation with their cooperatives.<sup>42</sup> Although there are still women who miss meetings to take care of children or because their husbands want them at home, organizations of women are becoming a new cultural norm and men are learning how to adjust and share roles. I saw this in the case of a woman in Namasli, whose husband had no problem feeding the baby while she helped with vaccinations. There is still much progress to be made in this sharing of gender roles. For single women like Lydia, there is now a group responsible for her and her financial status. There have been other important changes in the social organization of the women which will have profound impacts in the future of these communities, but these will be discussed further in the “political health” section.

### **“Political Health” and Empowerment**

Up to this point, I have discussed the project’s impact on such things as the diet, education, self-esteem, and social health of the women. All of these things are important to the present level of holistic health of the women. However, I argue that the most significant change brought by the program, as well as the change which has the potential to bring the greatest long-term impact on health, is the empowerment of the women. The women from this case study in Jalapa are caught in a cycle of poverty and have little power to break out of the trap; they lack power not only because they are women in a *machista* society, but also because they are poor. Empowerment which addresses both of these issues is necessary before sustainable changes can take place. Empowerment is a word which is frequently

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<sup>42</sup> Doña Camila. And Doña Elena.

overused and difficult to demonstrate, but in short, the program has made women realize that they, as citizens, have the right to make demands from their government and have the power to advocate for change. I will first define “empowerment” in the context of how it is being achieved by the program, and then offer predictions for how it may affect health in the long-term.

A basic definition of empowerment is *the ability to exercise choice*. This may include the ability to choose what to eat that day, ability to choose one’s level of education, or ability to choose government representatives. Empowering a woman so that she has the freedom and ability to make choices about her life requires three key elements: resources, agency, and achievements.<sup>43</sup>

### Resources

To begin, access to material, social, and human resources is crucial to providing both the material and educational bases for empowerment. The most obvious way that *Hambre Cero* provides these resources is through the material goods themselves; families who would not otherwise have been able to afford a cow or the installation of a *biodigestor* now have the resource and the power that comes with ownership of property. This is an especially important thing for single women, who would have to save for years from their single salary. The animals also function as a form of microcredit because they should result in profit for the animals in exchange for *cuotas*<sup>44</sup> paid to the cooperatives. Omar Cuñas, a CPC leader in Tauquil, insists that the middle classes can get loans from banks, but *Hambre Cero* is the only form of investment in the lower classes of Nicaragua. Doña Dolores, who makes money from

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<sup>43</sup> This framework for elements of empowerment is taken from the article: Kabeer, Naila. "Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment." *Development and Change* 30 (1999): 435-64.

<sup>44</sup> Installment payments of the 20% the women agree to re-invest in the cooperatives

a bakery she runs out of her home, was able to expand her business with the addition of cheese from her cow; the resources gave her a boost.<sup>45</sup>

Beyond the material goods, the resource of education should not be downplayed, since the technical assistance offered is not necessarily something that can be purchased. The engineers emphasize that the program should not be merely a *gift* from the government, but that the most successful beneficiaries are those who take advantage of the resource of the engineer and the knowledge they provide.<sup>46</sup> I imagine the value of this resource being similar to the “teach a man to fish” analogy<sup>47</sup>: If you give a woman a chicken, she’ll eat chicken for a day. But if you give a woman the education and resources to learn how to build proper housing for the chickens, vaccinate them against anthrax, diagnose parasitic infections, and collect and sell eggs to make a profit...then the whole family will eat for years to come. Classes on preventative healthcare (both for humans and animals) and the proper handling of pesticides are examples of some of the training that isolated *campesina* (rural) women may not have otherwise received. The program also claims to offer literacy classes for the women, although I did not personally observe this in Jalapa.

The organization of the cooperatives also has the potential to serve as a valuable resource for the women; if they operate as intended in the coming years, then they should generate a common fund of about \$15,000 USD to be used for community projects.<sup>48</sup> Unfortunately, this is only a projection, and there have been problems with women not paying the *cuotas*, so presently this can only be considered a *potential* resource if they project develops as planned.

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<sup>45</sup> Dolores. "Interview with Doña Dolores." Personal interview. 24 Nov. 2008.

<sup>46</sup> Please see the section “critiques of the program” for discussion on this question of whether the program is merely giving “gifts.”

<sup>47</sup> The analogy is that “if you give a man a fish, he will eat for a day, but if you teach a man to fish, he will eat for a lifetime.” That is, that giving material goods will only benefit the person until the goods are used up, but teaching a person to empower himself or herself to proactively help himself or herself will have long-lasting consequences.

<sup>48</sup> This is based on a calculation of \$300 per beneficiary (which is the 20% cuota they are required to pay), in a community cooperative fund of 50 women.

## Agency

The second element of empowerment is agency, or the ability to make decisions and negotiate. This includes opportunities to make decisions, such as varied available jobs so that one can choose one's work, as well as the level of power to enforce decisions, such as a woman's ability to make choices about family finances. In this way, food diversity can also be a sign of resources and agency; to use Doña Elena's experience again, women can sell the eggs for about 15 cents apiece or a liter of milk for about 40 cents, which gives them cash with which to *choose* their foods. This is a form of agency as it allows them to make personal choices about their diet.

It is very significant that *Hambre Cero* is a government program, because the majority of the women noted that they had never received any kind of direct government assistance before. Doña Candida said that "One day, we weren't seen, but today we're being taken into account."<sup>49</sup> Although some mentioned previous assistance from national and international non-governmental organizations, the women are now learning that they have a right to demand these things from the government and are learning how to navigate through their elected officials to create change. Part of this is due to the relationships between the engineers and the beneficiaries. Because the program delivers and vaccinates the animals, teaches *capacitaciones*, and monitors the cooperative meetings, they have no choice but to notice the living conditions of the people. In San Antonio, the women said that no one from the government really noticed the terrible conditions of the road up the mountain until the engineers started trying to deliver the animals. They knew that they needed the construction of a road so they could access the hospital in emergencies, as well as the construction of latrines for sanitation, but they did not know how to negotiate for this with the government.

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<sup>49</sup> Doña Elena.

Their connections with the engineers and CPC leaders have helped them negotiate with the local branch of Nicaragua's *Instituto de Desarrollo Local* (Institute of Rural Development) for these things.

*Hambre Cero* is also making advances in agency because it is teaching the women how to organize themselves. These rural communities have very little experience in social organizing and mobilization of groups, so the cooperatives, although imperfect, are a step toward this goal. The women are becoming accustomed to things that were not previously a part of the culture, such as note taking, financial record-keeping, and regular meeting attendance. They are also realizing how to divide officer positions and authority in an executive board. I observed an officers' meeting during which the women were deciding how to confront those not paying the *cuotas*, and they finally decided to use an engineer as an outside mediator. These things are helpful for effective organizing with structured groups. Learning how to navigate government, as well as advocate with NGO's, will be made easier with the experience of their own organizing.

### Achievements

Achievements, or well-being outcomes, make up the third element of empowerment. Basically, once women have resources and the agency with which to use them, what can they do with them? Many of the achievements realized may be small, but with great impacts on long-term health conditions. Doña Dilsia's expansion of her bread shop with the resource of milk will supplement her family's income everyday, and she will have the power to decide how to use it to benefit the family. Empowerment against machismo and a different role within the family will mean that women can more effectively enforce rules such as washing hands and covering food in the kitchen. On a slightly larger scale, the women of San Antonio are being empowered to advocate for roads, which will provide better access to curative care,

especially in emergencies. This applied to Namasli, as well, a community which is waiting for a bridge to be repaired so they don't have the transport their sick across the river in hammocks. This will also make it easier for their children to get to school, which is positively correlated with health status.<sup>50</sup> Women can peacefully advocate to the government for better credit and subsidized seeds, which will give them the ability to plant more, make more money, and improve the diet and living conditions of their families. Also, the effect on emotional and mental health that empowerment has on the women is a crucial part of breaking the poverty cycle discussed earlier. It is my hope that this empowerment will lead to a rise in the overall holistic health of the beneficiaries, although they may not immediately be apparent.

## **CRITIQUES OF THE PROGRAM**

After discussing the great contributions that *Hambre Cero* has made to the empowerment of the women and the improvement of health, I find it necessary to balance my analysis with a brief discussion of the critiques of the program. As mentioned earlier, the program has been very controversial, as much for the structure of the program as for the government that implements it. One criticism is simply that 25% of the program funds are spent on administrative expenses;<sup>51</sup> I agree with this criticism, and suggest that better communication and accountability between engineers would make the project more cost-effective. It is also true that there have been problems with families not being able to feed the animals, as well as supply problems with getting the cows to the families in a timely manner.<sup>52</sup> I believe that these are due to logistical problems rather than a flawed structure, and the engineers should be able to work them out over time. The cooperatives have also

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<sup>50</sup> Knowledge about the connections between educational level, socioeconomic status, and level of health was gleaned from a class taught at Emory University in Spring 2007 entitled GHCS 101: Introduction to Global Health, taught by Peter J. Brown.

<sup>51</sup> "Desinformación Opaca Programa *Hambre Cero*."

<sup>52</sup> Cáceres, Sinforiano. "We Need More Action and Less Talk About the Food Crisis." *Revista Envío* June 2008.

received criticism for not generating organization as intended.<sup>53</sup> Although I argue that the women are learning new organization skills, the empowerment does have a long way to go. The cooperatives are not independent from their government-employed engineers, there are divisions between groups over whose brother killed who during the war,<sup>54</sup> and not all women contribute to the fund equally. Non-beneficiaries cannot join, so they are not mobilizing the entire community. However, many of these rural areas had not previously experienced this type of community organizing, so there is much potential.

Some argue that there is a lack of clear goals and that the program is simply creating more dependency on the state for hand-outs.<sup>55</sup> This reflects the struggle between the good intentions of the program versus how it is actually being implemented in reality. The intention is to create organization and enterprise, leading to production of the goods rather than consumption of them, and the cooperatives and health promoters will eventually take responsibility for the program. If the program is simply a hand-out to buy votes, as many suggest, then the Sandinista party picked the wrong program; although the women profit right away from eggs and milk, the real purpose of the project is to be a catalyst for long-term change, and many of the beneficiaries will not see significant change without work and investment from both the government and the people. The program should lead the women to hold their government accountable for public works and equal provision of services, but it should make them independent at the same time. Whether this is really occurring is to be debated; many women are treating the items as gifts, and that is where the program fails because once they kill the chickens and sell the pigs, they are left with nothing. However, the structure exists to make this a sustainable effort with long-term results.

Other criticisms center on the political affiliation with the Sandinista party. The majority of this debate centers on the formations and use of the CPC, which are part of the

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<sup>53</sup> "We Need More Action and Less Talk About the Food Crisis."

<sup>54</sup> Doña Elena.

<sup>55</sup> Álvarez Hidalgo, Wendy. "Oftevan Vacas para el '*Hambre Cero*.'" La Prensa, 9 July 2007.

Ortega administration's "direct democracy" model, and consist of local councils organized by the Sandinista party to create links for civic participation in government. The councils are comprised of 16 elected officials, half of them men and half women, each of whom acts as a coordinator of a focus area in the community (health, youth, environment, etc.).<sup>56</sup> Critics of the CPC claim that they are merely parallel structures to existing civil society, but that they favor Sandinista party members and impose an authoritarian control on the "non-state sphere of organized civil society."<sup>57</sup> More extreme critics accuse Ortega of organizing the bodies as a tool to "control the society, to spy on the people."<sup>58</sup> Supporters of the structure, including Omar Cuñas, a CPC leader from Tauquil, insist that the councils are democratically elected and the "colors" of the members vary (that is, that they can be members of any political party).<sup>59</sup> I would argue that the administrative structure is completely Sandinista, and several meetings began with a lecture about the elections and the "power-hungry" PLC. The program is also confusing the state with the party since Doña Elena mentioned that she believes Jalapa was chosen to benefit because they had always been faithful to the party.<sup>60</sup> However, I can at least say that in my case study, I saw posters for both parties outside of the homes of beneficiaries, and although it seems unnecessary that the CPC is replicating the civil society structure,<sup>61</sup> it is providing a valuable link between rural communities and government. The use of Venezuelan funds is another political critique, since the money in effect bypasses the National Assembly,<sup>62</sup> and the loans will have to be paid back eventually. I think this is a dangerous norm for Daniel Ortega in general, but it is not necessarily affecting the beneficiaries individually, which was the focus of my research.

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<sup>56</sup> Cuñas, Omar. "Interview with Omar Cuñas, leader of CPC in Tauquil." Personal interview. 24 Nov. 2008.

<sup>57</sup> "CPCs Around the Country are Waiting for 'Guidance' from Higher Up."

<sup>58</sup> "Nicaraguan Councils Stir Fear of Dictatorship."

<sup>59</sup> Cuñas interview.

<sup>60</sup> Doñas Elena.

<sup>61</sup> "CPCs Around the Country are Waiting for 'Guidance' from Higher Up."

<sup>62</sup> "Nicaraguan Councils Stir Fear of Dictatorship."

My personal critiques focus on the efficiency in local organization. Engineers need to improve their punctuality in communication with the women, since several women complained about engineers being late in delivering items,<sup>63</sup> or not showing up for scheduled meetings.<sup>64</sup> Also, in terms of sanitation, it is not normally a custom in Jalapa to collect trash for disposal; occasionally trash is burned, but it is more often thrown into the street. The *Hambre Cero* engineers frequently disposed of used glass vaccine bottles in this manner. Visiting these communities gives the engineers the opportunity to encourage sanitation and set an example for the beneficiaries. Attention should be paid to encourage the responsible disposal of products used by the engineers for the prolonged protection of the residents of the communities. I would also suggest help for those who cannot pay for vaccines, since only comprehensive preventative health will eradicate the diseases from the area and be most cost-effective in the long-term.

## CONCLUSIONS

In entering this research, I hoped to focus on basic health and how *Hambre Cero* is working on the ground level. I thought I would be able to ignore the political structure and controversy of the project and provide an evaluation of whether it is achieving results, pure and simple. What I found, however, was that the project is inherently political, and it would be impossible to analyze its health impact without this crucial component. The program's most important impact on the holistic health of its female beneficiaries is the relationship it creates between rural communities and their governments, and the empowerment it brings to women to allow them to defend their rights in an effective manner. Through resources, including the material goods as well as educational resources and technical support, and changes in agency, including the experience of organizing as a cooperative and petitioning

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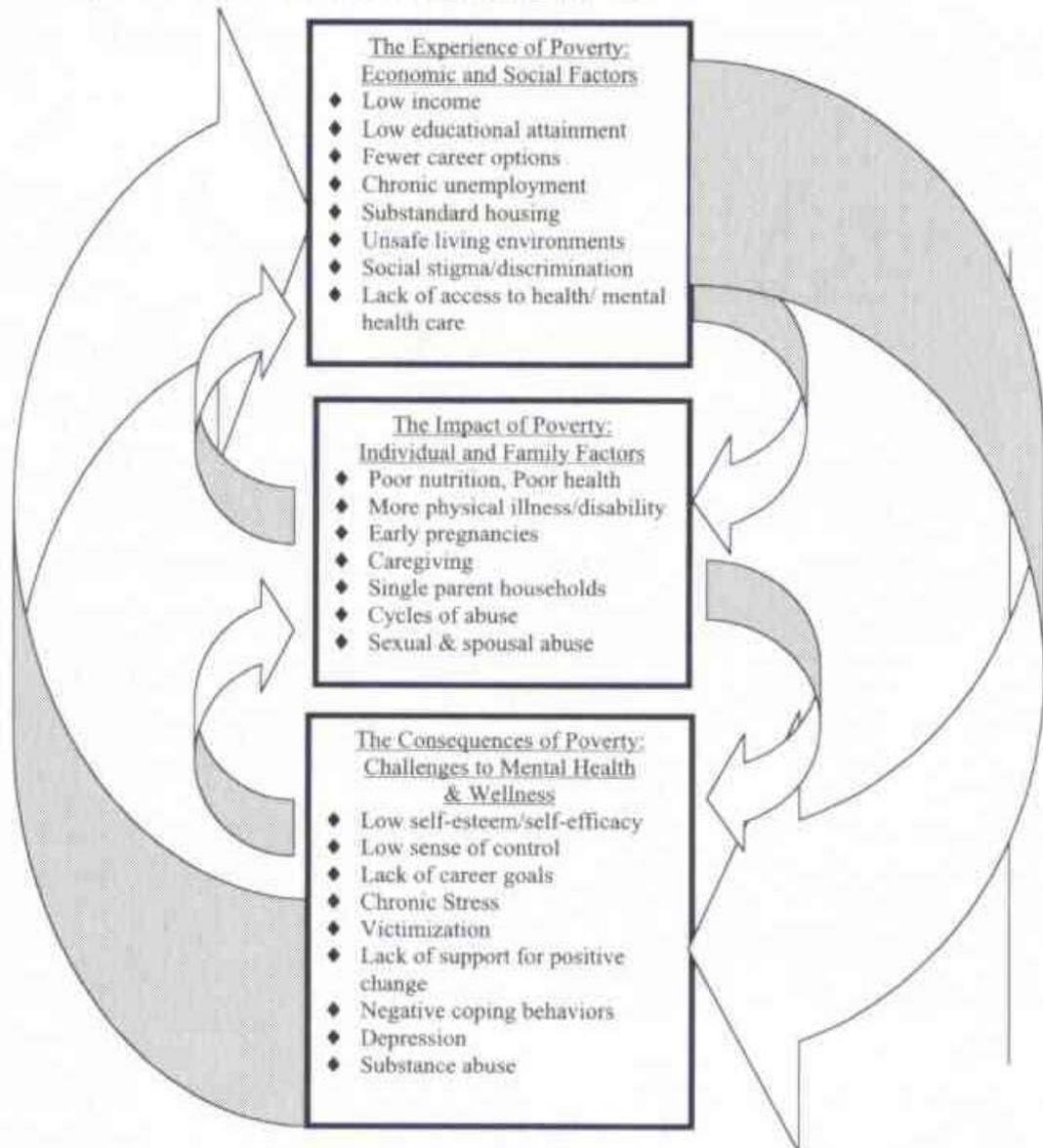
<sup>63</sup> Doña Elena.

<sup>64</sup> Isabel. "Interview with Isabel." Personal interview. 21 Nov. 2008.

for the construction of public works, the program had the potential to achieve great long-term changes in public health. There are valid criticisms, but I believe the potential of the program to be tremendous. If it can improve to operate as it should, then the framework is in place for the empowerment and long-term health benefit of the women.

# IMAGE 1

Figure 1. The Cycle of Poverty and Compromised Wellness



Adapted from the Cycle of Poverty and Mental Disorders, World Health Organization, 2001

**Image taken from Myers and Gill article.**

IMAGE 2

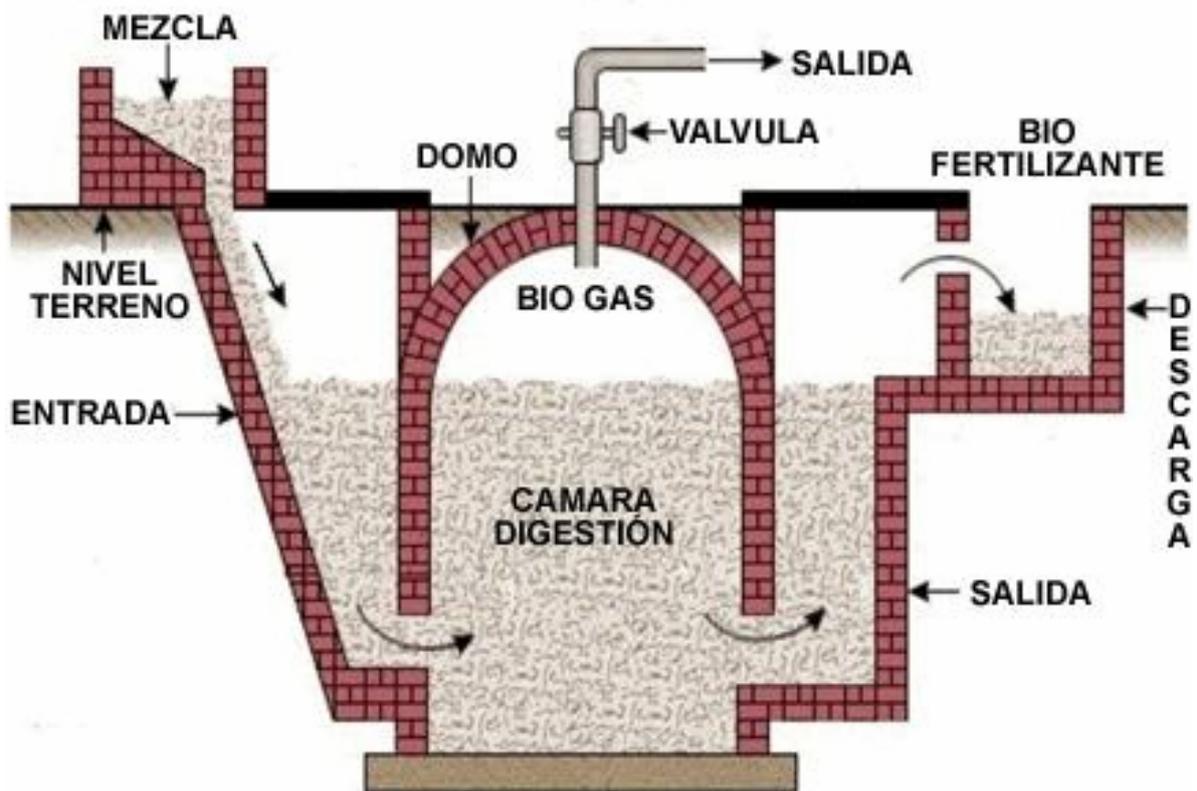


Image taken from "*Biodigestores y otras soluciones energéticas.*"

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