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Logan J. Kirsch April 10, 2013

“Con Amor Aprendemos”: Evaluating a Cervical Cancer Education Intervention in El Salvador

By

Logan J. Kirsch
MPH

Behavioral Sciences and Health Education

_____Cam Escoffery, PhD, MPH_____
Committee Chair

_____Karen Andes, PhD_____
Committee Member

_____Michael Windle, PhD_____
Department Chair

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By

Logan J. Kirsch

Bachelor of Science
University of Michigan
2011

Thesis Committee Chair: Cam Escoffery, PhD, MPH

An abstract of
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Abstract

"Con Amor Aprendemos": Evaluating a Cervical Cancer Education Intervention in El Salvador
By Logan J. Kirsch

Introduction. Few cervical cancer prevention programs exist in Latin America. Research highlights the need to couple public health education with health care access to address the excessive cervical cancer burden in low-resource settings. Interventions like "Con Amor Aprendemos" (CAA) are vital to enhancing public health literacy on topics related to HPV and cervical cancer. This evaluation was done to determine the effectiveness of the CAA program six to twelve months post-implementation.

Literature Review. Cervical cancer is one of the greatest contributors to the disease burden women face in Latin America. In El Salvador, it is the leading cause of cancer mortality among women. Using the social ecological model as a framework, the various macrosocial factors that contribute to a woman's ability to acquire screening and vaccination in this setting are evident. While some cervical cancer education programs exist, most were developed for use in the United States and few specifically focus on enhancing knowledge to modify behavior.

Methodology. CAA is a seven-week course offered through a network of churches in El Salvador. A knowledge, attitudes, and practices (KAP) survey was developed to collect quantitative data from past CAA participants in six different Departamentos of El Salvador. In addition, qualitative data from focus groups discussions (FGDs) with men and women in Sonsonate, El Salvador further informed KAP survey data.

Results. 159 individuals completed the KAP survey; six women and seven men participated in gender-specific FGDs. Data demonstrated that individuals who participated in the CAA program sustained knowledge six to twelve months post-intervention. FGD participants emphasized their increased knowledge regarding HPV and cervical cancer, as well as the value of their participation in the intervention.

Discussion. CAA effectively improves knowledge regarding HPV and cervical cancer. However, the data revealed some gaps in understanding. This further emphasizes the need for public health education, which can significantly improve efforts of prevention. Interventions like CAA can help transform cultural norms that impact HPV infection and cervical cancer. The CAA program effectively increases knowledge of participants and can ultimately modify behavior, which will contribute to the reduction of the cervical cancer burden in El Salvador.

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Chapter I: Introduction

Cervical Cancer

Cervical cancer and other human papillomavirus (HPV) cancers cause extensive morbidity and mortality among women worldwide (Yang et al., 2004). This is especially disconcerting given that cervical cancer has a single necessary cause, HPV, and is therefore one of the most preventable and treatable cancers affecting women (Natunen et al., 2011). In fact, research shows that roughly 70% of cervical cancer cases could be prevented through routine screening and use of the HPV 16-18 vaccine (Smith et al., 2007). According to GLOBOCAN, an International Agency for Research on Cancer (IARC) project aiming to provide current estimates of the global cancer burden, the incidence of cervical cancer among women in the United States in 2008 was 5.7/100,000 women and the mortality was just 1.7/100,000 women (International Agency for Research on Cancer, World Health Organization [IARC], 2012). Although these statistics illustrate the success in preventing and treating cervical cancer when proper screening and vaccination programs are available, women in low- and middle-income countries with limited access to such programs do not fare as well.

Disease Burden of Cervical Cancer in Latin America

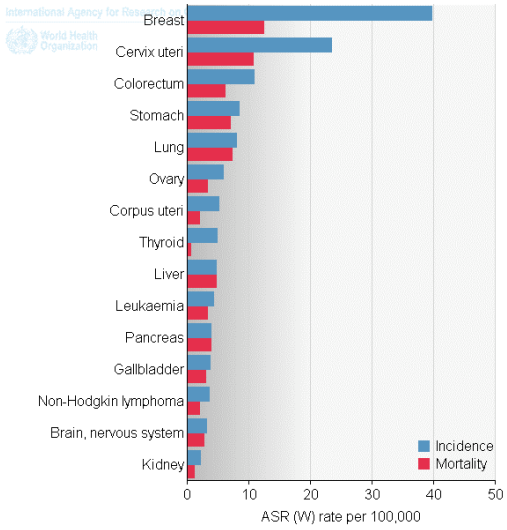
The immense burden of cervical cancer, especially in developing nations, has been well documented. Research consistently reports that over 80% of annually diagnosed cases of and deaths due to cervical cancer occur in low- and middle-income countries (Ditzian et al., 2011). Furthermore, research shows that cervical cancer resulting from sexually transmitted HPV infection occurs most often in developing nations where the burden of cervical cancer is highest (Vicari et al., 2010).

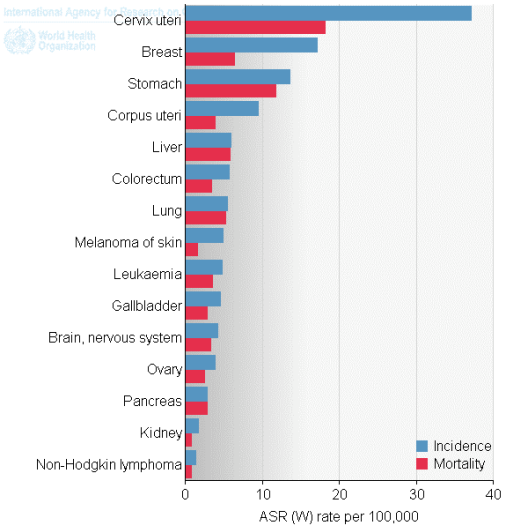
In Latin America, women experience a disproportionate burden of cervical cancer. Although GLOBOCAN data from 2008 reports that breast cancer had the greatest incidence (39.7/100,000 women) and mortality (12.4/100,000 women) among Latin American women, cervical cancer also causes extensive morbidity and mortality in this region. According to 2008 GLOBOCAN data on Latin America, cervical cancer had an incidence of 23.5/100,000 women and a mortality of 10.8/100,000 women, which is a similar mortality rate to that of breast cancer (IARC, 2012).

Disease Burden of Cervical Cancer in El Salvador

Within Latin America, there are varying rates of morbidity and mortality due to cervical cancer. In El Salvador specifically, cervical cancer has the most devastating impact of all cancers affecting women, with a reported cervical cancer incidence of 37.2/100,000 women and a mortality rate of 18.2/100,000 women (IARC, 2012). Comparing these statistics to those for breast cancer in El Salvador, which had an incidence of 17.1/100,000 women and a mortality rate of 6.4/100,000 women in 2008, the unrivaled impact of cervical cancer on the morbidity and mortality of Salvadoran women is evident (IARC, 2012).

Figure 1.1 Cancer Incidence and Mortality in Latin America and El Salvador





While these statistics certainly highlight the disproportionate burden of cervical cancer in El Salvador, the limited amount of surveillance data available in the country makes it challenging to develop a comprehensive understanding of the cancer burden. The fact that El Salvador has no national cancer registry further complicates this issue. Weak cancer surveillance coupled with a complete lack of data on HPV infection rates in El Salvador makes quantifying and addressing the cervical cancer burden difficult. In addition to incidence and mortality data on the disease, HPV rates are a necessary aspect of cervical cancer prevention and control as HPV infection causes nearly 100% of cervical cancer cases (Bosch et al., 2002).

Cervical Cancer Screening Interventions

With this information in mind, it is imperative to understand the benefits of primary and secondary prevention methods for cervical cancer. Screening and vaccination are crucial to diminishing cervical cancer incidence and mortality, especially in low- and middle-income countries. Papanicolaou's cervical smear (the Pap test) is the most common cervical cancer screening method utilized. With this technique, a medical professional uses an instrument to remove cells from a woman's cervix to check for abnormalities that could potentially develop into cancer. HPV co-testing can also be completed in a laboratory to check for the presence of HPV in cervical cells, which significantly increases a woman's risk for cervical cancer (Centers for Disease Control and Prevention [CDC], 2012b).

The Centers for Disease Control and Prevention (CDC) highlights cervical cancer screening guidelines and recommendations from the American Cancer Society (ACS), the US Preventive Services Task Force (USPSTF), and the American College of Obstetricians and Gynecologists (ACOG). Based on the guidelines recommended by these professional organizations, women should only begin routine screening for cervical cancer once they have

reached 21 years of age, regardless of the age of sexual initiation or other risk factors. In terms of screening frequency, it is recommended that women receive a Pap smear every two to three years through the age of 65, at which time only women considered high risk for cervical cancer should continue routine screening. In addition to the Pap smear, women age 30-65 may also have HPV co-testing completed every three to five years to monitor the presence of HPV in the cervix, which is a significant risk factor for the development of cervical cancer (CDC, 2013; CDC, 2012b).

While cytology-based screening programs such as the Pap smear have been used extensively in the developed world to reduce the cervical cancer burden, this method has not been as effective in low- and middle-income countries. Issues such as inadequate health care infrastructure and an insufficient number of properly trained health care professionals contribute to the unsuccessful utilization of cytology-based screening interventions in these regions (Ditzian et al., 2011; MacDonald, 2008). Such issues also lessen the ability of women in countries like El Salvador to access routine preventive screening. For example, although a 2008 National Family Health survey from El Salvador reports that of sexually experienced women age 15-49, 87.2% have had a cytology exam at some point in their lives, only 45% of these women report having had such an exam in the past year (FESAL-2008, 2009).

Acknowledging the ways in which structural features impact individual screening behavior, alternative cervical cancer screening methods like visual inspection with acetic acid (VIA) have been developed for low-resource settings (Ditzian et al., 2011). This form of screening involves visual inspection of the uterine cervix one to two minutes after applying a 3-5% solution of acetic acid to the area with a cotton swab. A positive VIA test result is characterized by the white color of a cervical growth, indicating abnormal lesions that should be

further investigated for malignancy. Abnormal growth is especially visible in the transformation zone, the area connecting the vagina and uterus where many cervical cancers originate.

VIA reduces the need for extensively trained health care professionals and advanced health care systems, which are key issues impeding the development of screening programs in low-income countries (Denny et al., 2000). This screening method also enables a single-visit "screen and treat" strategy; women are able to be screened and receive their results nearly immediately, allowing the health care provider with whom they are working to treat them if needed during the same visit (Denny et al., 2006). A single-visit "screen and treat" approach enhances the likelihood that women who screen positive for precancerous lesions will get the necessary treatment to prevent or diminish the progression of cervical and other HPV-related cancers. Cryotherapy, which uses nitrous oxide or carbon dioxide gas to freeze potentially pre-cancerous cervical cells, is the most simple and cost-effective treatment used in the single-visit "screen and treat" method (Sherris et al., 2009). This is an effective approach in low-resource settings, particularly in rural areas with limited access to medical care.

Cervical Cancer Vaccination Interventions

In addition to screening programs, vaccination is also essential to addressing the extensive burden of disease caused by cervical cancer. Nearly 70% of cervical cancer cases could be prevented through use of the HPV 16-18 vaccine (Smith et al., 2007). Two HPV vaccines are currently available. Gardasil, a quadrivalent vaccine approved by the U.S. Food and Drug Administration (FDA) for use among both men and women, covers four specific HPV strains: 16, 18, 6 and 11. HPV 16 and 18 are the two most common strains that cause cervical cancer, while HPV 6 and 11 are the two most common strains that cause genital warts. In addition to Gardasil, another vaccine called Cervarix is also available. However, Cervarix is only approved

by the FDA for use in women. This is a bivalent vaccine that only covers HPV strains 16 and 18, which are the most common cause of cervical cancer. Both vaccines require three injections over a six-month period; the second injection should be obtained one to two months after the first dose, and the third injection should be obtained approximately six months after the first dose.

According to the CDC, both Cervarix and Gardasil are licensed, safe and effective for females between 9 and 26 years of age. It is most effective if girls between the ages of 11 and 12 receive all three doses of the vaccine in order to acquire protection against the most prevalent strains of HPV before sexual debut. However, girls and young women between the ages of 13 and 26 should receive the vaccine if they did not get all three doses when they were younger. Only Gardasil is considered licensed, safe and effective for use in males between 9 and 26 years of age. Gardasil is recommended for boys between the ages of 11 and 12, as well as for boys and young men ages 13 to 21. However, men may receive the vaccine up through age 26 if recommended by their physician (CDC, 2012c).

Unfortunately, issues such as infrastructure, economics, and medical providers have all contributed to the difficulty faced by low-resource countries in implementing vaccination programs. Perhaps unsurprisingly, one of the main problems surrounding HPV vaccination in regions like Latin America is the cost of the vaccine; subsidizing the cost of the HPV vaccine would be necessary to employ its widespread use. These challenges aside, however, the Global Alliance for Vaccines and Immunization (GAVI) regards the HPV vaccine as one that could have the largest impact on the total disease burden in low- and middle-income countries (Natunen et al., 2011). The HPV vaccine's potential to reduce the pervasive morbidity and mortality as a result of cervical and other HPV-related cancers emphasizes the significance of this vaccine, particularly in resource-poor settings like El Salvador.

A multitude of concerns surrounding vaccination impact the availability of the HPV vaccine in a country like El Salvador. As aforementioned, economic concerns, health care infrastructure, and the availability of trained medical professionals are all necessary components of an effective vaccination program. However, similar guidelines to those outlined by the CDC for HPV vaccination in the United States could be utilized in Latin American countries. For El Salvador, the most effective way to ensure that youth (especially girls between the ages of 11 and 12 years old) receive the HPV vaccine may be to include the vaccine in the country's National Immunization Plan. La Asociación Salvadoreña para la Prevención del Cáncer (ASAPRECAN), the main cancer prevention association in El Salvador, is currently working with legislators to encourage the government to include the HPV vaccine in the National Immunization Plan. Incorporation of the vaccine in this countrywide plan would enhance the likelihood that young girls receive all three doses of the vaccine in a cost-effective, logistically sound manner. Alternatively, school-based vaccination programs may be another way to ensure that young girls have access to the multiple-dose HPV vaccine in El Salvador (Vicari et al., 2010).

Determinants Related to Cervical Cancer Screening and Vaccination

While issues of health care access and the availability of trained medical professionals are known obstacles affecting preventive care in low-resource settings, public health education is an equally important issue. A reduction in the cervical cancer burden is possible, and perhaps only plausible, through education. Enhancing educational efforts among Latinos will increase public health literacy in regard to HPV, highlight the association between HPV and cervical cancer, and emphasize crucial primary and secondary prevention methods (Kobetz et al., 2010). Education will also correct false information present within the Latino community, such as the idea that

cervical cancer is caused by physical trauma or poor hygiene, and that cytology exams are unnecessary if a woman has been vaccinated or does not show symptoms of disease (Flores & Bencomo, 2009; Adams et al., 2007). Further, educational interventions can assist in altering behaviors that increase the risk of HPV transmission and cervical cancer, like number of sexual partners, condom use, and tobacco use (Vanslyke et al., 2008). The inclusion of men in this educational effort is essential considering that they have a clear stake in HPV transmission and often a strong influence on women's sexual behavior and access to health care (Schiffner & Buki, 2006; Vanslyke et al., 2008; Traviño et al., 2012).

"Con Amor Aprendemos" Education Intervention

Aware of the challenges faced by the Latino community in regard to cervical cancer prevention and control, Dr. Lisa Flowers, a gynecologist at Emory University's School of Medicine, worked with the American Cancer Society and the Spirit Foundation to develop "Con Amor Aprendemos" (CAA). CAA is a culturally and linguistically appropriate, community-based cervical cancer education intervention designed for Latino couples. This educational program focuses on HPV and cervical cancer prevention and screening, and is implemented through faith-based organizations by trained community health workers. The program covers a broad range of topics through seven sessions that each last roughly two hours. Though Dr. Flowers originally created this intervention for use with Latinos in the greater Atlanta metro area, she has since adapted it for use in Latin America. Working in collaboration with Dra. Lisseth G. Ruiz de Campos, the President of ASAPRECAN, Dr. Flowers modified the language and content of CAA in order to enhance its cultural relevance for use in El Salvador.

Over the summer in 2011, the CAA intervention was administered to individuals through the network of Cristiana Josue Churches in Sonsonate, El Salvador. Data was collected from

CAA participants using pre- and post-intervention evaluation surveys. Data from 303 CAA participants demonstrated that the CAA intervention effectively increased participants' knowledge of the causes of cervical cancer and the modes of transmission of the HPV virus. For example, the percent of correct answers to the question "An STI causes cervical cancer" rose from 66.4% to 92.6% from pre- to post-test ($p=0.000$). Similarly, the percent of correct responses to the question "HPV infection can cause cervical cancer" rose from 60.6% to 87.5% from pre- to post-test ($p=0.000$). The ability to label female reproductive anatomy also increased significantly from pre- to post-test ($p=0.000$). These notable increases in participants' knowledge regarding HPV and cervical cancer indicate that the CAA intervention is having a strong impact on knowledge among participating Salvadoran men and women.

Significance

Currently, there are few cervical cancer prevention programs in Latin America. Previous research highlights the need to couple public health education efforts with health care access in order to address the excessive cervical cancer burden in low-resource settings like El Salvador. Screening, vaccination, and education are arguably the three most important factors when devising an effective plan to reduce the cervical cancer burden. Educational interventions such as CAA are vital to enhancing public health literacy on topics related to HPV and cervical cancer. Although data from past CAA participants show that the intervention effectively increases knowledge, collecting follow-up data from these initial participants is necessary to demonstrate that knowledge is sustained over time. Further, this data is vital to establish that enhanced knowledge translates to behavior change among participants. Accordingly, this study was conducted in June and July of 2012 as an evaluation of the CAA program. This evaluation will provide sufficient data to highlight the ways in which the knowledge, attitudes, and behaviors of

previous CAA participants changed roughly six to twelve months post-intervention. In addition, the study will also emphasize the value participants' place on their involvement with the CAA program.

Research Questions

Follow-up evaluation of the CAA program is essential to measure long-term effects of the intervention. Using these data, it will be possible to demonstrate whether or not CAA participants maintained the knowledge they gained from the intervention over a follow-up period of roughly six to twelve months. Perhaps more importantly, though, the data will help highlight if increased knowledge leads to behavior change among participants, such as increased cervical cancer screening rates. Evaluation data will also emphasize individuals' risk perception and protective behaviors such as condom use. Finally, both the quantitative and qualitative data acquired through the evaluation will help to illustrate the value of the CAA intervention for participants, demonstrating the significance of these public health education programs in low-resource areas.

The overall purpose of this research is to evaluate the effectiveness of the CAA intervention. The program evaluation will be answered on the following questions:

1) To what extent does the CAA program enhance participants' knowledge regarding HPV and cervical cancer six to twelve months post-intervention?

2) Does CAA improve individuals' perception of risk related to HPV infection and cervical cancer?

3) What are the behavioral outcomes of the CAA program?

4) Does CAA increase participants' awareness and use of condoms?

5) Do individuals who participate in the CAA intervention value their experience in the program?

Together, these questions will measure the effectiveness of the CAA intervention and whether intended results from the program are sustained over time.

Chapter II: Literature Review

This chapter will present information from a literature review conducted to describe cervical cancer, existing research on the disease, and effective programs that prevent cervical cancer and sexually transmitted infections like HPV. Basic demographic information for El Salvador will also be highlighted to provide context for this follow-up evaluation. The social ecological model will be used as a theoretical framework to further explore barriers to cervical cancer screening and vaccination, particularly in low-resource settings like El Salvador.

El Salvador Demographic Information

Located along the Pacific Ocean, El Salvador is the smallest country in Central America. It is divided into three main topographic regions: the hot, narrow coast along the ocean; a central plateau crossing east to west between two mountain ranges; and northern lowlands that are bordered by a high mountain range crossing over the Honduran border. The central plateau has several valleys full of rich, volcanic soil where much of the country's agricultural work takes place. The capital, San Salvador, is also situated within the central plateau and is surrounded by five active volcanoes. As such, this region experiences consistent earthquakes and volcanic activity. El Salvador has an extensive network of rivers as well as several large lakes, including Ilopango and Coatepeque. The geographic diversity present within this small country can complicate travel throughout the region, particularly during the rainy season when erratic weather decreases functionality of the roadways (Encyclopedia of the Nations, 2013).

According to the World Bank, the population of El Salvador in 2011 was roughly 6.2 million people with about 60% of the population living in urban areas. In 2010, it was reported that 36.5% of the population was living below the poverty line (CIA World Factbook, 2013). El Salvador has a relatively young population, with a mean age under 20 years. Life expectancy at

birth is 72 years and the general fertility rate is two births per woman. The adolescent fertility rate is about 77 per 1,000 women aged 15-19 years. In 2011, it was estimated that 96% of children were enrolled in primary school, but only 68% of adolescents were enrolled in secondary school (The World Bank, 2013).

In regard to health care infrastructure, El Salvador's health care system has both a public and private sector. There is a third unofficial component that includes non-governmental organizations and faith-based institutions. The public sector of El Salvador's health care system is financed by the Ministry of Health (MOH) and is said to cover 80% of the population, though 50% is a more realistic estimate. The public sector includes the MOH and Social Welfare, the Salvadoran Social Security Institute (ISSS), the Higher Council for Public Health, Military Health, and Teacher's Welfare. Throughout the country there are roughly 16 hospitals run by the MOH and 10 hospitals run by the ISSS. There is no formal, specialized training for medical professionals in El Salvador. Aside from physicians and nurses, health promoters, who complete primary education and twelve weeks of health training, perform the majority of the medical work in the country (Pan American Health Organization—World Health Organization, 2001).

Basic Cervical Cancer Biology and Epidemiology

Cervical cancer can develop in the cervix of women. The cervix, sometimes referred to as the uterine cervix, is the part of a female's body that connects the uterus with the vagina. Cervical cancer may develop if normal cells in the cervix gradually acquire pre-cancerous lesions that ultimately turn into cancer. The cervix is comprised of two main types of cells: squamous cells and glandular cells. These two cell types meet in an area known as the transformation zone, which is where most cases of cervical cancer occur due to the rapidly

evolving nature of the cells in this region. Cell modification is especially prevalent in the transformation zone during puberty and pregnancy (American Cancer Society [ACS], 2013).

There are two main types of cervical cancer: 1) squamous cell carcinoma, which is the most prevalent type of cervical cancer, and 2) adenocarcinoma. Though other types of cancer can develop in the cervix, these are the two seen most often in cervical cancer cases (ACS, 2013]. Nearly all cases of cervical cancer are caused by the human papillomavirus (HPV); 16 and 18 are the two most common HPV strains that lead to the majority of cervical cancer cases in women (Bosch et al., 2002).

Cervical Cancer in El Salvador

Cervical cancer is especially prevalent in El Salvador (IARC, 2012). A 2005 study by the El Salvador Ministry of the Economy's Statistics and Census Bureau estimated that 74% of deaths in the country were due to non-communicable diseases. Of all non-communicable diseases impacting Salvadorans, malignant neoplasms such as cervical cancer ranked third in this report. In fact, nearly 7% of deaths due to cancer in 2004 in El Salvador were from cervical cancer (Pan American Health Organization-World Health Organization [PAHO], 2001).

The Social Ecological Model: Macrosocial Factors Influencing Cervical Cancer Prevention

In addition to understanding the biology and epidemiology related to cervical cancer, it is crucial to recognize the ways in which macrosocial determinants like economics and education impact health outcomes. El Salvador is a small, coastal country in Central America that borders the Pacific Ocean along the south and west, Guatemala to the north, and Honduras to the east. El Salvador has a relatively young population; over 50% of Salvadorans are under the age of 25 (PAHO, 2001). The country, however, is very poor. In 2010, 36.5% of the population was living below the poverty line (CIA World Factbook, 2013). It is important to acknowledge the

numerous factors contributing to these high rates of poverty in El Salvador, including educational attainment, employment opportunities, and access to medical care, among others.

The social ecological model is often utilized as a theoretical framework to further explore macrosocial determinants of health like education, income, and policy. This model can be used effectively as a theory-based framework because it acknowledges the interconnected nature of social factors that exist within a given environment. The model addresses multiple dimensions, including the individual, interpersonal, communal, societal, and policy levels (Gregson et al., 2001). The comprehensive perspective provided through a social ecological framework is useful for identifying the many ways in which barriers impact cervical cancer screening and vaccination among women, especially those in resource-poor settings.

Individual Level. The most fundamental aspect of the social ecological model is the individual level. There are many individual-level factors that impact women’s ability to obtain cancer screening and vaccination. A few of these factors, such as knowledge and financial well being, are especially relevant in low- and middle-income countries. In places like El Salvador, women often find themselves in a cycle of poverty that continues generation after generation. A report by the Pan American Health Organization (PAHO) reveals that roughly one out of every ten girls in El Salvador leaves school because of economic problems in her family. As these girls forego education to work or help take care of a family, they find themselves with limited knowledge and a minimal income (PAHO, 2001). This can translate to an inability to obtain routine medical care, such as cancer screenings. It is particularly relevant for cervical cancer prevention, which includes not only consistent screening, but also vaccination against HPV, the sexually transmitted infection that causes the majority of cervical cancer cases.

Similar to the economic impact on women's ability to acquire cancer screening and vaccination, limited knowledge of the disease also impedes these preventive behaviors. A study by Dandash and Al-Mohaimeed (2007) highlights the notion that women with an insignificant understanding of breast cancer are less likely to engage in preventive medical care like breast self examination. This has similar ramifications for cervical cancer, where consistent screening can detect the disease in its early stages and offer more effective treatment options to enhance survival. Research from the National Cancer Institute (NCI) in the United States also notes that socioeconomic status (SES) appears to influence whether or not individuals follow cancer screening recommendations. Individuals with a lower SES tend to forego preventive medical care such as cervical cancer screening and vaccination, increasing the likelihood that if the disease manifests, it is caught at a later stage and more difficult to treat (National Cancer Institute [NCI], 2008). Considering education is even less available to girls in El Salvador, and that cervical cancer knowledge is minimal among the general population (as evidenced by baseline data from the "Con Amor Aprendemos" intervention), most Salvadoran women are likely not receiving the necessary screening and vaccination for cervical cancer prevention.

Further emphasizing the relationship among education, income, and health, results from a U.S.-based study by Ross & Wu (1995) highlight a positive association between education and health. Improved work and economic conditions, the availability of social and psychological resources, and an overall healthy lifestyle contributed to better health outcomes for women in this study. Employed women with strong social support and a healthy lifestyle were more likely to acquire routine medical care, which has significant implications for a disease like cervical cancer. Considering that so many Salvadoran women receive an inadequate education and are often un- or underemployed, it is evident why decreased psychosocial well being and an

unhealthy lifestyle contribute to reduced cervical cancer screening and vaccination rates in such women.

Interpersonal Level. In terms of cervical cancer prevention, there is considerable overlap between the interpersonal and communal levels of the social ecological model. Each of these levels addresses the significance of relationships and extensive networks of social support. Familial ties are especially important in Latin American countries like El Salvador where generations of a family sometimes live together under one roof. Collectivism, a perspective that emphasizes the interdependence of human beings and places the needs of family and community above those of individuals, is especially present in Latin cultures (Arredondo et al., 2008). The close relationships formed through both families and communities further enhance networks of social support; this has implications for cervical cancer prevention and control. Considerable research shows that including social support in programs and interventions increases screening behaviors by drawing on the strengths of relationships and community ties (Gotay & Wilson, 1998). Further, widespread networks of support can be protective against cervical cancer by enhancing women's self-efficacy and helping them overcome barriers to cervical cancer screening and vaccination (Arredondo et al., 2008).

On the other hand, familial relationships and community ties also have the potential to hinder women's access to preventive medicine. Although collectivism can enhance collaboration and empathy within a community, it also has the potential to prioritize the health needs of others, such as children or the elderly, over those of women. The patriarchal relationships that tend to exist in Latin communities also have the potential to prevent women from receiving routine medical care like cancer screening and vaccination (Arredondo et al., 2008). Further, a woman's husband or partner can increase her risk for HPV infection based on his past sexual experience

and whether or not he is monogamous within their current relationship. Considering this negative aspect of collectivism, as well as the potentially harmful impact of patriarchy within some Latin cultures, the need for public health education and health literacy in these communities is evident. It is crucial that both men and women understand the severity of HPV infection and cervical cancer, as well as the effective ways that exist to prevent the disease in order to increase the likelihood that women obtain the necessary preventive care (Schiffner & Buki, 2006; Vanslyke et al., 2008; Traviño et al., 2012).

Provider recommendation is another critical interpersonal influence on whether or not women receive screening and vaccination for cervical cancer. If health care providers are not up-to-date on current cervical cancer screening guidelines, or they are not recommending routine screening to their patients, women are less likely to obtain consistent cytology exams. Collaboration among medical professionals is critical to identifying and implementing effective screening strategies that will contribute to a reduction in the cervical cancer burden (Brouwers et al., 2011). Specifically for cervical cancer, health care professionals must also be aware of the benefits of HPV vaccination in order to effectively promote vaccine uptake among young women. The cervical cancer burden will only be reduced through routine preventive care, including both screening and vaccination. Health care providers play a critical role in ensuring the use of preventive care strategies, especially in low-resource settings like El Salvador.

Community Level. At the community level, media campaigns are necessary for increasing awareness about public health issues such as cancer. Public service announcements on the television, radio, and in print all help to enhance people's understanding of the prevention and treatment options available for specific diseases. The US Centers for Disease Control and Prevention (CDC), for example, currently has a campaign called "Inside Knowledge: Get the

Facts About Gynecologic Cancer". This campaign helps to raise awareness of gynecologic cancers and increase women's understanding of the significance of monitoring their own bodies for abnormalities (CDC, 2012d). Further, pharmaceutical companies like Merck, which produces the HPV vaccine, also spend large sums of money on marketing and promotion to increase awareness about the vaccine through television commercials, radio messaging, and print advertisements.

These public health campaigns are especially relevant in low-resource settings like El Salvador where public broadcasting, often through the radio, is one of the only ways for people to obtain news and public health education. In addition to radios in private homes, cars and trucks with loud speakers can be found driving slowly through city streets, blaring anything from popular music to political and public health campaign messaging. Health-related public service announcements, like those emphasizing the significance of cervical cancer screening and vaccination, can be delivered to large numbers of people by including them in public broadcasting efforts in low- and middle-income countries. Given that so many cancers are due to modifiable risk factors, these public health messaging campaigns are critical to minimizing the cancer burden. Campaigns have the potential to not only improve early detection and treatment outcomes, but also things like communication between patients and health care providers (Viswanath, 2005).

Public Policy Level. The broadest levels of the social ecological model offer the opportunity to assess macrosocial factors from a societal or public policy level. In regard to cervical cancer prevention efforts at this macro level, research points to the fact that a usual source of care is one of the strongest predictors of screening uptake among minority women (Selvin & Brett, 2003). This is especially relevant for women in low- and middle-income

countries who often lack access to adequate health care because of the limited number of health clinics and professionals in their communities (Tsu & Levin, 2008). When societies do not have the medical infrastructure necessary for routine care, it is nearly impossible to effectively promote cancer prevention efforts. According to the International Agency for Research on Cancer (IARC), El Salvador has no formal guidelines for cervical cancer screening (IARC, 2004). With insufficient guidelines for medical providers to follow, it is even more difficult to promote routine, preventive care. Furthermore, research suggests that women who say they have no usual source of care also report that they do not seek medical care because they do not believe they need it (Selvin & Brett, 2003). This mentality is detrimental to cervical cancer prevention efforts, as risk for cancer is present among all sexually active women whether or not they perceive symptoms. Accordingly, it is imperative that women understand the value of routine screening, as well as vaccination, in order to prevent cervical cancer morbidity and mortality (Flores & Bencomo, 2009; Adams et al., 2007).

Improving health literacy is crucial to successfully informing men and women about the realities of cervical cancer prevention and control. Governmental bodies and other influential organizations in resource-poor countries like El Salvador must develop programs to enhance access to health information, as well as people's ability to properly use such information (Nutbeam, 2000). Policies that emphasize the significance of regular medical care and preventive measures like screening and vaccination should be implemented in low-resource settings. Widespread availability and use of preventive medicine techniques will only work with the proper infrastructure and extensive support from governmental and non-governmental organizations alike. Despite these structural barriers to cervical cancer screening, community-based educational outreach has been shown to assist women in overcoming such barriers

(Nutbeam, 2000). Governmental organizations like the Ministry of Health need to continue fostering public health education programs, which are fundamental to enhancing health literacy among both men and women. In turn, these will educate citizens by highlighting the connection between HPV infection and cervical cancer and emphasizing the need for prevention to decrease cervical cancer rates.

Issues Surrounding HPV Vaccination

In regard to HPV vaccination specifically, there are numerous barriers to vaccine uptake in low-resource settings. These barriers exist despite strong evidence supporting the efficacy of both Gardasil and Cervarix in preventing cervical cancer. Perhaps surprisingly, religion is rarely cited in the literature as an impediment to vaccine uptake among Latina women and girls (Watts et al., 2009; Shelton et al., 2011). Cost of the vaccine, however, is often one of the main factors that inhibit widespread vaccination efforts. Further, the HPV vaccine requires three doses in a six-month time span. Completing all three doses within this time frame is challenging, even for girls in the United States. In fact, research shows that only about 50% of girls and young women receiving the vaccine in the US obtain all three doses (Laz et al., 2012; Hirth et al., 2012). Acquiring three doses of a vaccine over six-months is even less realistic for many adolescent girls in low- and middle-income countries like El Salvador, where women face larger barriers due to health care access and affordability (Kim et al., 2008; Agosti et al., 2007; Laz et al., 2012).

An effective plan for mass vaccination has not been identified in resource-poor settings, which creates an additional obstacle to vaccination efforts. While school-based vaccination programs have been suggested, the number of girls between the ages of 11 and 15 attending school varies extensively in developing countries, especially in urban versus rural areas. Many

girls are either not enrolled in school, or have left school to help with housework and raise a family (Sankaranarayanan, 2009). Effective educational campaigns with targeted health communication are necessary to contribute to the development of mass screening programs in which participants complete all three doses of the HPV vaccine within the recommended six-month period (Bello et al., 2011; Yeganeh et al., 2010; Laz et al., 2012).

Existing Effective Cervical Cancer Screening Programs

Current research suggests that effective cervical cancer screening programs designed for low- and middle-income countries require adequate financial resources, health care infrastructure, trained medical professionals, and extensive surveillance mechanisms for screening, treatment, and follow-up. Any successful screening program should also include an array of opportunities for health education (Malloy et al., 2000). Considering that nearly all cases of cervical cancer are caused by a preventable sexually transmitted infection – a modifiable risk factor – the significance of public health education cannot be overemphasized when devising a plan to address the cervical cancer burden. Educating people on the causal association between HPV and cervical cancer is vital to reducing the spread of HPV and consequently diminishing the incidence of cervical cancer in low-resource settings (Flores & Bencomo, 2009; Kobetz et al., 2010; Schiffner & Buki, 2006; Vanslyke et al., 2008).

The Guide to Community Preventive Services

The *Community Preventive Services Task Force* develops and disseminates "The Guide to Community Preventive Services", which highlights specific strategies that both work to encourage cancer screening and make it easier for individuals to obtain such screening. The Guide contains recommendations for breast, cervical, and colorectal cancers. The content from this Guide is especially relevant for low- and middle-income countries like El Salvador, where

public health and medical practitioners must determine the most effective way to utilize limited resources. The information provided through this Guide should be acknowledged and integrated when developing new cancer prevention interventions, as it has been derived from research on existing interventions that have been shown to be effective. Specifically regarding cervical cancer, the methods emphasized in the Guide include client reminders, one-on-one education, the use of small media, and provider-oriented strategies. These methods have been shown to effectively increase knowledge about cervical cancer, individual risk perception, and knowledge and beliefs of the advantages and disadvantages of screening and treatment options in current cervical cancer prevention programs (Sabatino et al., 2012). The Guide also encourages shared decision making between patients and health care providers so that patients can make informed decisions and be an integral part of their care; this is an important component of successfully navigating cancer treatment, diagnosis, and survivorship (Briss et al., 2004).

Research-Tested Intervention Programs (RTIPs)

The National Cancer Institute (NCI) highlights specific intervention programs that have been rigorously evaluated and shown to produce effective results. These Research-tested Intervention Programs (RTIPs) are endorsed by the NCI for successfully transforming research into practice and demonstrating the ability to modify behavior and improve health outcomes. Several of the RTIPs specifically address cancer through screening and educational interventions, much like the CAA program strives to do among Latinos both in the United States and abroad (NCI, 2012a).

For example, the *Forsyth County Cancer Screening Project* was designed to increase knowledge, attitudes, and practices regarding breast and cervical cancer among low-income black women in churches. Another goal of this intervention is to identify and address barriers to

screening, such as knowledge, cost, and fear, for impoverished women to reduce the likelihood of late-stage cancer diagnosis and treatment. This is especially important given that late diagnosis often results in higher rates of mortality. Similar to the CAA program, the *Forsyth Country Cancer Screening Project* utilizes community outreach through worship places to recruit and educate participants. Results from this study show that compared to a control group, women participating in the intervention increased both breast and cervical cancer screening rates (Paskett et al., 1999). These findings emphasize the role of public health education in preventive health care behaviors.

Targeting Cancer in Blacks was developed to promote all types of cancer screening in underserved African-American men and women in group settings. Acknowledging that inadequate knowledge inhibits necessary screening behavior, this culturally sensitive, community-wide intervention was designed to provide public health education on different cancer prevention methods like screening. It also uses mass media to disseminate cancer prevention information throughout this community. In addition to churches, participants are recruited from community-based organizations and historically Black colleges and universities. The majority of results from this study indicate that preventive cancer screenings for multiple cancer types increase with education and awareness. While findings show there was an increase in screening rates for breast, colorectal, and prostate cancers in Atlanta versus Decatur, GA, there was not a significant change in the rate of Pap smears among women in Atlanta as compared to Decatur (Blumenthal et al., 2005).

Several RTIPs were designed specifically to enhance cervical cancer education and screening behaviors among participants. The *Cambodian Women's Health Project* (Taylor et al., 2002) and *Vietnamese Women's Health Project* (Taylor et al., 2010) each were created to

increase rates of cervical cancer screening among un- or under-screened Cambodian and Vietnamese women living in the United States. Public health literacy is especially important among immigrant populations that may not fully understand western medicine. Accordingly, both of these programs emphasize individual and group health education between program participants and community health workers in order to enhance knowledge and understanding of cervical cancer prevention methods. Culturally competent, bilingual patient navigators and lay health workers facilitate individual home visits and group meetings in order to provide information and support regarding cervical cancer and the Pap smear. Results indicate that the educational components of these interventions effectively increase both knowledge and screening behavior among participants. Participants from the *Cambodian Women's Health Project* report a 17% increase in screening behavior, whereas the control group only increased screening uptake by 11% (Tayley et al., 2002). Similarly, women participating in the *Vietnamese Women's Health Project* reported screening rates nearly 20% higher than women not taking part in the intervention (Taylor et al., 2010).

Like many of the NCI-approved RTIPs, the CAA program is a faith-based, group education intervention implemented by community health workers. CAA shares similar goals of enhancing public health literacy regarding HPV infection and cervical cancer. Further, the CAA program strives to cultivate behavior change as a result of improved knowledge in order to reduce risk for HPV infection and cervical cancer among program participants.

Effective Behavioral Interventions

In addition to the RTIPs that specifically address issues related to cancer prevention, CDC highlights several behavioral interventions that effectively reduce STI transmission (CDC,

2012a). It is worth exploring the different components of these successful interventions as well given that education regarding STIs is a crucial component of the CAA intervention.

Connect is a six session relationship-based intervention designed to teach couples skills to improve the quality of their relationship, communication methods, and commitment to safe behaviors. This is done using the AIDS Risk Reduction Model, which classifies behavior change into three distinct phases: recognition of risk, commitment to change, and acting on strategies. This couple-based intervention has similar aspects as the CAA program, which recognizes the significance of educating both men and women in order to enhance knowledge and change behavior within couples. Results from the *Connect* couples intervention highlight a significant decrease in the number of unprotected sexual acts between partners as well as a significant increase in the rates of condom use. These data emphasize the success of the intervention at opening communication between partners and enhancing protective behaviors such as condom usage (El-Bassel et al., 2003).

The Future is Ours is another behavioral intervention deemed effective by the CDC. This is an eight-week small group, cognitive-behavioral intervention for heterosexually active women in high-risk communities. By fostering a sense of community, women are able to share experiences and feelings about relationships with men, their personal values, and feelings of vulnerability. Women are able to better understand their risk for HIV and other STIs, identify barriers to safer sex practices, and acquire knowledge about various risk-reduction techniques such as condom negotiation and couples HIV testing. Like the CAA program, *The Future is Ours* recognizes that power dynamics within relationships may inhibit women's ability to effectively communicate their desires and concerns. This intervention promotes effective communication techniques while emphasizing the important role of knowledge in female

empowerment. Results from the intervention indicate a reduction in unprotected vaginal and anal intercourse both one month and twelve months post-intervention. Not only did rates of condom use increase long term, but data showed a decrease in the number of sexual contacts among program participants as well (Erhardt et al., 2002).

Popular Opinion Leader is a community-level intervention that entails identifying, enrolling, and ultimately training key opinion leaders in a community on a specific topic. These key opinion leaders can encourage safer sexual norms and behaviors within their social network by having risk-reduction conversations and improving overall communication about sensitive topics like STI transmission (Kelly et al., 1991). In a sense, the CAA intervention utilizes key opinion leaders by working closely with pastors at specific churches to implement the CAA program. These pastors are trained on the HPV and cervical cancer topics addressed through the intervention and are able to encourage CAA participation while increasing communication about these issues among parishioners.

Evaluation of Effective Interventions

Evaluation for all of the RTIPs and effective behavioral interventions previously discussed was based on desired outcomes. Since the ultimate goal for nearly all of these cancer prevention programs included enhancing knowledge and increasing screening behavior among program participants, knowledge and behavior outcomes were quantified through pre- and post-intervention evaluations to determine the effectiveness of these programs (Paskett et al., 1999; Taylor et al., 2002, 2010; El-Bassel et al., 2003; Erhardt et al., 2002). Similarly, pre- and post-intervention surveys – such as the KAP survey that was developed for the CAA evaluation – measure changes among participants in knowledge, attitudes, and behavior regarding cervical cancer and prevention methods like screening and vaccination. Although this form of evaluation

relies on self-report, pre- and post-intervention evaluation is perhaps the most effective way to determine change over time as a result of an intervention. In fact, "The Guide to Community Preventive Services" identifies self-reported cervical cancer screening post-intervention as the primary outcome for their systematic review of cervical cancer programs (Sabatino et al., 2012).

The abovementioned interventions are examples of evidence-based education and prevention programs that have strived to increase knowledge and modify behavior related to cancer. Many of these NCI-supported RTIPs have been evaluated to demonstrate that the program methodology has measureable results like knowledge gain or behavior modification after implementation. The RTIPs specifically addressing cervical cancer, however, such as the *Targeting Cancer in Blacks* and *The Cambodia Women's Health Project,* have not been fully recommended by the Community Preventive Services Task Force (Task Force). Based on the current evaluation of these group education programs, the Task Force has stated that they have found insufficient evidence to promote the efficacy of group-based interventions at increasing cervical cancer screening rates among participants. The fact that the Task Force has found insufficient evidence does not mean that the interventions are ineffective; rather, that additional research and evaluation of group education programs is necessary to determine their overall effectiveness. Accordingly, evaluation studies such as this one that was completed for the CAA intervention are important to help continue building evidence for the impact of group education programs on cervical cancer knowledge and screening behavior.

Successful Cervical Cancer Prevention Programs Abroad

Although the literature does not cite many cervical cancer screening and vaccination programs in Latin America specifically, there are some success stories. Cervical cancer prevention and control in El Salvador, for example, emphasizes how coordination among cancer

control organizations, sexual and reproductive health groups, and vaccine delivery services can enhance a cervical cancer prevention campaign. Currently, ASAPRECAN is working with multiple stakeholders, including government officials, to increase collaboration and work toward bringing the HPV vaccine to girls throughout the country. Additional support from the Ministry of Health, extensive outreach strategies that encompass health education, and the use of resources and materials that fit the country's budget all strengthen this initiative (Agurto et al., 2006). Similarly, although not country-wide, a decreasing incidence of cervical cancer seen over the past 4 decades in Cali, Colombia can likely be attributed to widespread educational interventions and early detection campaigns (Sankaranarayanan et al., 2001). In addition to routine, accessible screening, public health education significantly contributed to this reduction in cervical cancer incidence. Each of these examples illustrates the significance of a comprehensive approach to cervical cancer prevention and control, emphasizing fundamental components like governmental support, quality control, and public health education.

Summary

Based on this literature review, it is evident that cervical cancer is one of the greatest contributors to the disease burden women face in Latin American countries. This is especially true in El Salvador, where cervical cancer is the leading cause of cancer mortality among women. There are numerous macrosocial factors that contribute to a woman's ability to acquire cervical cancer screening and vaccination, including income, employment, education, extent of social support, availability of health care infrastructure, access to medical professionals, knowledge about navigating the health care system, an understanding of HPV infection and cervical cancer, and an awareness of cervical cancer prevention methods, among others. While there are several evidence-based cervical cancer education programs, most were developed for

use in the United States and few specifically focus on enhancing knowledge in order to modify behavior and improve screening and vaccination uptake among participants.

Chapter III: Methodology

This chapter will present information on the methodology used for this evaluation of the CAA intervention. In addition to providing further detail about the CAA program, this section will describe the study design, development of the data collection instruments, the process of recruitment for the evaluation, data collection methods, and data analysis.

CAA Program Description

The CAA education intervention is a seven-week course offered through a network of Cristiana Josue Churches in El Salvador. Each of the seven sessions lasts roughly two hours and has a unique theme to address various aspects of HPV infection and cervical cancer. Throughout the CAA program, participants gain extensive knowledge about HPV and cervical cancer, as well as learn techniques to help them discuss these pertinent issues with family and friends in their communities. The seven sessions, including the title and main objectives for each session, are outlined in Table 1 below.

Table 1.1 Outline and Objectives of CAA Workshop

Session Number	Title	Objectives
1	Introduction and Anatomy	This session includes general information about the female reproductive system.
2	Understanding STIs and HPV	Participants will learn basic information and symptoms of common STIs, in particular HPV.
3	Cervical Cancer and HPV: Knowing the Truth!	This session educates participants about myths and truths surrounding HPV and cervical cancer.
4	Dialogues: Let's Talk About the Topic!	This session emphasizes the importance of open communication regarding HPV and cervical cancer. Participants develop educational tools by creating and revising dialogues designed to encourage behaviors that reduce the risk of HPV.
5	Dialogues: Action!	This session is used to film the dialogues and share them among the groups. Participants are encouraged to discuss the potential impact of the dialogues and suggest modifications.
6	Presentation to the Community	Participants will share their recorded dialogues to further inspire discussion regarding HPV and cervical cancer.
7	Separating Fact from Fiction: Learning about the HPV Vaccine	This session educates participants about the myths and truths regarding the HPV vaccine.

In order to develop local health educators to facilitate the CAA program, an intensive two-day "Train the Trainers" workshop is used. This workshop educates previous CAA participants to become future instructors for the CAA program in their respective churches. Similar to the main CAA program, the "Train the Trainers" workshop utilizes the same seven educational sessions to address diverse topics related to HPV and cervical cancer. However, these topics are covered in a thorough two-day workshop instead of over multiple weeks. A variety of teaching methods are used to reinforce objectives of the program, including lectures, engaging discussions, role-plays, and demonstrations. Trainers not only acquire knowledge about HPV and cervical cancer, but also learn valuable tools for teaching these topics and implementing a CAA program in their own church.

Initial CAA Evaluation Plan

Originally, the objective was to assess the effectiveness of the CAA intervention using a mixed methods cross-sectional, non-randomized controlled trial. This evaluation would combine survey questionnaire on intervention outcome variables and knowledge, attitudes, and practices (KAP) with focus group discussions (FGDs) designed to assist in the interpretation of quantitative findings. Quantitative data from a KAP survey and qualitative data from FGDs would be acquired from participants in both an intervention (Sonsonate) and control (San Vicente or Cuscatlán) community in El Salvador. These data from an intervention and control group would be used to demonstrate the efficacy of the CAA intervention at enhancing not only the knowledge and attitudes of participants, but also their sexual risk and screening behaviors.

Actual CAA Implementation and Evaluation in El Salvador

The CAA intervention was implemented through the Cristiana Josue Churches in El Salvador in the summer of 2011. It was subsequently evaluated by a post-intervention survey that assessed knowledge, attitudes, and practices of participants. Preliminary data analysis illustrated the success of the intervention at increasing participants' knowledge on information related to HPV infection and cervical cancer.

This specific evaluation, completed in the summer of 2012, collected follow-up data from participants six to twelve months after participation in the CAA intervention. A knowledge, attitudes, and practices (KAP) survey and focus group discussions (FGDs) were utilized to gather follow-up quantitative and qualitative data from past CAA participants. This data was used to assess if individuals sustained the enhanced knowledge over time; whether or not increased knowledge translated to behavior modification; how risk perception changed due to program participation; and the value individuals placed on their participation in the CAA intervention.

The study design utilized for this evaluation was a cross-sectional survey with focus group discussions (FGDs) in order to acquire both quantitative and qualitative data from past CAA participants. The data collection occurred between six and twelve months after the implementation of the CAA intervention.

Data Collection Instruments

KAP Survey

The researcher developed the KAP survey between March and May 2012 with input from Lisa Flowers, MD; Karen Andes, PhD; Cam Escoffery, PhD, MPH; and Lisseth Ruiz de Campos, MD. Ultimately, the KAP survey was finalized, piloted, and implemented in El Salvador in June and July of 2012. The key items related to participant knowledge, attitudes, and practices that were addressed in the KAP survey are outlined in Table 1.2 below.

Table 1.2 Key Items Addressed in the KAP Survey

	Knowledge	**Attitudes**	**Practices**
Domains	• Cervical cancer risk factors • HPV transmission • Condom use • Screening • HPV vaccination • Female anatomy	• Access to medical care • Barriers to condom use • Screening • HPV vaccination • Discussion about HPV/cervical cancer	• Access to medical care • Screening behavior • HPV vaccination • Number of sexual partners • Condom use

Since the KAP survey was used with both people who had and had not participated in the CAA intervention, the survey had two parts. Part I of the KAP survey was for all respondents to fill out, and it had a total of 36 questions. Part II was only for past CAA participants to fill out, and it had nine questions. The KAP survey was originally developed in English and later translated into Spanish with the assistance of colleagues from ASAPRECAN. These colleagues also reviewed the final instrument for purposes of clarity and understanding. The full KAP survey, including parts I and II, is located in Appendix A. Sample questions from the KAP

survey that specifically address the aforementioned three domains include:

1. Knowledge
    a. "Is HPV a sexually transmitted infection?"
    b. "In what ways can you protect yourself from HPV infection?"
    c. "True or False: HPV can infect the cells of the cervix because these cells can change rapidly, especially during puberty and pregnancy."
2. Attitudes
    a. "If you cannot access medical care when you are sick, why not?"
    b. "Do you think it is important for women to have a Pap smear?"
    c. "Do you feel that you or your partner is at risk for HPV infection?"
3. Practices
    a. "If you are a woman, have you had a Pap smear since your participation in the CAA intervention?"
    b. "The last time you had sexual intercourse, did you or your partner use a condom?"

Throughout June and July 2012, efforts were initially focused on distributing the KAP survey to past CAA participants. The main Cristiana Josue Church in Sonsonate, El Salvador was chosen to be the recruitment site for an intervention group, as many past CAA participants attend this church. Names of previous CAA participants were acquired from the church's main pastor and his secretary. Through this convenience sampling method, 15 men and 25 women from the Cristiana Josue Church in Sonsonate were selected to fill out a KAP survey. These 40 individuals constituted the intervention group for this evaluation project.

While recruitment for the intervention group was being conducted, a control group was identified in another Departamento, San Vicente. San Vicente was chosen as the location for the control group because no one in the Departamento had received the CAA intervention. Furthermore, it was isolated from Sonsonate, the main Departamento in which many individuals participated in the CAA program. This isolation minimized the chances that people from the

control group were exposed to intervention materials or information through friends and family. After discussing the project with the pastor of the Cristiana Josue Church in San Vicente, KAP surveys were sent to the church. It was expected that 40 participants would fill out surveys and that they would be returned to the research team in San Salvador. However, roughly three weeks after sending the KAP surveys to the pastor, he decided that he no longer wanted his congregation to participate in this project.

A pastor from the Cristiana Josue Church in Santa Ana, another Departamento northwest of San Salvador, agreed to have 40 parishioners from his church fill out the KAP survey. These nine men and 31 women, who had not previously participated in the CAA intervention, completed the KAP surveys and returned them to the research team in San Salvador within three days. Upon review of the preliminary findings from these KAP surveys, however, it was apparent that the baseline knowledge of these individuals was much higher than that of the people from the intervention community. As a result, it is difficult to effectively compare the KAP survey results from the intervention group in Sonsonate with the control group in Santa Ana because the people from these Departamentos clearly have differing levels of education and knowledge regarding HPV and cervical cancer. Unfortunately, there was limited time in which to recruit a different control group to fill out KAP surveys.

Since data was not effectively acquired from an intervention and control community, KAP surveys collected from past CAA participants living in multiple Departamentos throughout El Salvador were analyzed for the purposes of this evaluation. The researcher obtained KAP surveys from 159 past CAA participants living in six different Departamentos: Sonsonate, San Salvador, Ahuachapán, San Miguel, La Paz, and La Libertad. The extensive network of Cristiana Josue Churches and the enthusiasm of key stakeholders enhanced the ability to reach participants

from multiple Departamentos and ultimately increased the amount of data available for this evaluation.

Focus Group Discussions (FGDs)

In addition to the KAP survey, two FGDs were completed to collect qualitative data from the original intervention group in Sonsonate. The researcher felt FGDs were an important aspect of this evaluation since the qualitative focus group data would provide more descriptive information about the issues explored in the KAP survey. Furthermore, these qualitative data would help validate and inform the quantitative findings acquired through the KAP survey. The main objectives of the FGDs were to explore topics related to health care system access in El Salvador; knowledge of and attitudes toward cervical cancer and Pap smear screening; knowledge of and attitudes toward HPV and the HPV vaccine; sexual practices and taboos; and a reflection on involvement in the CAA intervention.

The FGD guide was lengthy, with a total of 33 questions on a range of topics. These topics included: health care access; HPV infection and cervical cancer knowledge; and sexual practices and behavior that impact HPV transmission and cervical cancer. The FGDs allowed themes presented in the KAP survey to be explored in greater detail with a small group of individuals from the Sonsonate community. Similar to the KAP survey, the FGD guide was first developed in English and later translated into Spanish with the assistance of colleagues from ASAPRECAN. The full FGD guide can be found in Appendix B. Below are several sample questions from the FGD guide:

1. "When people in your community are sick, where can they go to receive medical care?"
2. "What puts women at risk for developing cervical cancer?"
3. "What do women in your community think about Pap smears?"
4. "Why is HPV a concern? Does it affect both men and women?"
5. "Is it common to have additional sexual partners outside of a relationship?".

All FGD participants were recruited in a similar manner as the respondents for the KAP survey. Once again, the main pastor and secretary from the Cristiana Josue Church in Sonsonate contacted eligible individuals to take part in FGDs. The pastor contacted seven women and seven men from the intervention community to partake in gender specific focus groups; six women were present for the female focus group, and all seven men who were contacted attended the male focus group. All 13 FGD participants previously completed the CAA intervention. Dr. Lisa Flowers facilitated the FGD with women, and the researcher facilitated the FGD with men. These individuals were chosen as focus group facilitators in order to ensure everyone present during the FGDs was of the same gender since some of the topics explored, such as screening practices and sexual behavior, were sensitive. The focus groups were recorded using iPhones for verbatim transcription and translation.

Data Analysis

The following section presents information on the data analysis procedures that were used for the two data collection methods in this study. Quantitative methods are first described for the analysis of data from the KAP survey; subsequently, qualitative methods are discussed for the analysis of data from the focus group discussions.

KAP Survey

The quantitative data derived from the KAP survey were first entered into Microsoft Excel and then into SPSS for further analysis with SPSS Statistical Software version 20.0. Initially, basic demographic information was analyzed to determine the composition of the KAP survey respondents in terms of age, gender, income, and education level. Descriptive statistics were also run on general knowledge, attitudes, and practices regarding HPV infection and cervical cancer based on variables explored in the KAP survey. In some instances, results were stratified by

gender in order to highlight any impact gender may have had on outcomes.

Focus Group Discussions

A professional transcription company used the iPhone recordings of the FGDs to transcribe the FGDs verbatim in Spanish. Following transcription, the researcher read through the focus group transcripts in Spanish and identified key themes that aligned with the following domains: knowledge, attitudes, and practices regarding HPV infection and cervical cancer; risk perception; behavioral outcomes, such as condom use; and the value of the CAA program. These domains were identified based on the content of the FGD guide and overall evaluation questions. Relevant portions of the transcripts were then translated from Spanish to English for further coding and thematic analysis (Gibson, 2009; Hennink, 2011). A colleague fluent in the Spanish language reviewed translations of relevant quotations in order to ensure accuracy and enhance validity.

Chapter IV: Results

This chapter will highlight results from the CAA program evaluation, which took place six to twelve months following program implementation. Initially, demographic data will be presented to illustrate the sample population and give context to the findings. Following the demographic data, quantitative and qualitative data from the KAP survey and FGDs will be presented to provide support in responding to the research questions previously outlined in the introduction. The results will be presented in the order of the five research questions.

KAP Survey Demographic Data

Table 2.1 KAP Survey Demographic Data

Variables	*# of Respondents*	*n(%)*
Age	159	
Mean (Range)		37.4 (14-76)
Gender	159	
Male		47 (29.6)
Female		112 (70.4)
Monthly Income	129	
$200 or less		39 (30.2)
$201 - $500		39 (30.2)
$501-$1000		36 (27.9)
$1001+		15 (11.6)
Education Level	156	
At most Basic (1-6 grade)		14 (9.0)
Intermediate (7-9 grade)		23 (14.7)
Baccalaureate (10-12 grade)		48 (30.8)
Superior (University/Technical)		71 (45.5)
Health Insurance	159	
Yes		106 (66.7)
No/I don't know/I'm not sure		53 (33.3)
Type of Health Insurance	103	
Public		73 (70.9)
Private		23 (22.3)
Both		7 (6.8)
Where Individuals Seek Medical Care *(multiple responses accepted)*		
Ministry of Health		59 (40.4)
Salvadoran Social Security Institute		74 (50.7)
Health Promoters		2 (1.4)
Private Hospitals or Clinics		58 (39.7)
Military Hospitals		1 (0.7)
Teacher's Welfare		5 (3.4)
Why Individuals Forego Medical Care *(multiple responses accepted)*		
There is not a hospital or clinic in my community		16 (38.1)
I don't know how to make an appointment with a doctor		5 (11.9)
I cannot pay for health care services.		12 (28.6)
I don't think I need the assistance of a health care professional		7 (16.7)
I don't have anyone to take care of my children or my house while I go to the doctor		3 (7.1)
I don't have transportation to get to an appointment with a doctor		5 (11.9)
Other		4 (9.5)

159 individuals from six different Departamentos completed the KAP survey. However, respondents were not required to answer questions if they did not understand or felt

uncomfortable doing so. Accordingly, every question on the KAP survey did not elicit 159 responses.

Based on the KAP survey data, it is evident that the majority of respondents were women of reproductive age. The mean age of the 159 respondents was 37.4 years, with a range from 14-75 years. 29.6% (47) of the sample was male, and 70.4% (112) was female. Data regarding education and income emphasize that most survey respondents had a low income with a moderate level of education. Roughly 30% (39) of individuals reported a monthly income of 200 USD or less; another 30% (39) reported a monthly income between 201-500 USD; and the remaining respondents reported a monthly income greater than 500 USD. Over 75% of the sample population completed at least part of high school or had university and/or technical training. In regard to health insurance status, approximately 67% (106) of respondents reported having health insurance, the majority of whom (70.9%) had public insurance through the Ministry of Health (MOH) or Salvadoran Social Security Institute (ISSS). In addition to seeking medical care through the MOH, respondents also reported acquiring medical services from private hospitals and clinics when their financial circumstances allowed. The most commonly cited reasons for not accessing health care when sick were the lack of a nearby hospital or clinic (39%), the inability to pay for medical services (28.6%), and the belief that the assistance of a health care professional was not needed (16.7%).

Research Questions

To reiterate, the overall purpose of this research was to evaluate the effectiveness of the CAA intervention. The program evaluation was answered on the following questions:

1) To what extent does the CAA program enhance participants' knowledge regarding HPV and cervical cancer six to twelve months post-intervention?

2) Does CAA improve individuals' perception of risk related to HPV infection and cervical cancer?

3) What are the behavioral outcomes of the CAA program?

4) Does CAA increase participants' awareness and use of condoms?

5) Do individuals who participate in the CAA intervention value their experience in the program?

Together, these questions helped to measure the effectiveness of the CAA intervention and whether intended results from the program were sustained over time.

1. To what extent does the CAA program enhance participants' knowledge regarding HPV and cervical cancer six to twelve months post-intervention?

Considering that the CAA program was developed to educate Latinos about cervical cancer and HPV infection, increased knowledge is a fundamental outcome for this intervention. Several questions were developed for the KAP survey in order to evaluate how effectively the CAA intervention improved participants' knowledge over time. Additionally, similar open-ended questions were addressed through the FGDs in order to allow individuals to expand on their knowledge about specific topics like HPV transmission and cervical cancer screening. Below are data from both the KAP survey and the FGDs that highlight how CAA participants sustained knowledge six to twelve months post-intervention.

Table 2.2 KAP Survey Data, Knowledge of Cervical Cancer and Prevention

Variables	*# of Respondents*	*n(%)*
Have you ever heard of a Pap smear?	143	
Yes		143 (100.0)
Do you think it is important for women to have a Pap smear?	142	
Yes		142 (100.0)
Have you ever heard of the human papillomavirus, or HPV?	140	
Yes		134 (95.7)
Is HPV a sexually transmitted infection?	140	
Yes		127 (90.7)
HPV can infect cervical cells because these cells change rapidly, especially during puberty and pregnancy.	82	
True		72 (87.8)
False		10 (12.2)
In what ways can you protect yourself from HPV infection? *(multiple responses accepted)*	114	
Abstain from sexual activity		66 (48.2)
Use a condom when engaging in sexual activity		55 (40.1)
Reduce your number of sexual partners		78 (56.9)
Get a vaccine		83 (60.6)
The test that is used to detect abnormal cells in the cervix is called….?	127	
Pap smear		121 (95.3)
Other		6 (4.7)
The STI that causes the majority of cervical cancer cases is…?	119	
HPV		109 (91.6)
Other		10 (8.4)
If a woman does not do anything after receiving abnormal Pap smear results, she has a risk of developing…?	129	
Cancer		100 (77.5)
Other		29 (22.5)
Labeling – Vulva	89	
Correct		75 (84.3)
Incorrect		14 (15.7)
Labeling – Perianal Area	84	
Correct		78 (92.9)
Incorrect		6 (7.1)
Labeling – Uterus	58	
Correct		40 (69.0)
Incorrect		18 (31.0)
Labeling – Cervix	82	
Correct		60 (73.2)
Incorrect		22 (26.8)
Labeling – Vagina	85	
Correct		56 (65.9)
Incorrect		29 (34.1)

KAP Survey. Data from several questions on the KAP survey demonstrated that individuals who participated in the CAA program sustained knowledge over time. For example, 100% (143) of KAP survey respondents acknowledged that they had heard of a Pap smear. Similarly, 100% (142) of respondents thought that it was important for women to have a regular Pap smear to check for cervical abnormalities that may lead to cancer. Regarding HPV, 95.7% (134) of individuals said they had heard of HPV, and 90.7% (127) knew that HPV was a sexually transmitted infection. 87.8% (72) of respondents recognized that HPV can infect cells of the cervix because the cells change rapidly, especially during puberty and pregnancy. From these data, it is evident that nearly all respondents retained basic knowledge of cervical cancer screening and HPV six to twelve months post-intervention.

In order to determine whether or not participants recalled ways to protect themselves from HPV infection, they were given a list of four mechanisms for HPV prevention: abstinence, condom use, reduction in number of sexual partners, and HPV vaccination. 48.2% (66) correctly identified abstention from sexual activity as a way to protect themselves from HPV; 40.1% (55) remembered that using a condom during sex could reduce HPV transmission; 56.9% (78) noted that reducing number of sexual partners corresponded to a decreased risk for HPV infection; and 60.6% (83) recognized vaccination as a means for protection against HPV. Roughly half of KAP survey respondents maintained knowledge six to twelve months post-intervention regarding protective behaviors that help to avoid HPV infection.

There were also a few fill-in-the-blank questions on the KAP survey regarding HPV and cervical cancer. Compared to questions in which respondents could choose the best answer, these questions specifically emphasized knowledge retention since they forced individuals to recall information on their own. When asked to name the test that is used to detect abnormal cervical

cells, 95.3% (121) of respondents correctly reported the Pap smear. Similarly, when asked to identify the STI that is responsible for the majority of cervical cancer cases, 91.6% (109) of individuals wrote HPV. Finally, when asked what could happen if women did nothing after receiving abnormal Pap smear results, 77.5% (100) of respondents said that cancer could develop. The fact that nearly all respondents could determine the correct responses to these fill-in-the-blank questions on the KAP survey indicates that they are gaining knowledge through CAA participation and that they are retaining this knowledge over time.

Toward the end of the KAP survey, there was a section in which participants labeled various parts of the female reproductive anatomy on a diagram. 84.3% (75) of respondents correctly labeled the vulva; 92.9% (78) correctly labeled the perianal area; 69.0% (40) correctly labeled the uterus; 73.2% (60) correctly labeled the cervix; and 65.9% (56) correctly labeled the vagina. It is evident that though some people learned this information well and retained it over time, others did not effectively comprehend the female reproductive anatomy during the CAA intervention.

Focus Group Discussions. Similarly, the focus group discussions showed that individuals had both acquired and sustained basic knowledge about HPV and cervical cancer as a result of the CAA program. Participants emphasized the notion that knowledge is fundamental to cervical cancer prevention, and that the information they acquired as a result of their involvement with the CAA intervention is crucial to protecting Salvadorans from HPV and cervical cancer.

"Entonces creo que una de las maneras para poder ayudar, para poder prevenir, quizás seria informarse verdad, que hubiera, es bien fundamental e importante, como decían ellos nosotros hemos llegado a conocer eso pero porque nos informaron, no porque quizá nombraríamos, muchas cosas, igual la mujer por lo menos en el sector que estoy casi nadi sabe, casi nadie habla de cáncer uterino." (participante femenina)	"So I think one of the things we can do to help prevent it is to learn, right, if there would…it is fundamental and important, as they've said, we've come to know that, but because they informed us, not because maybe we would name many things, same with the women, at least in the area where I'm from, nobody knows, almost no one discusses uterine cancer." (female participant)

When asked what caused cervical cancer, several FGD participants responded that it is caused by a sexually transmitted infection called HPV. People understood that HPV is transmitted sexually between men and women, and that both men and women are susceptible to the infection. One respondent further explained that HPV could cause genital warts in addition to cervical cancer.

"Otras tienen el concepto de la relación sexual, un hombre que este contaminado puede dañar verdad a la mujer, igual viceversa, la mujer también puede dañar al hombre." (participante masculino)	"Others have the understanding of sexual relations, that a man who is infected can harm, right, the woman, vice versa as well, the woman can also harm the man." (male participant)

Individuals also recognized that there are mechanisms to prevent HPV infection, most notably vaccination. Although there was some confusion as to whether or not the HPV vaccine is available in El Salvador, participants reported that the vaccine could be used for both girls and boys, and that it is a critical aspect of HPV prevention. While the vaccine is an effective form of HPV prevention, focus group participants noted that it is costly and often inaccessible. As such, they reported additional forms of HPV prevention. The concept of monogamy or fidelity was discussed consistently throughout the focus groups. Multiple partnering is quite common in El Salvador, and past CAA participants recognized that this inhibits individuals' protection from HPV infection. In addition, several men and women discussed the need to understand partners' past sexual behavior in order to protect one self from infection. Reducing the number of sexual partners, fostering a culture of monogamy, and obtaining consistent cytology exams were all noted as realistic forms of HPV prevention.

"[Se puede] prevenir VPH con una vacuna, evitar las relaciones con diferentes parejas, y estar pendientes de la citología." (participante femenina)	"HPV can be prevented with a vaccine, by avoiding [sexual] relations with different partners, and by being aware of cytology [screening]." (female participant)

In regard to cytology exams, several participants emphasized the significance of consistent

screening to prevent cervical cancer. Several men suggested that women obtain a yearly Pap smear.

"Tengo o tenga relación sexual, tiene que hacerse [citología]. Por lo menos aconsejarle una vez al ano." (participante femenina)	"She has or has had a sexual relationship, so she has to get screened. [Screening] is recommended once a year." (female participant)

One woman described the importance of Pap smears as their ability to predict the future, meaning that they can catch abnormal cells present within the cervix before they develop into cervical cancer. Several individuals also noted that even women who are virgins or who are not currently sexually active should still acquire consistent cervical cancer screening.

2. Does CAA improve individuals' perception of risk related to HPV infection and cervical cancer?

Risk perception is an important concept when dealing with disease prevention, particularly in the case of cervical cancer, which is caused by an STI. If individuals do not perceive that they are at risk, they are unlikely to take the necessary precautions to avoid the morbidity and mortality associated with a specific infection or disease. Consequently, risk perception was explored in this evaluation through both the KAP survey and FGDs; relevant data regarding individuals' perceived risk for HPV infection and cervical cancer are presented below.

Table 2.3 KAP Survey Data, Individual Risk Perception

Variables	*# of Respondents*	*n(%)*
Do you feel that you or your partner is at risk for HPV infection?	113	
Yes		40 (35.4)
No		60 (53.1)
I don't know/I'm unsure		13 (11.5)
Do you feel that you or your partner is at risk for cervical cancer?	109	
Yes		34 (31.2)
No		62 (56.9)
I don't know/I'm unsure		13 (11.9)
How frequently do you use condoms when engaging in sexual activity?	88	
50% of the time or more		15 (17.1)
If a woman does not do anything after receiving abnormal Pap smear results, she has a risk of developing…?	129	
Cancer		100 (77.5)
Other		29 (22.5)
Do you think it is important for women to have a Pap smear?	142	
Yes		142 (100.0)
No		0 (0.0)

KAP Survey. There were four questions on the KAP survey that specifically addressed risk and individual risk perception as they relate to HPV infection and cervical cancer. 35.4% (40) of respondents felt that they or their partner was at risk for HPV infection, and 31.2% (34) of individuals reported feeling that they or their partner was at risk for cervical cancer. Further, only 17.1% (15) of individuals reported using a condom 50% of the time or more when engaging in sexual activity. Despite the fact that only 88 individuals responded to this question, clearly condom use was infrequent among this sample population. From these data, it is evident that CAA participants had a low sense of personal risk regarding HPV infection and cervical cancer six to twelve months post-intervention. This is likely one factor contributing to the low rates of condom usage reported by participants.

On the other hand, in response to a fill-in-the-blank question, 77.5% (100) of respondents knew that women were at risk for cancer if they received abnormal results from a Pap smear and did not follow-up with a medical professional. Further, 100% (142) of respondents agreed that it

was important for women to have a Pap smear. Based on these data, there appears to be a disconnect between individuals' perceived risk for themselves and their perceived risk for other people. This is concerning given that people are less likely to take precautionary measures to avoid infection, such as condom use during sexual activity or a reduction in the number of sexual partners, if they do not believe they are susceptible.

Focus Group Discussions. During the focus groups, numerous participants reported that both men and women were at risk for HPV. One individual emphasized that people living in rural areas had an even higher risk for HPV infection and cervical cancer due to the limited information available in those places. Despite this consensus, however, one woman suggested that some people believe if they feel fine, they are not at risk for the disease.

"Yo pienso que si, hay personas de que si no sienten nada piensan que no puede haber un, un riesgo de contraer un cáncer." (participante femenina)	"I think that yes, there are people who do not feel anything, they think that there cannot be a risk of getting cancer." (female participant)

Considering that preventive medicine is not widely available in El Salvador, many women do not seek medical care until symptoms present and the problem becomes acute.

"Si, la ignorancia como casi siempre para cualquier enfermedad, no solamente con esta, muchas veces tenemos la enfermedad y como a veces no empiezan con doler, a veces no hay síntomas iniciales y están, o a veces duela y si dejamos, hasta que y alas cosas se hacen bien difíciles, ya están bien preparadas…no hay una cultura preventiva aquí." (participante femenina)	"Yes, the ignorance like with almost any disease, not only this one, many times we have the disease and since sometimes there is no pain, sometimes there are no initial symptoms and they're, or sometimes it hurts and we leave it until things have gotten very difficult, they are already very prepared…there is not a preventive culture here." (female participant)

Further, some women find the Pap smear exam to be embarrassing, and they become fearful of it. As a result, women's risk increases since they are not consistently obtaining screening to prevent cervical cancer.

"Se ve que lo hacen por pena y hay unas que tienen miedo de hacérselo, porque yo conozco bastante mujeres y ellas tienen miedo de hacérselo." (participante femenina)	"We see that they are embarrassed to get it and there are some who are fearful of getting it done, because I know many women and they are afraid of getting it done." (female participant)

Another significant topic impacting risk, which was discussed extensively throughout the focus groups, was the idea of multiple partnering. Individuals noted that having multiple sexual partners increases HPV risk. However, they noted that the machismo culture in El Salvador facilitates men having multiple partners, which increases risk of HPV infection – and ultimately the risk of cervical cancer for women.

"Aja, estos se da bastante por el machismo que hay aquí, los hombres que pueden tener como varias mujeres a la vez y a veces las mujeres están diciendo verdad, yo creo que están iguales quieren que también, también andan uno no puede echarles la culpa." (participante femenina)	"Aha, this happens a lot because of the machismo there is here, men that can have like various women at the same time and sometimes the women are saying the truth, I think that they're the same, they also want, also have one, you can cast the same blame on them." (female participant)

The machismo culture is said to be especially prevalent in rural areas. It may seem sufficient to promote things like routine screening and vaccination to prevent HPV infection and cervical cancer. However, several participants emphasized the equally significant need to change cultural values, such as infidelity and sexual promiscuity, to truly reduce risk.

"Nuestra sociedad tiene quiérase o no una situación de un caos de valores, cuando digo eso porque nos arroja las estadísticas en los hospitales cuantas niñas están saliendo embarazadas, Sonsonate, según los índices a nivel nacional después de la capital de San Salvador, que es nuestra ciudad ocupa el primer lugar de los Departamentos que muchas adolescentes o preadolescentes están saliendo embarazados, quiere decir esto que hay un riesgo de que ellas contraigan la enfermedad de los valores, de los principios entonces hay un riesgo en nuestra sociedad…no hay fundamentos, no hay valores, en lo que es el núcleo familia..." (participante masculino)	"Our society has, whether it wants to or not, a situation of chaos of values, when I say that because they throw the statistics in the hospitals of how many girls are getting pregnant, Sonsonate, according to the national rates, is after the capital San Salvador, it is our city that ranks first of the Departamentos where many teenagers or pre-teenagers are getting pregnant, this means that there is a risk of them contracting the disease because of the values, of the principles then there is a risk in our society…there is no basis, there are no values in what is the nuclear family…" (male participant)

Ultimately, focus group participants suggested that discussion about these topics must increase to enhance the information available regarding HPV and cervical cancer, particularly if transforming cultural values is fundamental to decreasing risk. Fortunately, interventions such as CAA afford communities the opportunity to increase dialogue on these issues.

3. What are the behavioral outcomes of the CAA program?

While improving knowledge is a critical component of any public health education intervention, increasing awareness of issues related to HPV infection and cervical cancer is especially beneficial if it leads to behavior modification. Accordingly, in addition to measuring knowledge gain and retention, this evaluation also looked at how the CAA program impacted behavior change like screening uptake, condom use, and number of sexual partners. Several questions from both the KAP survey and FGDs explored behavioral outcomes of the CAA intervention.

Table 2.4 KAP Survey Data, Behavioral Outcomes of the CAA Intervention

Variables	*# of Respondents*	*n (%)*
If you are a woman, when was the last time you had a Pap smear?	94	
In the last year		38 (40.4)
In the last two years		15 (16.0)
If you are a woman, have you had a Pap smear since your participation in the CAA intervention?	66	
Yes		28 (42.4)
Did your participation in the CAA program influence your decision to get a Pap smear?	55	
Yes		38 (69.1)
Do you think it is important that young women get the vaccine against HPV?	142	
Yes		139 (97.9)
Do you think more people would get the HPV vaccine if the government included it in the National Plan on Immunization?	141	
Yes		138 (97.0)
Have you ever received the HPV vaccine?	123	
Yes		7 (5.7)
No		114 (92.7)
I don't know/I'm unsure		2 (1.6)
If you received the HPV vaccine, did you get the vaccine after participating in the CAA intervention?	6	
Yes		1 (16.7)
No		5 (83.3)
Did you participation in the CAA program influence your decision to get the HPV vaccine?	43	
Yes		25 (58.1)
No		18 (41.9)
Since your participation in CAA, have you had any new sexual partners?	72	
Yes		6 (8.3)
No – Total Men Women		66 (91.7) 17 (23.6) 49 (68.1)
How many people have you had sex with in the last 3 months?	128	
0 – Total Men Women		51 (39.8) 12 (9.3) 39 (30.5)
1 – Total Men Women		77 (60.2) 25 (19.6) 52 (40.6)
Since your participation in the CAA program, have you used condoms more frequently?	52	
Yes		4 (7.7)
No		48 (92.3)

KAP Survey. A few questions on the KAP survey addressed cervical cancer screening uptake, specifically with regard to the Pap smear. 56.4% (53) of women said they had received a Pap smear within the last two years, and 42.4% (28) of women said they had gotten a Pap smear since their participation in the CAA program. Furthermore, 69.1% (38) of respondents said their involvement in the CAA program influenced their decision to get a Pap smear. These data emphasize how the knowledge gained through the CAA intervention prompted behavior change, in this case screening uptake, among participants.

Although the data demonstrates an increase in cervical cancer screening among CAA participants post-intervention, a similar trend was not seen for HPV vaccination. This could be due to the fact that female KAP survey respondents generally were older than 26 years, the age at which it is no longer recommended for women to receive the HPV vaccine. The CAA intervention does discuss the vaccine and its importance in reducing the cervical cancer burden, which respondents clearly understood. For example, 97.9% (139) of respondents thought it was important for young women to get the HPV vaccine, and 97.0% (138) of respondents felt that more people would get the HPV vaccine if the government included it in the National Plan on Immunization. However, it appeared survey respondents were confused regarding whether or not they had actually obtained the vaccine. Although this may have been a knowledge issue on the part of the respondents, poorly worded questions on the survey instrument could have also contributed to the misunderstanding. For example, 92.7% (114) of people reported that they had never gotten the HPV vaccine. Later in the survey, only 16.7% (1) of people said they had gotten the vaccine after their participation in the CAA program, but 58.1% (25) of people said their participation in the CAA program influenced their decision to get the HPV vaccine. Whether or not behavior change in the form of HPV vaccination improved as a result of the CAA program is

unclear from this data. Nonetheless, individuals appeared to understand the significance of the vaccine for reducing the cervical cancer burden in El Salvador.

In addition to screening and vaccination, the CAA intervention also taught the importance of monogamous relationships and condom use in order to reduce HPV infection and cervical cancer incidence. 23.6% (17) of men and 68.1% (49) of women responded that they had zero new sexual partners since their participation in the CAA program. In addition, 9.3% (12) of men and 30.5% (39) of women reported that they had had sex with no one in the last three months, while 19.6% (25) of men and 40.6% (52) of women reported that they had only had sex with one partner in the last three months. These data emphasize that participants, particularly women, understood the value of minimizing the number of sexual partners in order to reduce disease transmission. However, condom use was especially low among this sample population. For instance, 92.3% (48) of respondents said that they had not used condoms any more frequently since their participation in the CAA intervention. This is important because regardless of whether or not people are in monogamous relationships, condoms are crucial to preventing both disease transmission and unwanted pregnancy.

Focus Group Discussions. Few focus group participants specifically addressed the behavioral outcomes of the CAA program during the discussion. Some aspects of both screening and vaccination were discussed, albeit briefly. One woman emphasized that the CAA program encouraged women to obtain regular Pap smear exams. However, she noted that both knowledge and cost inhibit some women from acquiring screening.

"Yo pienso que es el costo, el costo y a veces por creencias, porque tienen creencias de los abuelitos que si te haces, si te haces esa prueba ya no vas a quedar bien…" (participante femenina)	"I think it is the cost, the cost and sometimes because of beliefs, because they have beliefs of grandparents that if you get, if you have this test you will not look good…" (female participant)

Once again, several participants noted that women might fear cervical cancer screening for multiple reasons, including embarrassment, the possibility of negative results, and/or the lack of sanitation in the health clinics.

"Hay muchas mujeres que uno porque sienten un poquito de pena, verdad, les da pena, se maneja siempre esa tabú y segunda que hay ciertos lugares no se que tan cierto será, donde hacen el examen o clínicas que no tienen quizás estrictas medidas de higiene para hacer el examen." (participante femenina)	"There are many women that because one feels a little embarrassment, right, they're embarrassed and they always drive this taboo and secondly that there are certain places where I'm not sure how true it might be, where they have the exam or clinics that do not have strict measures of hygiene to conduct the exam." (female participant)

Despite these negative associations, several men agreed that male partners should support their female partners in obtaining consistent cervical cancer screening in order to avoid the morbidity and mortality associated with the disease.

"El hombre debe animar a su mujer para que se lo haga con frecuencias, debemos estar ahí pendientes de que ella vaya a cada, cada cierto tiempo se cheque para que haga ese examen para que este segura de que esta bien." (participante masculino)	"The man should encourage his woman to get it (Pap smear) frequently, we should be there waiting when she goes each time to check that she has the exam to be sure she is well." (male participant)

Although participants had mixed responses regarding the HPV vaccine, they unanimously agreed that more people would obtain the HPV vaccine if it were included in the government's National Immunization Plan.

4. Does CAA increase participants' awareness and use of condoms?

Considering that the majority of cervical cancer cases are caused by an STI, several components of the CAA intervention focus on STI transmission and prevention. In fact, the second session of the program is entirely dedicated to information on STIs, specifically HPV. One important behavioral outcome of the CAA intervention relates to condom use, because condoms can reduce the transmission of HPV and, ultimately, decrease the cervical cancer burden. Data on CAA participants' awareness and use of condoms are presented below.

Table 2.5 KAP Survey Data, Awareness and Use of Condoms

Variables	*# of Respondents*	*n (%)*
In what ways can you protect yourself from HPV infection? *(multiple answers accepted)*	114	
Abstain from sexual activity		66 (48.2)
Use a condom when engaging in sexual activity		55 (40.1)
Reduce your number of sexual partners		78 (56.9)
Get a vaccine		83 (60.6)
If you always use a condom, the condom can…	76	
Eliminate the transmission of HPV		30 (39.5)
Reduce the transmission of HPV		37 (48.7)
Have no effect		3 (3.9)
I don't know/I'm unsure		6 (7.9)
How frequently do you use condoms when engaging in sexual activity?	88	
100% of the time – Total Men Women		7 (8.0) 2 (2.3) 5 (5.7)
75% of the time		3 (3.4)
50% of the time		5 (5.7)
<25% of the time		14 (15.9)
Never – Total Men Women		59 (67.0) 19 (21.6) 40 (45.4)
The last time you had sexual intercourse, did you or your partner use a condom?	91	
Yes		11 (12.1)
No – Total Men Women		80 (87.9) 26 (28.6) 54 (59.3)
Since your participation in the CAA program, have you used condoms more frequently?	52	
Yes		4 (7.7)
No – Total Men Women		48 (92.3) 15 (28.8) 33 (63.5)

KAP Survey. Several questions on the KAP survey evaluated past CAA participants' knowledge regarding condom use and HPV, as well as their condom use behavior. 40.1% (55) of respondents said that condoms could be used as an effective way to protect themselves from HPV transmission. Similarly, 48.7% (37) of people identified condom use as a way to *reduce* the transmission of HPV. However, 39.5% (30) of people incorrectly identified condom use as a

means to *eliminate* HPV transmission, highlighting that participants did not fully understand the association between condom use and HPV infection.

Aside from these beliefs, the KAP survey also asked respondents about their own condom use behavior. Interestingly, 21.6% (19) of men and 45.4% (40) of women reported that they *never* used condoms when engaging in sexual activity, and only 2.3% (2) of men and 5.7% of women said that they *always* used condoms during such activities. Further, 28.6% (26) of men and 59.3% (54) of women reported that they or their partner did not use a condom the last time they had sexual intercourse. This last question was especially relevant, as individuals are more likely to correctly recall information regarding their last sexual experience than their activity over the last several weeks or months. Despite the fact that many respondents understood the protective nature of condom use in regard to HPV infection and cervical cancer, the knowledge did not appear to provoke significant behavior change over time. In fact, 28.8% (15) of men and 63.5% (33) of women reported that they were not using condoms more frequently since their participation in the CAA intervention. This may be partially due to the availability of condoms in their communities.

Focus Group Discussions. Focus group participants highlighted the fact that things like reproductive anatomy and condom were rarely discussed in El Salvador in the past. In fact, condoms were not available on the shelves in pharmacies or supermarkets, and people would have to speak privately with clerks to ask if they had condoms available for purchase. Fortunately, the culture is beginning to change; there is more open discussion surrounding reproductive health and condoms are now available for free at health clinics and hospitals and for purchase from stores, supermarkets, and pharmacies throughout the country.

"Hablar del pene era algo que no se tocaba ni en las escuelas ni mucho menos en el hogar e inclusive hasta ponerle sobrenombre para no decir la realidad de como se llama. Pues yo digo que como se llama, la tontona, y tiene su verdadero nombre, como se llama el varón, Pedrito o cosas así para no presentar la realidad de cual es el verdadero nombre, siempre ha habido una barrera de no querer tocar esos nombres, inclusive creo que todos los que usan condón hemos pasado por eso, de que antes para ir a comprar un preservativo teníamos que hacerlo con el amigo que esta en la farmacia y decirle en secreto necesito un preservativo, ah okay. Hoy están a la mano y están a la vista publica, en los supermercados, tanto la mujer como el hombre lo agarran y ponen la cajita ahí para comprar. Yo vi como una muchacha agarro como tres cajitas, un día que estaba en el supermercado…" (participante masculino)	"Talking about the penis was something that you didn't do in schools, even less in homes, and even give it a nickname to avoid saying what it's actually called. Well, I say what do you call it, 'la tontona', and it has its real name, it is called the man, Pedrito, or things like this as to not present the reality of its true name, always being a barrier of not wanting to touch those names. I think even those who use condoms have been there, before going to buy a condom we would have to make sure a friend was working in the pharmacy and tell him in private that I need a condom, ah okay. Today they are on hand and in public view in the supermarkets, even the women, like the men, can grab it and put the box there to buy. I saw a girl grab three boxes one day when I was at the supermarket…" (male participant)

Although some youth are apparently using condoms to prevent pregnancy, increased availability is not necessarily associated with increased use. In fact, several participants in the focus groups mentioned that condoms are used minimally, particularly in rural parts of the country. Furthermore, several women noted that although condoms are for both men and women, condom use is dependant upon whether or not the man wants to use one.

"Yo pienso que es fácil [adquirir un preservativo] porque se ve que en muchas partes los venden, tiendas, supermercados, farmacias…depende de como el hombre quiere usarlo." (participante femenina)	"I think it is easy to acquire a condom because they are sold in many parts, stores, supermarkets, pharmacies…it depends on whether the man wants to use it." (female participant)

5. Do individuals who participate in the CAA intervention value their experience in the program?

In order to emphasize the need for educational interventions such as CAA, it is important to understand how different cultures and communities value an opportunity such as the CAA intervention. Accordingly, open-ended questions on both the KAP survey and the FGDs addressed this aspect of the intervention. Participants were able to openly describe how their

involvement with the CAA program impacted their lives, and whether or not they thought it was a significant opportunity for members of their community.

KAP Survey. The KAP survey had one open-ended question at the end of the instrument addressing how individuals valued their experience participating in the CAA intervention. Responses to this question were overwhelmingly positive. Several respondents noted their increased knowledge surrounding HPV and cervical cancer as a result of their involvement in the CAA program. Further, individuals emphasized how their enhanced knowledge on these topics inspired them to talk with others in their community about these relevant issues.

"Tomen conciencia del virus del papiloma humano y sus consecuencias y como prevenirlo…en poder ayudar a otras personas a conocer mas acerca de que esta enfermedad." (participante masculino)	"Be aware of HPV and its consequences and how to prevent it…in order to help others know more about this disease." (male participant)

In addition to increasing participants' knowledge and cultivating discussions about topics related to HPV and cervical cancer, the CAA intervention also prompted participants to seek preventive medical care such as Pap smear exams. One woman wrote how her involvement in the CAA program motivated her to go to the health clinic to get a Pap smear.

"Luego de recibir la capacitación fui a la Unidad de Salud para que me lo tomar la citología. Gracias a Dios no tengo nada, salí bien." (participante femenina)	"After receiving the program, I went to my health clinic to get a cytology exam. Thank God I have nothing, I was fine." (female participant)

Another woman described how even though she had learned about sexually transmitted infections before, this experience in the CAA program was different because she was learning together with her husband. Not only did the intervention help them both to discuss issues like HPV prevention and cervical cancer screening, but it also emphasized for her the significance of personal responsibility in her health.

"Bueno realmente fue de mucho aprendizaje porque uno desconoce muchas sobre las enfermedades de transmisión sexual, pero con este curso hubo una experiencia diferente con mi esposo…nuestros propios descuidos en esa área el poder tener mejor cuidado en todo y también reflexionar ante el examen de la citología con mas responsabilidad." (participante femenina)	"Well it was really good learning because I knew a lot about sexually transmitted diseases, but this course was a different experience with my husband…our own carelessness in this area…we have the power to take better care of everything and to reflect before the cytology exam with more responsibility." (female participant)

Focus Group Discussions. It was apparent throughout the FGDs that past CAA participants valued their experience in the program. Given the machismo aspect of the Salvadoran culture, many of the women emphasized how important it was to be educated on these issues in order to promote discussion about HPV and cervical cancer prevention in their communities.

"A veces también el hombre como aquí en nuestra cultura, aquí el hombre como es machista y aparte el hombre como no le gusta quizá tener mucho con la mujer respecto con estas cosas, entonces ellos no se informan…por eso es importante que con estos cursos que botemos todo eso y podamos hablar con nuestra pareja mas abiertamente, aja, exacto." (participante femenina)	"Sometimes also the men here in our culture, here the men are machista and they do not like to have much respect for women with these things, so they do not inform themselves…that is why it is important that with these courses that we drop all of that so we talk more openly with our partners, aha, exactly." (female participant)

In fact, several women said that participating in the CAA intervention provided them a trusting environment in which to gain the confidence they needed to discuss these issues and better take care of their own health. Numerous participants acknowledged that they chose to participate in the CAA program in order to gain proper knowledge about HPV and cervical cancer.

"Yo quizás, porque quería conocer verdad, quería saber de que se trataba, porque no tenia conocimiento verdad, de nada de eso, entonces este quería saber, verdad tenia como digamos por curiosidad, al principio, por eso, como no sabia entonces quería saber de que se trataba y la verdad es que, por eso y se me dio la oportunidad de poderlo, poderlo recibir verdad." (participante femenina)	"Perhaps because I wanted to know the truth, I wanted to know what it was about, because I had no real knowledge of any of this, so I wanted to know this, right, I had like let's call it curiosity, at first, regarding that, since I don't know I wanted to know what it was about and the truth is that, that's why and I was given the opportunity to do it, to receive the truth." (female participant)

Since some people are embarrassed to talk about these issues, respondents noted that it is only through education and open dialogue that HPV infection and cervical cancer can truly be addressed in El Salvador. The CAA program effectively fosters this discourse by allowing participants to gain knowledge in order to better care for their own health and promote disease prevention. One man noted that the CAA program is not only valuable for women, but for the nuclear family and the society as a whole in El Salvador.

"Yo creo que este programa que ustedes tienen es un programa vital para las mujeres y no solo par alas mujeres sino para el núcleo familiar, para nuestra sociedad." (participante masculino)	"I believe this program you have is a vital program for women, and not just for women but also for the nuclear family, for our society." (male participant)

Further, multiple participants felt that the CAA program should be offered in schools and universities around the country in order to reach young people with this vital information. Members of the focus group discussions made it clear that the lessons learned through the CAA intervention are helping to transform the Salvadoran culture and improve health outcomes, particular as it relates to cervical cancer among women.

Chapter V: Discussion and Conclusion

This final chapter will discuss the CAA evaluation findings in a broader context while highlighting specific aspects of the results. Main ideas drawn from the KAP survey and FGD data will be further explored. The implications of these findings on the field of public health, particularly as it relates to HPV and cervical cancer in low-resource settings like El Salvador, will also be presented. Limitations from this evaluation will be described briefly. Finally, recommendations for future implementation of the CAA program and related studies on HPV and cervical cancer prevention will be provided.

Conclusions

As evidenced by the data, the CAA program effectively improves knowledge regarding HPV and cervical cancer among participants in El Salvador. This education intervention offers a broad understanding of topics related to both HPV and cervical cancer while highlighting crucial methods of prevention. Initial data from the implementation of the intervention emphasized that immediate knowledge of participants increased as a result of their involvement in the CAA program. The data from this evaluation demonstrated that many individuals' understanding of issues surrounding HPV and cervical cancer was sustained six to twelve months post-intervention as well.

The majority of CAA participants acquired and retained knowledge from the intervention over time. Similar to several other programs highlighted in the literature, CAA participants gained knowledge on a variety of topic areas, most importantly HPV and cervical cancer transmission and prevention, as a result of the intervention (O'Brien et al., 2010; Paskett et al., 1999; Tayley et al., 2002; Taylor et al., 2010). However, the evaluation data did reveal some gaps in understanding of certain issues addressed by CAA. For example, a considerable number

of participants found it challenging to identify different components of the female reproductive anatomy. Considering that this is one of the main topics addressed through the intervention, it is concerning that on a diagram nearly one-quarter of respondents could not correctly identify the uterus or cervix, and about one-third of respondents could not correctly identify the vagina. Further, in addition to the female reproductive anatomy, individual risk perception regarding HPV infection and cervical cancer was low among KAP survey participants. In fact, only about one-third of respondents felt that they or their partner was at risk for HPV infection and cervical cancer. This is problematic because if individuals do not believe they are at risk for a particular malignancy, they are unlikely to take the necessary precautions to protect against it (Burak & Meyer, 2009; Leventhal et al., 1999). Perhaps educating individuals on the treatment options available for cervical cancer would increase their perceived susceptibility and encourage them to engage in preventive behaviors to avoid the disease.

Interestingly, both the quantitative and qualitative data from this evaluation highlighted issues surrounding condom awareness and use in the sample population. Although the Salvadoran culture is progressing in this regard, the acceptability of condom use certainly affects the dialogue surrounding their utilization and effectiveness. FGD participants noted that lack of access to condoms, particularly in rural areas, is another factor impacting condom use in these regions. Furthermore, minimal perceived risk related to HPV infection may also contribute to low rates of condom use. When people do not believe they are at risk, they tend to be less likely to engage in protective behaviors such as condom use to avoid infection (Burak & Meyer, 2009; Leventhal et al., 1999). Accordingly, these low rates of condom use may reflect participants' minimal perceived risk in regard to HPV infection and cervical cancer.

Although the majority of CAA participants recognized condoms as a means to reduce STIs

like HPV, very few individuals reported consistently using condoms with their sexual partner(s). In the FGDs, some participants described how condoms are generally used by adolescents to prevent pregnancy or during casual sexual encounters. However, condom use with a main partner might indicate that someone is being unfaithful, which can provoke issues of trust and resentment. Further, several women in the focus groups noted that using protection typically depends on whether or not the man wants to. As a result, some women seemed to feel a sense of disempowerment and an inability to advocate for condom use with their main partner (Cottingham & Ravindran, 2008; Marín, 2003). This emphasizes the Machismo culture present in El Salvador, highlighting that perhaps Salvadoran women lack skill in condom negotiation. Additionally, the fact the many Salvadorans are practicing Catholics may influence their minimal use of condoms, as contraception is not condoned by the Catholic Church. In order to improve condom use among individuals in this environment, additional education surrounding condom use and negotiation may be needed; this is a common strategy employed in other HIV/STI prevention programs (Gómez & Marín, 2010; Peragallo et al., 2005; Harvey et al., 2008). Educational interventions like CAA are important to help continue transforming the cultural norms and encourage dialogue about issues like condom use in El Salvador.

Behavioral modification is an important outcome of the CAA intervention. While it is valuable to note that knowledge of participants improved as a result of the program, it is also important that enhanced knowledge translates to modified behavior. For example, as men and women learn more about HPV transmission and the link between this specific STI and cervical cancer, they must understand the significance of prevention. When knowledge increases through the CAA program, people better understand the value of preventive health interventions. On the KAP survey, roughly 56.4% of women reported obtaining cervical cancer screening in the past

two years, as recommended by the CDC. In comparison, national data estimates that about 67.5% of women in El Salvador are receiving cervical cancer screening every two years (World Health Organization/Institut Catala d'Oncologia HPV Information Center, 2010). The CAA intervention has the ability to transform participants' attitudes toward both screening and vaccination by demystifying these fundamental methods of HPV and cervical cancer prevention. Furthermore, as lay people recognize the significance of preventive care, they can mobilize resources and work to bring these medical services to their communities.

Currently, cervical cancer screening is more widely available than HPV vaccination in El Salvador. However, the HPV vaccine is an effective prevention strategy that is fortunately being championed for use in El Salvador by ASAPRECAN and partner organizations. Additional education regarding the vaccine, reduced cost per injection, and enhanced availability of the vaccine throughout the country are all vital to its widespread use. Inclusion of the vaccine in the National Immunization Plan, which ASAPRECAN is advocating for and the majority of respondents on both the KAP survey and FGDs agreed with, could be the most effective way to address these barriers and increase uptake among young women. This is crucial, as the most effective plan to reduce the burden of cervical cancer in El Salvador should include a combination of public health education, screening, and vaccination (Malloy et al., 2000; Flores & Bencomo, 2009; Kobetz et al., 2010; Schiffner & Buki, 2006; Vanslyke et al., 2008).

Unfortunately, preventive medicine is not emphasized in El Salvador. Since only about half of women are regularly seeing a health care provider for routine care, a large percentage of the population is at an increased risk for the morbidity and mortality associated with HPV infection and cervical cancer. Considering the limited availability of preventive care, many women do not seek health care until severe symptoms present and the medical problem becomes acute. This is

particularly true in rural areas where some women have such few economic resources that they go without medical care until a crisis situation arises. These realities emphasize the need for public health education, which can significantly enhance efforts for prevention. Further, increasing knowledge and awareness of HPV infection and cervical cancer can promote early detection, which enhances the likelihood that more effective treatment can be offered to women (Sankaranarayanan et al., 2001; CDC, 2000). Education interventions like CAA have the ability to not only increase knowledge and modify behavior, but also transform cultural norms – like multiple-partnering and condom use – that significantly impact the burden of disease caused by HPV infection and cervical cancer.

The cultural transformation that is working to normalize things like condom use in the Salvadoran culture must continue in order to reduce the morbidity and mortality associated with cervical cancer. Related cultural values such as multiple-partnering must also improve to truly make an impact on these morbidities. While consistent screening is crucial to cervical cancer prevention, it is only one aspect of a multitude of components that can impact HPV infection and cervical cancer development. Interventions such as CAA provide public health education to communities lacking knowledge on these topics and help enhance discussion about these sensitive issues.

In fact, improving participants' ability to communicate effectively with not only sexual partners, but also family and community members, is an important result of the CAA intervention. Better communication not only enhances the quality of relationships, but also the use of preventive health care like screening and vaccination. Several women in the focus groups noted that they felt an increased sense of control over their own health after gaining knowledge through the CAA intervention. This empowerment is critical for women, families, and the

Salvadoran culture in general, as highlighted by both men and women during the FGDs. Offering programs like CAA exposes individuals to new information that helps them improve their personal health in addition to the quality of their relationships. Further, it fosters a culture that values women's health and promotes the wellness of the family, a building block of any society.

Implications for Public Health

Educational interventions such as CAA are crucial to improving public health outcomes related to cancer, specifically in underserved populations where the burden of cervical cancer is highest. As previously discussed in the literature review, the effective behavioral interventions highlighted by CDC provide examples of existing interventions that effectively improve cancer-related prevention and outcomes. These programs have been rigorously evaluated according to CDC guidelines, and have been shown to significantly increase outcomes like knowledge and cancer screening uptake. However, based on a thorough review of the literature, it is evident that cervical cancer education programs specifically targeting Latino populations are limited. Additional program development and implementation that addresses public health education about HPV infection and cervical cancer for Latinos is crucial to decreasing the burden of disease (Byrd et al., 2007; O'Brien et al., 2010; Fernández et al., 2009).

To further develop interventions that address HPV and cervical cancer in low-resource settings like El Salvador, it is imperative to effectively engage community participants in a culturally appropriate manner. Trust is built between the research team and the study participants by demonstrating to individuals the value of the research both personally and for their community. Fortunately, the CAA intervention has strong stakeholders in the United States as well as El Salvador, where the intervention was implemented. From physicians to public health educators and church leaders, successfully engaging community partners is crucial to developing

rapport and building trust, both of which are necessary to the effective implementation of any intervention. In addition, the CAA intervention acknowledged the sociocontextual factors unique to El Salvador throughout both the development and implementation phases; this certainly contributes to any successful intervention abroad (Barab & Squire, 2004). While the availability of educational programs is necessary to address the excessive cervical cancer burden in resource-poor settings, it is only through effective community engagement and participation that the mission of these interventions can be achieved (Tu et al., 2008; Mackingbach & Gunning-Schepers, 1997; Scott et al., 2005).

CAA successfully increases the knowledge of participants regarding HPV and cervical cancer. Furthermore, the program emphasizes the importance of educating both men and women so that they engage with this valuable information. Through vaccination and routine screening, cervical cancer is one of the most preventable cancers impacting women globally. As such, public health education on this topic must be enhanced, specifically in low-resource settings where the cervical cancer burden is highest. Faith-based, culturally relevant interventions such as CAA should be available to men and women in these areas in order to enhance public health literacy and increase uptake of medical services to prevent disease. Overall, participants valued this group education experience. These types of interventions have the potential to significantly improve knowledge of participants and ultimately alter behavior that will decrease individual risk for HPV infection and cervical cancer, thereby reducing the overall burden of disease.

Limitations

There were several limitations to this study. A significant limitation is the fact that it was not a randomized controlled trial. Increased difficulty in long-term follow-up with people from low-resource communities such as these in El Salvador makes it more challenging to implement

this type of trial. Since most individuals do not have access to cellular telephones or electronic mail, the contact information available for participants is unreliable. Fortunately, church membership is a fairly dependable way to consistently interact with the same individuals in these environments. Implementing CAA through the extensive network of Cristiana Josue Churches in El Salvador enhances the research team’s ability to continue working with this similar sample population over time.

The inability to collect data from a comparable intervention and control group is another limitation of this study. This is most certainly impacted by the aforementioned difficulty in following participants long-term. The fact that data from an intervention and control community was not effectively attained emphasizes the need for further testing of the program through a pre-test/post-test or randomized controlled trial in order to illustrate the overall impact of the CAA intervention.

Another limitation to this evaluation is that individuals had varying amounts of time between their involvement in the CAA program and data collection. Although all participants completed the intervention six to twelve months prior to this evaluation, the amount of time since their involvement in the CAA intervention may have impacted their responses to the KAP survey and FGD questions. Further, behavior change was self-reported on the KAP survey, and therefore not validated. This also might have impacted the quality of the data obtained for this evaluation.

Finally, only the researcher reviewed the complete transcripts from the FGDs. If another individual had also read through the transcripts, checking for recurring themes and ideas, this would have enhanced the reliability, adding further support to the findings. Although another individual did not review the complete transcripts for inter-rater reliability, a colleague fluent in

the Spanish language did review the translation of the selected quotations for validation.

Recommendations for "Con Amor Aprendemos"

Based on the findings from this evaluation, it is clear that topics like HPV and cervical cancer must be openly discussed more frequently in El Salvador in order to enhance health outcomes. Increased dialogue will allow people to consistently engage with the issues addressed in the CAA program to more fully understand how HPV and cervical cancer impact men and women in their community. In addition, these data suggest that it would also be beneficial to modify certain components of the CAA intervention. For instance, emphasizing the female reproductive anatomy throughout the CAA program as opposed to solely in the first weekly session would increase participants' exposure to these concepts. Further, highlighting individual risk perception in each session of the intervention might be necessary to enhance participants' perceived susceptibility of acquiring HPV and/or cervical cancer. Emphasizing risk perception could provoke action among participants, such as increased uptake of preventive screening and condom use. Enhanced education and candid dialogue are fundamental to minimizing any false information present within these communities. Further, they will increase the necessary preventive health measures that will help decrease the burden of disease caused by HPV and cervical cancer in El Salvador.

Recommendations for Future Studies

Despite these known challenges, the next step for this project would be to adopt a stronger research design such as a randomized controlled trial between two churches in El Salvador. This type of research design would allow a more thorough evaluation of the effects of the CAA program. Additional evaluation using a KAP survey and/or FGDs that emphasizes behavior modification like condom use and screening uptake will also be of importance to demonstrate

how increased knowledge from CAA has motivated behavior change. Studies on HPV infection and cervical cancer among Latinos are critical to enhance the existing body of research and further inform the development of interventions like CAA.

References

Adams, M., Jasani, B. & Fiander, A. (2007). Human papilloma virus (HPV) prophylactic vaccination: challenges for public health and implications for screening. *Vaccine, 25*(16): 3007-3013. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/17292517.

Agosti, J.M. & Goldie, S.J. (2007). Introducing HPV vaccine in developing countries – key challenges and issues. *The New England Journal of Medicine, 356*: 1908-1910. Retrieved from http://www.nejm.org/doi/full/10.1056/nejmp078053.

Agurto, I., Sandoval, J., De La Rosa, M., & Guardado, M.E. (2006). Improving cervical cancer prevention in a developing country. *International Journal for Quality in Health Care,* 18(2): 81-86.

American Cancer Society. (January 2013). Cervical Cancer. Retrieved from http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-what-is-cervical-cancer.

Arredondo, E.M., Pollak, K. & Costanzo, P.R. (2008). Evaluating a stage model in predicting monolingual Spanish-speaking Latinas' cervical cancer screening practices: The role of psychosocial and cultural predictors. Retrieved from http://www.ndinnovators.com/PDF/EvalAModel4LatinaCervicalCancer.pdf.

Barab, S. & Squire, K. (2004). Design-based research: putting a stake in the ground. *Journal of the Learning Sciences, 13*(1): 1-14. Retrieved from www.tandfonline.com/doi/abs/10.1207/s15327809jls1301_1?journalCode=hlns20#previewhttp://www.jstor.org/stable/10.2307/3699927.

Bello, F.A., Enabor, O.O. & Adewole, I.F. (2011). Human papilloma virus vaccination for control of cervical cancer: a challenge for developing countries. *African Journal of Reproductive Health, 15*(1): 25-30. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/21987934.

Black, M.E., Yamada, J. & Mann, V. (2002). A systematic literature review of the effectiveness of community-based strategies to increase cervical cancer screening. *Canadian Journal of Public Health, 93*(5): 386-393. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12353463.

Blumenthal, D.S., Fort, J.G., Ahmed, N.U., Semenya, K.A., Schreiber, G.B., Perry, S., & Guillory, J. (November 2005). Impact of a two-city community cancer prevention intervention on African Americans. *Journal of the National Medical Association, 97*(11): 1479-1488.

Bosch, F.X., Lorincz, A., Muñoz, N., Meijer, C.J.L.M, & Shah, K.V. (2002). The causal relation between human papillomavirus and cervical cancer. *Journal of Clinical Pathology,* 55(4), 244-265.

Briss, P., Rimer, B., Reilley, B., Coates, R.C., Lee, N.C., Mullen, P., Corso, P., Hutchinson, A.B., Hiatt, R., Kerner, J., Georgia, P., White, C., Gandhi, N., Saraiya, M., Breslow, R., Isham, G., Teutsch, S.M., Hinman, A.R., Lawrence, R. & Task Force on Community Preventive Services. (2004). Promoting informed decisions about cancer screening in communities and healthcare systems. *American Journal of Preventive Medicine, 26*(1): 67-80. Retrieved from http://www.thecommunityguide.org/cancer/idm/Briss-consent.pdf.

Brouwers, M.C., De Vito, C., Bahirathan, L., Carol, A., Carroll, J.C., Cotterchio, M., Dobbins, M., Lent, B., Levitt, C., Lewis, N., McGregor, S.E., Paszat, L., Rand, C. & Wathen, N. (2011). Effective interventions to facilitate the uptake of breast, cervical and colorectal cancer screening: an implementation guideline. *Implementation Science, 6*(112). Retrieved from http://www.implementationscience.com/content/6/1/112.

Burak, L.J. & Meyer, M. (2009). Using the health belief model to examine and predict college women's cervical cancer screening beliefs and behavior. *Health Care for Women International, 18*(3): 251-262. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/07399339709516279.

Byrd, T.L., Chavez, R. & Wilson, K.M. (2007). Barriers and facilitators of cervical cancer screening among Hispanic women. *Ethnicity & Disease, 17*(1): 129-134. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/17274222.

Centers for Disease Control and Prevention. (2000). Implementing recommendations for the early detection of breast and cervical cancer among low-income women. *Morbidity and Mortality Weekly Report-Recommendations and Reports, 49*(RR02): 35-55. Retrieved from http://www.cdc.gov/Mmwr/preview/mmwrhtml/rr4902a4.htm.

Centers for Disease Control and Prevention. (2012a). Effective Interventions, Behavioral Interventions. Retrieved from http://www.effectiveinterventions.org/en/HighImpactPrevention/Interventions.aspx.

Centers for Disease Control and Prevention. (2012b). Cervical Cancer Screening Guidelines for Average-Risk Women. Retrieved from http://www.cdc.gov/cancer/cervical/pdf/guidelines.pdf.

Centers for Disease Control and Prevention. (2012c). Vaccines and Immunizations, HPV Vaccine. Retrieved from http://www.cdc.gov/vaccines/vpd-vac/hpv/vac-faqs.htm.

Centers for Disease Control and Prevention. (2012d). Gynecologic Cancers, Inside Knowledge Campaign. Retrieved from http://www.cdc.gov/cancer/knowledge/.

Centers for Disease Control and Prevention. (2013). Gynecologic Cancers, Cervical Cancer Screening. Retrieved from http://www.cdc.gov/cancer/cervical/basic_info/screening.htm.

CIA World Factbook. (2013). El Salvador Population Below Poverty Line. Retrieved from http://www.indexmundi.com/el_salvador/population_below_poverty_line.html.

Cottingham, J.C. & Ravindran, T.K.S. (2008). Gender aspects of sexual and reproductive health. *International Encyclopedia of Public Health:* 19-25. Retrieved from http://www.sciencedirect.com/science/article/pii/B9780123739605004810.

Dandash, K.F. & Al-Mohaimeed, A. (2007). Knowledge, attitudes, and practices surrounding breast cancer and screening in female teachers of Buraidah, Saudi Arabia. *International Journal of Health Sciences, 1*(1): 61-71. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3068667/.

Denny, L., Kuhn, L., Pollack, A., Wainwright, H., & Wright, T.C. (2000). Evaluation of alternative methods of cervical cancer screening for resource-poor settings. *Cancer,* 89(4): 826-833.

Denny, L. & Sankaranarayanan, R. (2006). Secondary prevention of cervical cancer. *International Journal of Gynecology and Obstetrics,* 94(1): S65-S70.

Ditzian, L. J., Gizelka, M. S., Maza, M., Hartmann, B., Beatrix, H., Shirazian, T., & Cremer, M. (2011). Cervical cancer screening in low- and middle-income countries. *Mount Sinai Journal of Medicine*, 78(3), 319-326.

El-Bassel, N., Witte, S., Gilbert, L., Wu, E., Chang, M., Hill, J., & Steinglass, P. (2003). The efficacy of a relationship-based HIV/STD prevention program for heterosexual couples. *American Journal of Public Health, 93*(6): 963-969.

Encyclopedia of the Nations. (2013). El Salvador-Topography. Retrieved from http://www.nationsencyclopedia.com/Americas/El-Salvador-TOPOGRAPHY.html.

Erhardt, A. A., Exner, T.M., Hoffman, S., Silberman, I., Leu, C-S., Miller, S., & Levin, B. (2002). A gender-specific HIV/STD risk reduction intervention for women in a health care setting: short- and long-term results of a randomized clinical trial. *AIDS Care*, *14*(2), 147-161.

Fatone, A. & Jandorf, L. (2009). Predictors of cervical cancer screening among urban African Americans and Latinas. *American Journal of Health Behavior, 33*(4): 416-424. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/19182986.

FESAL-2008. (February 2009). Retrieved from http://fesal.org.sv/2008/informe/resumido/10-SaluddelaMujer.htm.

Fernández, M.E., Gonzales, A., Tortolero-Luna, G., Williams, J., Saavedra-Embesi, M., Chan, W. & Vernon, S.W. (2009). Effectiveness of Cultivando la Salud: a breast and cervical cancer screening promotion program for low-income Hispanic women. *American Journal of Public Health, 99*(5): 936-943.

Gibson, W. J. & Brown, A. (2009). 8 Identifying Themes, Codes and Hypotheses: Working with Qualitative Data. London: SAGE Publications, Ltd.

Gómez, C.A. & Marín, B.V. (2010). Gender, culture, and power: Barriers to HIV-prevention strategies for women. *Journal of Sex Research, 33*(4): 355-362. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/00224499609551853.

Gotay, C.C. & Wilson, M.E. (1998). Social support and cancer screening in African American, Hispanic, and Native American women. *Cancer Practice, 6*(1): 31-37. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9460324.

Gregson, J., Foerster, S.B., Orr, R., Jones, L., Benedict, J., Clarke, B., Hersey, J., Lewis, J. & Zotz, A.K. (2001). System, environmental, and policy changes: using the social-ecological model as a framework for evaluating nutrition education and social marketing programs with low-income audiences. *Journal of Nutrition Education*, 33(1): S4-15. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12857540.

Harvey, S.M., Bird, S.T., Galavotti, C., Duncan, E.A.W. & Greenberg, D. (2008). Relationship power, sexual decision-making and condom use among women at risk for HIV/STDs. *Women & Health, 36*(4): 69-84. Retrieved from http://tandfonline.com/doi/abs/10.1300/J013v36n04_06.

Hennink, M., Hutter, I. & Bailey, A. (2011). Qualitative Research Methods. London: SAGE Publications, Ltd.

Hirth, J.M., Tan, A., Wilkinson, G.S. & Berenson, A.B. (2012). Completion of the human papillomavirus vaccine series among insured females between 2006 and 2009. *Cancer, 118*(22): 5623-5629. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/cncr.27598/abstract.

International Agency for Research on Cancer, World Health Organization. (2005). Handbooks of Cancer Prevention Volume 10, Cervix Cancer Screening. Lyon: IARC Press. Retrieved from http://www.iarc.fr/en/publications/pdfs-online/prev/handbook10/handbook10-chap3.pdf.

International Agency for Research on Cancer, World Health Organization. (2010). GLOBOCAN 2008. Retrieved from http://globocan.iarc.fr.

Kelly, J.A., St. Lawrence, J.S., Diaz, Y.E., Stevenson, L.Y., Et al. (1991). HIV risk behavior reduction following intervention with key opinion leaders of population: An experimental analysis. *American Journal of Public Health, 81*(2): 168-171.

Kim, J.J., Brisson, M., Edmunds, W.J. & Goldie, S.J. (2008). Modeling cervical cancer prevention in developed countries. *Vaccine, 26*(10): K76-K86. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2769256/.

Laz, T.H., Rahman, M. & Berenson, A.B. (2012). Human papillomavirus vaccine uptake among 18- to 26-year-old women in the United States. *Cancer, 119*(7): 1386-1392. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/cncr.27894/abstract.

Leventhal, H., Kelly, K. & Leventhal, E.A. (1999). Population risk, actual risk, perceived risk, and cancer control: a discussion. *Jounrla of National Cancer Instititue Monographs, 1999*(25): 81-85. Retrieved from http://jncimonographs.oxfordjournals.org/content/1999/25/81.short.

MacDonald, C.F. (2008). Assessing Secondary Prevention Methods for Cervical Cancer: Costs and Benefits in Managed Care. *The American Journal of Managed Care,* 14(6), 185-192.

Mackenbach, J.P. & Gunning-Schepers, L.J. (1997). How should interventions to reduce inequalities in health be evaluated? *Journal of Epidemiology and Community Health, 51*(4): 359-364. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1060501/.

Malloy, C., Sherris, J. & Herdman, C. (2000). HPV DNA Testing: Technical and programmatic issues for cervical cancer prevention in low-resource settings. http://www.path.org/publications/files/HPV-DNA-Testing-Issues.pdf, accessed April 23, 2012.

Marcus, A.C. & Crane, L.A. (1998). A review of cervical cancer screening intervention research: implications for public health programs and future research. *Preventive Medicine, 27*(1): 13-31. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9465350.

Marín, B.V. (2003). HIV prevention in the Hispanic community: sex, culture, and empowerment. *Journal of Transcultural Nursing, 14*(3): 186-192. Retrieved from http://tcn.sagepub.com/content/14/3/186.short.

National Cancer Institute. (2008). Cancer Health Disparities. Retrieved from http://www.cancer.gov/cancertopics/factsheet/disparities/cancer-health-disparities.

National Cancer Institute. (September 2012a). Research-tested Intervention Programs. Retrieved from http://rtips.cancer.gov/rtips/.

National Cancer Institute. (2012b). The Forsyth County Cancer Screening Project. Retrieved from http://rtips.cancer.gov/rtips/programDetails.do?programId=141840.

National Cancer Institute. (2012c). Targeting Cancer in Blacks. Retrieved from http://rtips.cancer.gov/rtips/programDetails.do?programId=310347.

National Cancer Institute. (2012d). Cambodian Women's Health Project. Retrieved from http://rtips.cancer.gov/rtips/programDetails.do?programId=193111.

National Cancer Institute. (2012e). Vietnamese Women's Health Project. Retrieved from http://rtips.cancer.gov/rtips/programDetails.do?programId=1427816.

Natunen, K., Lehtinen, J., Namujju, P., Sellors, J., & Lehtinen, M. (2011). Aspects of prophylactic vaccination against cervical cancer and other human papillomavirus-related cancers in developing countries. *Infectious Diseases in Obstetrics and Gynecology*, 2011(10): 1155-1165.

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International, 15*(3): 259-267. Retrieved from http://heapro.oxfordjournals.org/content/15/3/259.short.

O'Brien, M.J., Halbert, C.H., Bixby, R., Pimentel, S. & Shea, J.A. (2010). Community health worker intervention to decrease cervical cancer disparities in Hispanic women. *Journal of General Internal Medicine, 25*(11): 1186-1192.

Pan American Health Organization—World Health Organization. (2001). El Salvador. Retrieved from http://www.paho.org/english/sha/prflels.htm.

Pan American Health Organization—World Health Organization. (2007). Health in the Americas, 2007. Volume II. Retrieved from http://www.paho.org/hia/archivosvol2/paisesing/El%20Salvador%20English.pdf#search="el salvador cancer".

Paskett, E.D., Tatum, C.M., D'Agostino, R., Rushing, J., Velez, R., Michielutte, R., & Dignan, M. (1999). Community-based interventions to improve breast and cervical cancer screening: Results of the Forsyth County Screening Project. *Cancer Epidemiology, Biomarkers & Prevention, 8:* 453-459.

Peragallo, N., Deforme, B., O'Campo, P., Lee, S.M., Kim, Y.J., Cianelli, R. & Ferrer, L. (2005). A randomized clinical trial of an HIV-risk-reduction intervention among low-income Latina women. *Nursing Research, 54*(2): 108-118. Retrieved from http://journals.lww.com/nursingresearchonline/Abstract/2005/03000/A_Randomized_Trial_of_an.5.aspx.

Podolsky, R., Cremer, M., Atrio, J., Hochman, T. & Arslan, A.A. (2009). HPV vaccine acceptability by Latino parents: a comparison of U.S. and Salvadoran populations. *Jounral of Pediatric and Adolescent Gynecology, 22*(4): 205-215. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/19646665.

Ross, C.E. & Wu, C. (1995). The links between education and health. *American Sociological Review, 60*(5). Retrieved from http://www.jstor.org/discover/10.2307/2096319?uid=3739616&uid=2&uid=4&uid=3739256&sid=21101511797691.

Sabatino, S.A., Lawrence, B., Elder, R., Mercer, S.L., Wilson, K.M., DeVinney, B., Melillo, S., Carvalho, M., Taplin, S., Bastani, R., Rimer, B.K., Vernon, S.W., Melvin, C.L., Taylor, V., Fernandez, M. & Glanz, K. (2012). Effectiveness of interventions to increase screening for breast, cervical, and colorectal cancers: nine updated systematic reviews for The Guide to Community Preventive Services. *American Journal of Preventive Medicine*, *43*(1):765-786. Retrieved from http://www.thecommunityguide.org/cancer/screening/client-oriented/index.html.

Sankaranarayanan, R. (2009). HPV vaccination: the promise & problems. *Indian Journal of Medical Research*, 130: 322-326.

Sankaranarayanan, R., Budukh, A.M., & Rajkumar, R. (2001). Effective screening programmes for cervical cancer in low- and middle-income developing countries. *Bulletin of the World Health Organization,* 79(10): 954-961.

Sankaranarayanan, R., Wesley, R., Somanathan, T., Dhakad, N., Shyamalakumary, B., Amma, N.S., Parkin, D.M. & Nair, M.K. (2000). Visual inspection of the uterine cervix after the application of acetic acid in the detection of cervical carcinoma and its precursors.

Scott, K.D., Gilliam, A. & Braxton, K. (2005). Culturally competent HIV prevention strategies for women of color in the United States. *Health Care for Women International, 26*(1): 17-45. Retrieved from www.tandfonline.com/doi/abs/10.1080/07399330590885795.

Selvin, E. & Brett, K.M. (2003). Breast and cervical cancer screening: Sociodemographic predictors among White, Black, and Hispanic Women. *American Journal of Public Health, 93*(4): 618-623. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447800/.

Shelton, R.C., Snavely, A.C., De Jesus, M., Othus, M.D. & Allen, J.D. (2011). HPV vaccine decision-making and acceptance: does religion play a role? *Journal of Religion and Health.* Retrieved from ttp://www.ncbi.nlm.nih.gov/pubmed?term=hpv%20vaccine%20religion%20hispanic.

Sherris, J., Wittet, S., Kleine, A., Sellors, J., Luciani, S., Sankaranarayanan, R. & Barone, M.A. (2009). Evidence-based, alternative cervical cancer screening approaches in low-resource settings. *International Perspectives on Sexual and Reproductive Health, 35*(3). Retrieved from http://www.guttmacher.org/pubs/journals/3514709.html.

Smith, J.S., Lindsay, L., Hoots, B., Keys, J., Franceschi, S., Winer, R., & Clifford, G.M. (2007). Human papillomavirus type distribution in invasive cervical cancer and high-grade cervical lesions: A meta-analysis update. *International Journal of Cancer,* 121(3), 621-632.

Taylor, V.M., Jackson, J.C., Yasui, Y., Kuniyuki, A., Acorda, E., Marchand, A., Schwartz, S.M., Tu, S.P., & Thompson, B. (2002). Evaluation of an outreach intervention to promote

cervical cancer screening among Cambodian American Women. *Cancer Detection and Prevention, 26,* 320-327.

Taylor, V.M., Jackson, J.C., Yasui, Y., Nguyen, T.T., Woodall, E., Acorda, E., Li, L., & Ramsey, S. (2010). Evaluation of a cervical cancer control intervention using lay health workers for Vietnamese American Women. *American Journal of Public Health, 100*(10): 1924-1929.

The World Bank. (2013). El Salvador. Retrieved from http://www.worldbank.org/en/country/elsalvador.

Traviño, M., Jandorf, L., Bursac, Z. & Erwin, D.O. (2012). Cancer screening behaviors among Latina women: the role of the Latino male. *Journal of Community Health, 37*(3): 694-700. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22075852.

Tsu, V.D. & Levin, C.E. (2008). Making the case for cervical cancer prevention: what about equity? *Reproductive Health Matters, 16*(32): 104-112. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/19027628.

Tu, S.P., Yip, M.P., Chun, A., Choe, J., Bastani, R. & Taylor, V. (2008). Development of intervention materials for individuals with limited English proficiency: lessons learned from "Colorectal Cancer Screening in Chinese Americans". *Medical Care, 46*(9): S51-61. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/18725834.

Vicari, A. S., Dilsa, L. G., Deeks, S., Ceron-Mireless, S. P., & San Roman, M. L. L. (2010). Progress toward implementation of human papillomavirus vaccination-the Americas, 2006-2010. *CDC Morbidity and Mortality Weekly Report*, 60(40).

Viswanath, K. (2005). The communications revolution and cancer control. *Nature Review Cancer, 5:* 828-835. Retrieved from http://www.nature.com/nrc/journal/v5/n10/full/nrc1718.html.

Watts, L.A., Joseph, N., Wallace, M., Rauh-Hain, J.A., Muzikansky, A., Growdon, W.B. & del Carmen, M.G. (2009). HPV vaccine: a comparison of attitudes and behavioral perspectives between Latino and non-Latino women. *Gynecologic Oncology, 112*(3): 577-582. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/19150120.

World Health Organization/Institut Catala d'Oncologia HPV Information Center. (2010). Human papillomavirus and related cancers. Retrieved from http://apps.who.int/hpvcentre/statistics/dynamic/ico/country_pdf/SLV.pdf.

Yang, B.H., Bray, F.I., Parkin, D.M., Sellors, J.W., & Zhang, Z.F. (2004). Cervical cancer as a priority for prevention in different world regions: An evaluation using years of life lost. *International Journal of Cancer,* 109(3), 418-424.

Yeganeh, N., Curtis, D. & Kuo, A. (2010). Factors influencing HPV vaccination status in a Latino population; and parental attitudes towards vaccine mandates. *Vaccine, 25*(4): 4186-4191. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/20417261.

Appendices

Appendix A

La Encuesta de CAP (Conocimientos, Actitudes y Prácticas)

PARTE I: Por favor, conteste todas las siguientes preguntas con honestidad. Toda la información se mantendrá confidencial.

1. ¿Usted ya ha participado en el programa "Con Amor Aprendemos"?

____ Sí ____ No ____ No sabe/No está segura (o)

2. ¿Cuál es su edad? _____

3. ¿Cuál es su género o sexo? ____ Masculino ____ Femenino

4. ¿Cuál es su ingreso familiar mensual? Por favor marque una:

___ 200 dólares o menos ___ 201 a 500 dólares ___ 501 a 1000 dólares
___ 1001 a 2000 dólares ___ 2000 dólares o más

5. ¿Cuál es su nivel de estudios/nivel educativo? Por favor marque una:

___ Menos del nivel básico ___ Básico (1°-6°) ___ Intermedio (7°-9°)
___ Bachillerato ___ Superior (Universitario/Técnico)

6. ¿Cuál es su Municipio? (de la dirección de su casa) _____

7. ¿De qué departamento es usted? _____

8. ¿Tiene seguro de salud?

____ Sí ____ No ____ No sabe/No está segura (o)

9. Si tiene seguro de salud, es:

____ Público ____ Privado ____ No sabe/No está segura (o)

10. ¿A dónde va cuando necesita servicios de salud? Por favor, marque todo a lo que aplique:

____ Ministerio de Salud ____ Instituto Salvadoreño del Seguro Social (ISSS)
____ Promotoras de salud ____ Hospitales o Clínica Particular (privada)
____ Hospital Militar ____ Bienestar Magisterial

Otro, por favor especifique: _____

11. Si no puede acceder a los servicios de salud cuando se enferma, ¿por que no? Por favor, marque todo a lo que aplique:

___ No hay un hospital o clínica en mi comunidad.

___ No sé cómo programar una cita con el médico.

___ No puedo pagar por los servicios de salud.

___ Yo no creo que necesite la ayuda de un profesional de la salud.

___ No tengo a nadie para cuidar de mis hijos o la casa mientras yo voy al médico.

___ Yo no tengo transporte para llegar a una cita con el médico.

Otro, por favor especifique: _____

12. ¿Alguna vez ha escuchado acerca del Papanicolau (citología cérvico vaginal)?

____ Sí ____ No ____ No sabe/No está segura (o)

13. ¿Cree que es importante que las mujeres tengan una prueba de Papanicolau (citología cérvico vaginal)?

____ Sí ____ No ____ No sabe/No está segura (o)

14. Si es mujer, ¿cuándo fue la última vez que le hicieron un Papanicolau (citología cérvico vaginal)?

____ En el último año (hace menos de 12 meses)

____ En los últimos 2 años (hace 1 año pero menos de 2)

____ En los últimos 3 años (hace 2 años pero menos de 3)

____ En los últimos 5 años (hace 3 años pero menos de 5)

____ Hace 5 años o más

____ Nunca ha tenido un Papanicolau (citología cérvico vaginal)

____ No sabe/No está segura

15. ¿Cree que usted o su pareja está en riesgo de cáncer del cuello de útero?

____ Sí ____ No ____ No sabe/No está segura (o)

16. ¿Alguna vez ha escuchado acerca del Virus del Papiloma Humano, o VPH?

____ Sí ____ No ____ No sabe/No está segura (o)

17. ¿Es el Virus del Papiloma Humano (VPH) una infección de transmisión sexual?

____ Sí ____ No ____ No sabe/No está segura (o)

18. ¿Cree que usted o su pareja está en riesgo del Virus del Papiloma Humano (VPH)?

____ Sí ____ No ____ No sabe/No está segura (o)

19. ¿Como puede protegerse de la infección del VPH? Por favor, marque todo a lo que aplique:

____ Abstenerse de la actividad sexual.

____ Usar un condón cuando participe en la actividad sexual.

____ Reducir el numeró de parejas sexuales.

____ Obtener una vacuna.

20. Una vacuna para prevenir el virus del papiloma humano o la infección por VPH está disponible y se llama la vacuna contra el cáncer del cuello de útero o verrugas genitales, la vacuna contra el VPH [si es mujer "GARDASIL o CERVARIX"; si es hombre "GARDASIL"]. Si usted está entre las edades de nueve y 26 años, ¿ha recibido alguna vez la vacuna contra el VPH?

____ Sí ____ No ____ No sabe/No está segura (o)

21. Si ha recibido la vacuna contra el VPH, ¿cuántas inyecciones ha tenido contra el VPH?

____ Uno de las inyecciones

____ Dos de las inyecciones

____ Las tres inyecciones

____ No sabe/No está segura

22. ¿Cree que es importante que las mujeres jóvenes reciban la vacuna para el Virus del Papiloma Humano (la vacuna contra el VPH)?

____ Sí ____ No ____ No sabe/No está segura (o)

23. ¿Cree que más personas obtengan la vacuna contra el VPH si el gobierno incluye la vacuna en el Plan Nacional de Inmunización?

____ Sí ____ No ____ No sabe/No está segura (o)

24. La prueba que se utiliza para detectar el crecimiento de células anormales en el cuello de útero se llama:
_____

25. Si una mujer no hace nada después de recibir un resultado de Papanicolaou (citología cérvico vaginal) anormal, existe un riesgo de: (sea lo más especifica/o posible) _____

26. La infección de transmisión sexual que causa la mayoría de los casos de cáncer del cuello de útero es llamada:
_____

27. ¿Está usted en una relación con una sola pareja?

____ Si ____ No ____ No sabe/No está segura (o)

28. ¿Con cuántas personas ha tenido sexo oral en su vida? (Sexo oral es contacto sexual de la boca y los genitales o el ano.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 o más

29. ¿Con cuántas personas ha tenido sexo vaginal en su vida? (Sexo vaginal es la unión sexual que involucra la penetración del pene dentro de la vagina.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 o más

30. ¿Con cuántas personas ha tenido sexo anal en su vida? (Sexo anal es la penetración del pene en el ano.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 o más

31. En los últimos tres meses, ¿con cuántas personas ha tenido relaciones sexuales?

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 o más

32. Yo he tenido sexo vaginal, oral, o anal con…

____ Hombres solamente ____ Mujeres solamente ____ Ambos

33. ¿Ha tenido alguna vez una infección de transmisión sexual?

____ Sí ____ No ____ No sabe/No está segura (o)

34. ¿Con que frecuencia usa un condón/preservativo/profiláctico cuando tiene relaciones sexuales?

____ 100% ____ 75% ____ 50% ____ <25% ____ Nunca

35. La última vez que tuvo relaciones sexuales, ¿usted o su pareja usó un condón?

____ Sí ____ No ____ No sabe/No está segura (o)

36. Si SIEMPRE usa un condón, el condón puede (por favor, marque una):

____ Evitar la transmisión de VPH ____ Reducir la transmisión de VPH

____ Tener ningún efecto ____ No sabe/No está segura (o)

<u>PARTE II</u>: Las preguntas de esta parte de la encuesta son *sólo para las personas que participaron anteriormente en el programa "Con Amor Aprendemos" (CAA)*. Si usted ha participado en CAA, por favor conteste todas las siguientes preguntas con honestidad. Toda la información se mantendrá confidencial.

37. Si es mujer, ¿desde su participación en CAA, ha obtenido un Papanicolau (citología cérvico vaginal)?

____ Sí ____ No ____ No sabe/No está segura (o)

38. ¿La participación en CAA influyó su decisión para tomarse un Papanicolau (citología cérvico vaginal)?

____ Sí ____ No ____ No sabe/No está segura (o)

39. Si usted ha recibido la vacuna contra el Virus del Papiloma Humano (VPH), ¿recibió la vacuna después de su participación en CAA?

____ Sí ____ No ____ No sabe/No está segura (o)

40. ¿La participación en CAA influyó su decisión para recibir la vacuna contra el VPH?

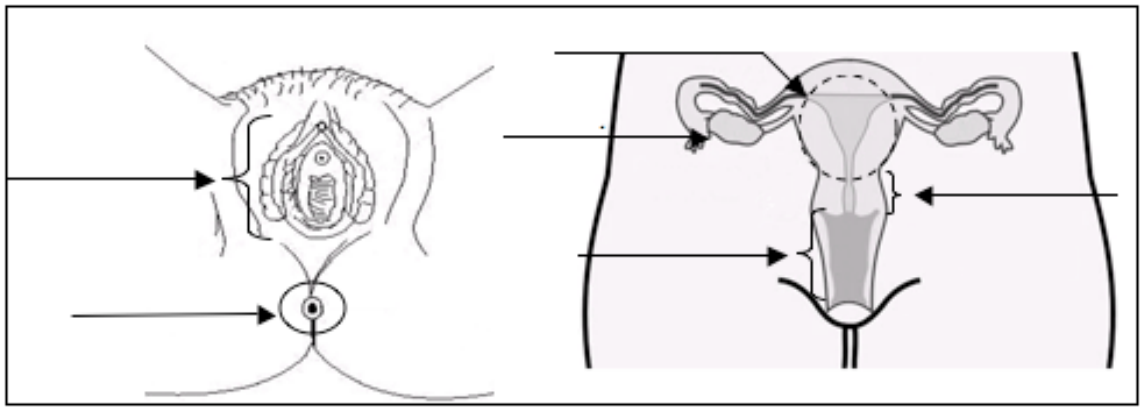
____ Sí ____ No ____ No sabe/No está segura (o)

41. Falso o Verdadero: El VPH puede infectar las células del cuello del útero porque estas células pueden cambiar rápidamente, especialmente durante la pubertad y el embarazo.

____ Falsa ____ Verdadera

42. Escriba la palabra que representa la parte del cuerpo o área señalada con la flecha. Por ejemplo, la palabra "ovarios" ha sido escrita en la línea que esta señalada en ese parte del cuerpo.

1. Vagina
2. Cuello del útero
3. Área Perianal
4. Útero
5. Vulva



43. Desde su participación en CAA, ¿ha tenido parejas sexuales nuevas? En caso afirmativo, ¿cuántas?

____ Sí, _____ (el número de parejas sexuales nuevas)

____ No

____ No sabe/No está segura (o)

44. Desde su participación en CAA, ¿ha usado condones con más frecuencia?

____ Sí ____ No ____ No sabe/No está segura (o)

45. ¿Cómo ha afectado su vida el programa "Con Amor Aprendemos"?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Gracias por completar esta encuesta. Recuerde, toda la información que usted proporciono en la encuesta será confidencial.

KAP Survey (Knowledge, Attitudes and Practices)

PART I: Please answer the following questions honestly. All of the information will be kept confidential.

1. Have you previously participated in the "Con Amor Aprendemos" program?

____ Yes ____ No ____ I don't know/I'm unsure

2. How old are you? _____

3. What is your gender? ____ Male ____ Female

4. What is your monthly income? Please mark one:

___ $200 or less ___ $201-$500 ___ $501-$1,000

___ $1001-$2000 ___ $2000 or more

5. What is your level of education? Please mark one:

___ Less than basic ___ Basic (1-6 grade) ___ Intermediate (7-9 grade)

___ Baccalaureate (10-12 grade) ___ Superior (University/Technical)

6. What is your municipality? (of your home address) _____

7. What Departamento are you from? _____

8. Do you have health insurance?

____ Yes ____ No ____ I don't know/I'm unsure

9. If you do have health insurance, is it:

____ Public ____ Private ____ I don't know/I'm unsure

10. Where do you go when you need health care services? (mark all that apply)

___ Ministry of Health ___ Salvadoran Social Security Institute

___ Health Promoters ___ Private Hospitals or Clinics

___ Military Hospital ___ Teachers' Welfare

Other, please specify: _____

11. If you cannot access health care services when you are sick, why not? (mark all that apply)

___ There is not a hospital or clinic in my community.

___ I do not know how to make an appointment with a doctor.

___ I cannot pay for health care services.

___ I do not think I need the assistance of a health care professional.

___ I do not have anyone to take care of my children or my house while I go to the doctor.

___ I do not have transportation to get to an appointment with a doctor.

Other, please specify: _____

12. Have you ever heard of the Pap smear?

____ Yes ____ No ____ I don't know/I'm unsure

13. Do you think it is important for women to have a Pap smear?

____ Yes ____ No ____ I don't know/I'm unsure

14. If you are a woman, when was the last time you had a Pap smear?

____ In the last year (the past 12 months)

____ In the last two years (more than one but less than two years ago)

____ In the last three years (more than two but less than three years ago)

____ In the last five years (more than three but less than five years ago)

____ Five years ago or more

____ I've never had a Pap smear

____ I don't know/I'm unsure

15. Do you feel that you or your partner is at risk for cervical cancer?

____ Yes ____ No ____ I don't know/I'm unsure

16. Have you ever heard of the human papillomavirus, or HPV?

____ Yes ____ No ____ I don't know/I'm unsure

17. Is HPV a sexually transmitted infection?

____ Yes ____ No ____ I don't know/I'm unsure

18. Do you feel that you or your partner is at risk for HPV infection?

____ Yes ____ No ____ I don't know/I'm unsure

19. In what ways can you protect yourself from HPV infection? (mark all that apply)

____ Abstain from sexual activity.

____ Use a condom when engaging in sexual activity.

____ Reduce your number of sexual partners.

____ Get a vaccine.

20. A vaccine to prevent the human papillomavirus (HPV) infection is available and is called the vaccine against cervical cancer or genital warts, the HPV vaccine (for women, Gardasil or Cervarix; for men, Gardasil). If you are between the ages of 9 and 26, have you ever had the HPV vaccine?

____ Yes ____ No ____ I don't know/I'm unsure

21. If you have received the HPV vaccine, how many injections have you had?

____ One of the injections

____ Two of the injections

____ All three of the injections

____ I don't know/I'm unsure

22. Do you think it's important that young women get the vaccine against the human papillomavirus (HPV)?

____ Yes ____ No ____ I don't know/I'm unsure

23. Do you think more people would get the HPV vaccine if the government included the vaccine in the National Plan on Immunization?

____ Yes ____ No ____ I don't know/I'm unsure

24. The test that is used to detect the growth of abnormal cells in the cervix is called:
_____

25. If a woman does nothing after she receives an abnormal Pap smear result, there exists a risk of: (please be as specific as possible) _____

26. The sexually transmitted infection that causes the majority of cervical cancer cases is called:
_____

27. Are you in a relationship with only one partner?

____ Yes ____ No ____ I don't know/I'm unsure

28. How many people have you had oral sex with in your life? (Oral sex is sexual contact between the mouth and

genitals or anus.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 or more

29. How many people have you had vaginal sex with in your life? (Vaginal sex is the penetration of the vagina with the penis.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 or more

30. How many people have you had anal sex with in your life? (Anal sex is the penetration of the anus with the penis.)

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 or more

31. How many people have you had sex with in the past three months?

____ 0 ____ 1 ____ 2-4 ____ 5-14 ____ 15 or more

32. I have had vaginal, oral, or anal sex with…

____ Men only ____ Women only ____ Both

33. Have you ever had a sexually transmitted infection?

____ Yes ____ No ____ I don't know/I'm unsure

34. How frequently do you use condoms when engaging in sexual activity?

____ 100% ____ 75% ____ 50% ____ <25% ____ Never

35. The last time you had sexual intercourse, did you or your partner use a condom?

____ Yes ____ No ____ I don't know/I'm unsure

36. If you always use a condom, the condom can (please mark one):

___ Eliminate the transmission of HPV ___ Reduce the transmission of HPV

___ Have no effect ___ I don't know/I'm unsure

<u>PART II</u>: The questions in this part of the survey are *only for people who have previously participated in the "Con Amor Aprendemos" (CAA) intervention*. If you have participated in CAA, please answer the following questions honestly. All of the information will be kept confidential.

37. If you are a woman, have you had a Pap smear since your participation in the CAA intervention?

____ Yes ____ No ____ I don't know/I'm unsure

38. Did your participation in CAA influence your decision to get a Pap smear?

____ Yes ____ No ____ I don't know/I'm unsure

39. If you have received the HPV vaccine, did you get it after your participation in the CAA intervention?

____ Yes ____ No ____ I don't know/I'm unsure

40. Did your participation in CAA influence your decision to get the HPV vaccine?

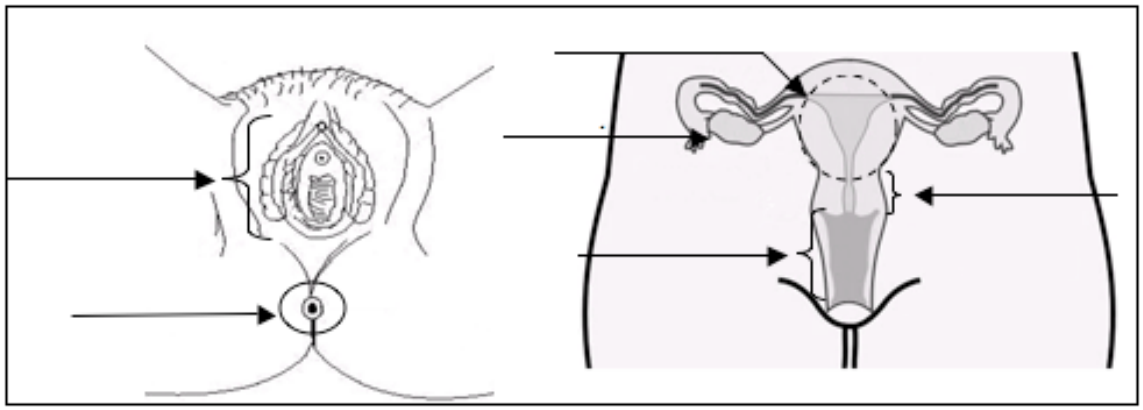
____ Yes ____ No ____ I don't know/I'm unsure

41. True or False: HPV can infect the cells of the cervix because these cells can change rapidly, especially during puberty and pregnancy.

____ True ____ False

42. Write the word that represents the part or area of the body indicated by the arrow. For example, the word "ovaries" has been written on the line that indicates this part of the body.

1. Vagina
2. Cervix
3. Perianal area
4. Uterus
5. Vulva



43. Since your participation in CAA, have you had any new sexual partners? If so, how many?

____ Yes, _____ (number of new sexual partners)

____ No

____ I don't know/I'm unsure

44. Since your participation in CAA, have you used condoms more frequently?

____ Yes ____ No ____ I don't know/I'm unsure

45. How has the "Con Amor Aprendemos" program impacted your life?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for completing this survey. Remember, the information that you provided in the survey will be kept confidential.

Appendix B

"Con Amor Aprendemos" Evaluación: Grupo de Discusión Focal

Introducción

¡Buenos tardes! Mi nombre es Logan Kirsch y esta es Camila Campos Ruiz. Trabajamos con la Asociación Salvadoreña Para la Prevención del Cáncer.

Gracias por venir a nuestra discusión hoy. Estamos agradecidos que ustedes están dispuestos a compartir sus pensamientos acerca de la salud preventiva y la detección del cáncer.

Así que vamos a hablar brevemente acerca de las logísticas. Durante la discusión hoy, vamos a hacer preguntas diferentes del grupo. ¡Ustedes son nuestros expertos, entonces queremos escuchar de todos ustedes! Con su permiso, nos gustaría grabar la discusión y tomar notas para ayudarnos a recordar lo que se dice. Sabemos que algunas cosas que vamos a discutir son muy sensibles, entonces por favor respeten las opiniones de otras personas, y hablen una persona a la vez.

Durante la discusión, por favor ayudarse a sí mismo a la comida y los refrescos. Si usted necesita ir al baño, se encuentra _____. Si tiene un teléfono celular, por favor apagarlo o ponerlo en vibrador. Al fin de la discusión hoy, va a recibir una camiseta de "Con Amor Aprendemos" por su participación.

Antes de empezar, quiero recordarles que sus comentarios son confidenciales. Nadie podría poner su nombre con ningunos de los comentarios que usted hace durante la discusión hoy. ¿Está bien si yo uso una grabadora para grabar la discusión? ¿Alguien tiene algunas preguntas?

Vaya, vamos a empezar.

Ejercicio

Queremos empezar hoy por preguntar cuantos de ustedes conozcan a alguien que ha tenido cáncer. Por favor, cada uno de ustedes puede decirnos a quien conoce que tenia cáncer y cómo se relaciona con usted?

Gracias. Podemos ver que muchos de ustedes y la gente en su comunidad han afectadas por el cáncer. Hoy, vamos a tratar de aprender como podemos trabajar con ustedes y sus familias y amigos para prevenir el cáncer para que menos personas se enferman y mueren de esta enfermedad. Vamos a hablar específicamente sobre el cáncer del cuello de útero hoy.

Sistema de Salud en El Salvador

Primero, vamos a hacer algunas preguntas sobre el sistema de salud en El Salvador.

1. Cuando personas en su comunidad están enfermas, ¿dónde pueden ir para recibir atención médica?

¿A un profesional de salud en un hospital o una clínica?
¿A una promotora de salud en su comunidad?
¿A un curandero?
¿Existe otro lugar que no se ha mencionado?

2. ¿Hay ocasiones cuando las personas están enfermas, pero no buscan atención medica? ¿Cuáles son algunas razones que no buscan atención medica?

¿Costo?
¿No hay profesionales de salud en su comunidad?
¿No hay nadie para cuidar de sus hijos o su casa mientras usted no está?
¿No hay transporte para ir a una cita con el médico?
¿Hay otra razones que no se han dicho?

3. ¿Pueden accesar fácilmente el cuidado de salud los hombres y las mujeres en El Salvador? ¿Por qué sí o por qué no?

4. ¿Cómo se pague por el cuidado preventiva de salud, como vacunas y exámenes de detección del cáncer?

¿Muchos Salvadoreños tienen seguro de salud?

Conocimientos/Actitudes Sobre el Cáncer del Cuello de Útero y la Prueba de Papanicolau

Luego, vamos a discutir el cáncer del cuello de útero y la prueba de Papanicolau.

5. ¿Qué causa el cáncer del cuello de útero?

6. ¿Cómo se puede prevenir el cáncer del cuello de útero?

7. ¿Qué cosas se ponen a las mujeres en riesgo de desarrollar cáncer del cuello de útero?

¿Cree que usted o su pareja está en riesgo de desarrollar cáncer del cuello de útero?

8. ¿Qué cree una mujer se ve o siente en su cuerpo si ha tenido cáncer del cuello de útero?

9. ¿Qué debe hacer alguien si piensa que tiene el cáncer del cuello de útero?

¿Consulte a un medicó?
¿Orar?
¿Consulte a un curandero en su comunidad?
¿Hay otras cosas que no se han dicho?

Así que vamos a discutir la Prueba de Papanicolau.

10. ¿Qué sabe acerca de las pruebas de Papanicolau?

11. ¿Quién debe obtener una prueba de Papanicolau? ¿Con que frecuencia?

12. ¿Qué creen las mujeres en su comunidad sobre la prueba de Papanicolau?

¿Cómo se siente sus parejas sobre el Papanicolau?
¿ Las parejas alentar o desalentar a las mujeres de obtener una prueba de Papanicolau? ¿Por qué?

13. ¿Cree que el mayor de las mujeres de actividad sexual en su comunidad tienen las pruebas de Papanicolau con regularidad? ¿Por qué sí o por qué no?

14. ¿Cree que participación en el programa "Con Amor Aprendemos" alentaría a las mujeres obtener una prueba de Papanicolau? ¿Por qué sí o por qué no?

15. ¿Lo que hace fácil para obtener una prueba de Papanicolau *(citología cérvico vaginal)* para las mujeres en su comunidad?

16. ¿Cuales algunas razones que mujeres *no* han recibido una prueba de Papanicolau *(citología cérvico vaginal)*?

¿El acceso?
¿Costo?
¿Las creencias religiosas?
¿Los valores familiares?
¿Sin síntomas de enfermedad?
¿Creen que no están en riesgo?
¿Hay otras razones que las mujeres en su comunidad no reciben una prueba de Papanicolau?

Conocimientos/Actitudes Sobre el Virus del Papiloma Humano (VPH) y la Vacuna Contra el VPH

Luego vamos a hablar sobre el Virus del papiloma Humano (VPH).

17. ¿Que ha escuchado acera del virus de papiloma humano, o VPH?

¿Cual es el VPH?

18. ¿Cómo se contrae el virus del papiloma humano (VPH)?

19. ¿Quien está en riesgo de contraer el virus del papiloma humano (VPH)?

20. ¿Por qué es el VPH una preocupación? ¿Afecta a hombres y mujeres o solo uno de los dos?

Así que queremos discutir la vacuna contra el VPH.

21. ¿Alguna vez ha escuchado sobre la vacuna contra el Virus de Papiloma Humano?

22. ¿Se disponible la vacuna contra el VPH en su comunidad?

23. ¿Las mujeres en su comunidad reciben la vacuna contra el VPH? ¿Cuáles son algunas razones que mujeres consigue esta vacuna?

¿Sugerencia de un medicó? Educador? ¿Miembro de la familia o una amiga? ¿Otras razones?

24. ¿Gente en su comunidad cree que esta vacuna contra el VPH es importante?

25. Una de las dos vacunas disponibles contra el VPH es para los hombres jóvenes también. ¿Habría que considerar la obtención de la vacuna para sus hijos?

26. ¿Cree que participación en el programa "Con Amor Aprendemos" alentaría a las personas obtener la vacuna contra el VPH? ¿Por qué sí o por qué no?

27. ¿Cuales algunas razones que personas en su comunidad *no* han recibido la vacuna contra el VPH?

¿El acceso?
¿Costo?
¿Las creencias religiosas?
¿Los valores familiares?
¿Creen que no están en riesgo?
¿Hay otras razones que las mujeres en su comunidad no reciben la vacuna contra el VPH?

28. ¿Cree que el gobierno debe incluir la vacuna contra el VPH en el Plan Nacional de Inmunización? Si el gobierno la incluye, piensa que más gente obtendría la vacuna contra el VPH?

Las Practicas y Comportamientos Sexuales (Tabúes, Mitos)

Luego vamos a discutir brevemente sobre las practicas y comportamientos sexuales, incluyendo mitos y tabúes que existen en su comunidad.

29. ¿Son la mayoría de las personas que conoce en una relación con una sola pareja?

¿Es común tener pajeras fuera de una relación?
¿Es común tener parejas fuera de un matrimonio?
¿Esto es común entre los hombres y las mujeres también?

30. ¿Son los condones disponibles en su comunidad?

En caso afirmativo, ¿dónde se puede obtenerlos?
¿Es fácil o difícil obtener los condones?
¿Por qué piensa esto?

31. ¿La gente en su comunidad usa condones para evitar los embarazos no deseados y las infecciones de transmisión sexual como el VPH?

¿Es diferente para los hombres frente a mujeres?

32. ¿Hay tabúes sexuales o mitos de su cultura?

En caso afirmativo, ¿cuáles son?
¿Cómo influye el comportamiento sexual de las mujeres? ¿De los hombres?
¿Cómo afectan la capacidad de las mujeres para obtener una prueba de Papanicolau (citología cérvico vaginal)?
¿Cómo afectan la capacidad de las mujeres (o los hombres) para recibir las vacunas contra las infecciones de transmisión sexual como VPH?

Reflejando Sobre Su Participación en el Programa "Con Amor Aprendemos"

33. Reflejando en su participación en el programa "Con Amor Aprendemos":

¿Qué le gusta del programa CAA?
¿Puede hacer recomendaciones para mejorar el programa?

Bueno. Antes de terminamos la discusión, hay algo que alguien quiere agregar?

Conclusión

¡Muchas gracias! Esto concluye nuestra discusión hoy. ¿Ustedes tienen algunas preguntas para nosotros, o algo más que les gustaría compartir? Una vez más, mil gracias por su tiempo y respuestas, ha sido muy valiosa.

"Con Amor Aprendemos" Evaluation: Focus Group Discussion Guide

Introduction

Good Afternoon! My name is Logan Kirsch and this is Camila Campos Ruiz. We work with the Salvadoran Cancer Prevention Association.

Thank you for coming to our discussion today. We appreciate that you are willing to share your thoughts about preventive health and cancer screening.

During the focus group discussion today, we will be asking the group different questions. You are our experts, so we want to hear from all of you! With your permission, we would like to record the discussion and also take some notes to help us remember what is said. We know that some things we will discuss today are sensitive, so we encourage everyone to respect each other's opinions, and give each other time to talk, one at a time.

During the discussion, please help yourself to food and refreshments. If you need to use the restroom, they are located _____. If you have a cell phone with you, please turn it off or put it on vibrate. At the end of the discussion today, you will receive a "Con Amor Aprendemos" t-shirt for your participation.

Before we start, I want to remind you that your comments are confidential. We will remove your name and information that might allow others to identify you. Is it ok that I tape record this session?

Does anyone have any questions?

Ok, let's get started.

Exercise

We want to start today by asking how many of you know someone who has had cancer. Can you each please tell us who you know who had cancer and how they were related to you?

Thank you. We can see that a lot of you and the people in your community have been affected by cancer. Today we are going to try to learn how to better work with you and your family and friends to prevent cancer so that fewer people get sick and die. We will be talking specifically about cervical cancer.

Health Care in El Salvador

First, we will ask a few questions about the health care system in El Salvador.

1. When people in your community are sick, where can they go to receive medical care?

    A medical professional at a hospital or clinic?
    A health promoter in their community?
    A healer?

Is there anywhere else that has not been mentioned?

2. Are there times when people are sick but do not seek care? Why do they not seek care?

Cost?
There are no medical professionals in their community?
There is no one to take care of your children or home while you are gone?
There is no transportation to get to a doctor appointment?
Are there any other reasons that have not been said before?

3. Can men and women in El Salvador both access health care easily? Why or why not?

4. How do Salvadorans pay for preventive health care like immunizations and cancer screenings?

Do many Salvadorans have health insurance?

Knowledge/Attitudes About Cervical Cancer and the Pap smear

Next, we are going to discuss cervical cancer.

5. What causes cervical cancer?

6. How can cervical cancer be prevented?

7. What puts women at risk for developing cervical cancer?

Do you think you or your partner is at risk for developing cervical cancer?

8. What do you think a woman would see or feel in her body if she had cervical cancer?

9. What should someone who thinks they might have cervical cancer do?

See a doctor?
Pray?
See a healer in their community?
Are there any other things that haven't been said?

Now we are going to talk about the Pap smear, a test that screens for cervical cancer.

10. What do you know about Pap smears?

11. Who should get a Pap smear? How often?

12. What do women in your community think about Pap smears?

How do their partners feel about Pap smears?
Do you think partners usually encourage or discourage women from having Pap smears? Why?

13. Do you think most sexually active women in your community have regular Pap smears? Why or why not?

14. Do you think participating in the "Con Amor Aprendemos" program would encourage women to have a Pap smear? Why or why not?

15. Is it easy for women in your community to get a Pap smear? Why or why not?

16. What are some of the reasons that women do not get Pap smears?

Access?
Cost?
Religious beliefs?
Family values?
No symptoms of disease?
They believe they are not at risk?
Are there other reasons why women in your community do not get a Pap smear?

Knowledge/Attitudes About HPV and the HPV Vaccine

Next we will discuss the human papillomavirus.

17. What have you heard about the human papillomavirus, or HPV?

What is HPV?

18. How does someone get the human papillomavirus (HPV)?

19. Who is at risk for contracting the human papillomavirus (HPV)?

20. Why is HPV a concern? Does it affect both men and women?

Now we are going to talk about the HPV vaccine.

21. Have you ever heard of the vaccine against the human papillomavirus (HPV)?

22. Is the HPV vaccine available in your community?

23. Do women in your community get the HPV vaccine? What are some of the reasons why?

Suggestion by a doctor? Educator? Family member or friend? Other reasons?

24. Do people in your community think this vaccine is important?

25. One of the two available HPV vaccines is for boys too. Would people in your community consider getting their sons vaccinated as well?

26. Do you think participating in the "Con Amor Aprendemos" program would encourage people to get the HPV vaccine? If so, can you tell me more about that?

27. What are some reasons that people in your community do not get the HPV vaccine?

Access?
Cost?
Religious beliefs?
Family values?
They think they are not at risk?
Are there any other reasons why some women may not get the HPV vaccine?

28. Do you think the government should include the HPV vaccine in the National Plan on Immunization? If it was included in the Plan, do you think more people would get the HPV vaccine?

Sexual Practices and Behavior (Taboos, Myths)

Next, we are going to talk briefly about sexual practices and behavior, including myths and taboos that exist in your community.

29. Are most people you know in a relationship with only one partner?

Is it common to have additional partners outside of a relationship?
What about a marriage?
Is this common among both men and women?

30. Are condoms available in your community?

If so, where can you get them?
Is it easy or difficult to get condoms?
Why do you think this?

31. Do people in your community use condoms to avoid unwanted pregnancy and sexually transmitted infections like HPV?

Is it different for men versus women?

32. Are there any sexual taboos or myths in your culture?

If so, what are they?
How do they impact sexual behavior for women? For men?
How do they affect women's ability to get a Pap smear?
How do they affect women's (or men's) ability to get vaccinated against sexually transmitted infections like HPV?

Reflecting on CAA Participation

33. Thinking back to your participation in the "Con Amor Aprendemos" program":

What did you like about the CAA program?
Can you make any recommendations for improving the program?

Ok. Before we finish the discussion, is there anything else you want to add?

Conclusion

Thank you very much! This concludes our focus group discussion. Do you have any questions for us, or anything else you would like to share? Thank you for your time and input, it has been very valuable.