

AN ABSTRACT OF THE THESIS OF

Garrett C. Jones for the degree of Honors Baccalaureate of Science in Biology as well as Honors Baccalaureate of Arts in International Studies in Biology presented on May 24, 2010. Title: Exploring Knowledge, Attitudes, and Sexual Behaviors among Young Adults in Rural Zacatecas, Mexico.

Abstract approved: \_\_\_\_\_  
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According to The Joint United Nations Programme on HIV and AIDS report of regional statistics for HIV/AIDS from 2001-2008, Latin America has the third highest prevalence of HIV/AIDS among children and adults in the world with about 2 million infected in 2008. Among all of these countries, Mexico has the second highest prevalence in Latin America. Another topic of public health concern associated with the boom of the younger generations in Mexico is the potential increase in unintended pregnancies. The **objective** of this study was to explore the factors influencing knowledge, attitudes and beliefs regarding reproductive health, as well as sexual risk behaviors among young adults in a rural community in Mexico. A mixed-**methods** investigation was conducted, including 10 closed-ended questionnaires and 10 in-depth interviews with five females and five males ranging from 18-28 years of age. **Findings** indicate that level of education had little influence on awareness of contraceptive methods and depth of knowledge increased only slightly with years of education. Religious affiliation was not related to contraceptive preference and/or use, and pre-marital sex was less common among females. The reasons influencing pre-marital sex were attributed to societal norms and familial pressures and were independent of religious background.

Key Words: knowledge, attitudes, risk behavior, contraceptives, STIs, education  
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Exploring Knowledge, Attitudes, and Sexual Behaviors among Young Adults  
in Rural Zacatecas, Mexico

by

Garrett C. Jones

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## Dedication

I dedicate this thesis to Daisy Grace Jones, *mi amor, mi inspiración, y mi razón.*

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## **Exploring Knowledge, Attitudes, and Sexual Behaviors among Young Adults in Rural Zacatecas, Mexico**

### **A. SPECIFIC AIMS**

According to a recent National Survey in Mexico, the average highest level of education completed in rural areas is 6.5 years, which in combination with limited health resources can decrease awareness surrounding public health concerns such as risky sexual activities. Lack of awareness of risky sexual behaviors has certain consequences including increased risk for contracting sexually transmitted infections (STIs) and unplanned pregnancy (Santos-Preciados, Pablo, Angelica, 2003). In fact among a population of young women who had given birth in 2008, fewer than half were intended (Gonzales, 2005). Numerous studies have explored the variables influencing reproductive health decisions among at high risk populations such as sex workers, intravenous drug users, and among heavily populated cities throughout Mexico. Few investigations have looked at the depth of knowledge about STIs and various birth control methods. Even fewer studies explored knowledge and behavioral practices involving contraceptive use from the perspective of young adults in rural Mexico.

The objective of this study is to explore from the point of view of young adults living in rural Mexico awareness about sexual and reproductive health. From data collected in 10 interviews and questionnaires from both males and females (ages 18-28), the study focused specifically on the educational background, the use of contraception, risky sexual behaviors, and various other factors influencing decisions surrounding reproductive health. This study will add to the current literature with the specific aims to explore: a) knowledge about STIs and various forms of birth control; b) attitudes and values, including religion, that might affect their use of contraceptives, and c) behavior with respect to the use of condoms and other forms of contraceptives.

## **B. BACKGROUND AND LITERATURE REVIEW**

### ***REPRODUCTIVE HEALTH AMONG YOUNG ADULTS IN MEXICO IS A PUBLIC HEALTH PRIORITY***

According to The Joint United Nations Programme on HIV and AIDS (UNAIDS) report of regional statistics on HIV and AIDS from 2001-2008 (“Interactive Map,” n.d.), Latin America has the third highest prevalence of HIV and AIDS among children and adults in the world with about 2 million infected in 2008. Among all of these countries, Mexico has the second highest prevalence in Latin America (“HIV & AIDS,” 2010). Furthermore, in 2007 Mexico reported 11,000 deaths attributed to the complications associated with AIDS, claiming the second highest number of lives (“HIV & AIDS,” 2010). Perhaps more importantly is the fact that this region has the second highest increase in incidence rate of HIV/AIDS, suggesting the need for focused preventive programs (“Interactive Map,” n.d) (see Appendix A pg. 46). The prevalence, as described here, is the total number of cases within a specific population at a certain time, and incidence rate is the total number of new cases of infection per population during a given time period.

Although not as fatal as HIV/AIDS, the contraction of other STIs such as HPV and or Herpes poses a great threat to the individual’s well-being, such as an increased risk for the development of cancer (“HPV,” 2010). Although there is no cure for either Herpes or HPV, early detection has certain benefits and can prevent future complications like urinary system failure in women, cervical cancer, or proctitis in men (“Genital Herpes,” 2009). The annual crude incidence rate for cervical cancer is 24.4 per 100,000 and is the greatest cause of cancer among women of all ages in Mexico (WHO/ICO, 2010). I have chosen to focus on these three STIs because of the lack of



data on Herpes, HPV, and HIV among young adults that are not necessarily part of a high risk group. I will assess the general level of awareness on these increasingly current threats.

Another topic of public health concern directly associated with the increasing population of the younger generations in Mexico is the potential increase in unintended pregnancies. There are over two million annual births in Mexico (Loza, Gomez-Maqueo, 2008), of which 15% are from young women between 15-19 years of age. Of the 31 Mexican states including the Federal District, Zacatecas has the 9<sup>th</sup> highest birth rate (“Birth Rate,” 2009). In addition to the economic consequences of pregnancies at a young age, like reduced income and increased migration, are public health concerns such as maternal morbidity and mortality, along with the complications of self-induced or ‘back alley’ abortions in illegal clinics (“Reaching Out,” 2007).

Many factors contribute to sexual health such as social pressures, gender inequalities, and cultural stigmas; however, failure of the education system is likely very influential. This might contribute to the likelihood that an adolescent is unaware of the negative consequences of engaging in risky behavior. The lack of perceived risk may then lead to the acquisition of STIs (such as HIV), or result in an unplanned pregnancy from the failure to use or improper use of a contraceptive method. In an attempt to better understand the factors influencing reproductive health decisions among young adults in Mexico, I will examine the findings of various previous studies. A summary of our current knowledge in each of these areas follows.

## ***EDUCATION***

### *General Education*

Formal education is largely the main source of knowledge when it comes to issues that are not widely discussed in public such as sexual behavior and reproductive health issues. For the majority of the Mexican population schools are where they learn about different methods of contraceptives as well as various STIs, including Human Immunodeficiency Virus, (HIV), and the progression to Acquired Immune Deficiency Syndrome, (AIDS). The Roman Catholic religion is deeply ingrained in the Mexican culture and affects the attitudes and beliefs for many issues regarding public health, including contraceptive use and STI prevention.

Similar to other Latin American countries, the percentage of Catholicism in Mexico is roughly 89% of the overall population varying by region. In Zacatecas specifically, the percentage of Catholics is estimated to be around 95% (“Mexico – Religion,” n.d.). Historically, the lack of separation between church and state has greatly influenced as well as restricted the parameters of sexual education in the public education system. When working in concert the efforts made by both church and state can have powerful results, as in the 1970 initiation of family planning services. This interaction resulted in a decrease in the average number of children per family from around seven in 1968 to about two in 2006 (“Sex Education,” 2006). Perhaps one of the greatest advancements in public health throughout the 1900’s occurred in 1974 when the secretary of public education supported the instruction of basic sexual education in elementary and middle schools. It should be noted that the information was centered on heterosexual relations, along with abstinent based education and has since then been revised to reach a broader audience.

For many students in Mexico, school is the only place in which they receive sex education, because the open discussion of this topic among many families is not widely accepted. Moreover, despite the numerous campaigns to increase the breadth of information and comprehensive instruction of sexual health the current education system does not reach all of Mexico's public. Low matriculation numbers and the decrease in retention rates exemplify the problem.

One study measuring the distribution of students throughout an academic year demonstrates a general trend in the Mexican school system. During the academic year of 1995-1996 there were an estimated 27 million students in the Mexican education system. Results of the national youth survey indicated that of the students 12-19 years of age, 52.9% although registered for school, did not show up (Santos-Preciados et al., 2003). Of the students that were enrolled, 12% were enrolled in Pre-K and/or kindergarten. There were 54% of the students in the primary-school system, a significant decrease from the 70% registered in 1980 ("Mexico – Education," n.d.). After completing primary school, the students enter secondary school which is three years of either a continuation of basic education or a vocational program. The secondary students made up 19% of the population. Although completion of secondary schooling marks the end of compulsory education, many students do not make it all the way through, especially in the more rural areas ("Mexico – Education," n.d.).

The national youth survey concluded that around 89% of the population with 19 years of age had already left school, 75% had done so because of economic hardships or due to the lack of transportation (Santos-Preciados et al., 2003). The survey also found a discrepancy in the average number of years in formal education completed between rural and urban zones, 6.5, and

9.2 years respectively (Santos-Preciados et al., 2003). This beckons the question of the effect that low retention rates have on level of knowledge regarding sexual health.

### *Sexual Education*

Findings from the Barrera study centered in Mexico City, provides a baseline for the effectiveness of the current system. Among the 478 student participants living in Mexico City between 13 and 19 years old, 27.7% reported that they did not use any contraceptive during their first sexual experience, and 23.3% indicated that they continued to not use any in subsequent sexual relations (Loza, Gomez-Maqueo, 2008). Three fourths of the teens reported effective contraceptive use.

According to the National Survey, the average age of first sexual experience was 16 years (2000), however the Barrera study indicates an average age of 14.5 years (Santos-Preciados et al., 2003). It is assumed that sexual activity begins at an even lower age in the more rural areas. Important to note here is the discrepancy in data referencing urban and rural settings. One study even noted a margin of difference between statistical discrepancies as great as 20 percent (Santos-Preciados et al., 2003). The age of first exposure is important addressing the efficacy of the education system, because in certain circumstances, the education may just be too late. Furthermore, it creates the question of what factors are contributing to earlier sexual activity. The results of a similar study highlight the importance of this, with the conclusion that the use of contraceptives and condoms is more consistent if the sexual education is received before the first sexual experience (Santos-Preciados et al., 2003).

The Barrera study also explored the differences in contraceptive use among genders. With regards to the specific use of the condom as a barrier method, 39.1% of the females said that it was used sometimes (Santos-Preciados et al., 2003). Of the males, 8.6% indicated that they had

never used a condom, compared to 19.6% of the females. The higher percentage reported among the females for lack of use may indicate less awareness about STIs, or stigmatization that accompanies the request for condom usage (Loza, Gomez-Maqueo, 2008). More information is needed about the selection of condom use, or lack thereof, in order to understand what other factors may be influencing these young women's decisions.

Organizations such as North American Federation of Sexuality Organizations (NAFSO), "Thais Desarrollo Socail," ( Instituto Mexicano de Investigación de Familia y Población [IMIFAP] ) and many others have realized the necessity and are devoted to promoting knowledge of reproductive health issues. Local to Mexico, the "Thais Desarrollo Social" organization has a mission to increase the overall awareness as well as action to many of the contemporary problems faced by the more vulnerable and underrepresented social groups. Norma Barreiro, Director of the organization, discusses the importance of increased focus on the rural populations especially with the youth boom. "These young people will have a huge effect on the future... [w]e must do everything we can to seize this opportunity to invest in their health..." ("Reaching Out," 2007). Largely due to physical separation, the lack of access to reliable medically accurate information with respect to reproductive health is an underlying problem for rural youth, and a central focus for this organization. Working alongside the youth, it provides the information and physically bridges the gap.

Even in the more indigenous communities, Thais Desarrollo Social has begun to train local youth in being community advocates and youth leaders for instructing about sexual health. It is common for these health programs to be led by youth in the native indigenous language. This provides great opportunities for youth to openly discuss dating, sexuality and reproductive health

choices with others close to their age, and the organization hopes to attract them to the various health services provided in government clinics.

Programs like this one that provide sex education in a more comprehensive format report high levels of success in increasing awareness and in the promotion of contraceptive use. The New York Population Council in cooperation with *IMIFAP* reported that the participants showed an increase in overall awareness and even promoted an increase in contraceptive use among those previously sexually active (Pick de Weis, Hernandez, Alvarez, 1998).

The government has also made efforts to increase access to reproductive health services in rural areas; however, the available resources seem to fall short of what is necessary along with the lack of staff. These deficiencies highlight the importance of the work done by the Non-Governmental Organizations, NGOs (“Reaching Out,” 2007). It is largely due to these organizations and NAFSO, which advocates for the public access to accurate and comprehensive sexual information, which has stimulated the government to allow this sort of progression as well as to contribute to it (“NAFSO,” 2009). As for the future, perhaps more collective efforts by these private organizations and the government would lead to a more efficient battle against the lack of education and engaging in risky behaviors.

## ***SEXUALLY TRANSMITTED INFECTIONS***

### *HIV/AIDS*

Evidence suggests that the HIV/AIDS epidemic in Mexico is predominantly a result of sexual transmission, with nearly 90% of the reported cases indicating that the most likely mode of transmission was through sexual contact (Santos-Preciados et al., 2003). As far as gender is concerned, the rate among males between the ages of 25-34 is six times higher than for females (Loza, Gomez-Maqueo, 2008). The high occurrence of sexual transmission might be due in part to the lack of risk awareness from incomplete education and in part to Mexico's economic instability and high migration rates. As found in a recent study, adolescents as early as age 14 are beginning to migrate to the U.S., as a 'rite of passage' for the young men coming from rural communities (Hernandez, Garcia, Bernal, Castañeda, Lemp, 2008).

Statistics show that around half of the recorded cases of HIV and AIDS in Mexico are from heterosexual transmission and that the numbers are rising ("HIV & AIDS," 2010). Throughout most of the world, MSM, men who have sex with men, make up the largest proportion of HIV positive people. For example, of the HIV and AIDS cases recorded in the United States, nearly 44% are MSM, while heterosexuals represent only 14% of total cases ("Estimated New HIV," 2009). In Mexico, the numbers of heterosexuals reported to have contracted HIV/AIDS in 1990 was 33.7%. In the year 2000, this percentage had risen to 42.6%, an increase of nearly 10% ("Indicadores Básicos," 2000). It has been suggested that there is a direct correlation in this increase of incidence among Mexican families and increased migration to the United States (Hernandez et al., 2008). Recent studies have focused specifically on this issue, in order to better understand potential causes for this increase in migration and HIV incidence and why it is disproportionately higher in rural areas.

Evidence indicates that a high percentage of HIV transmission especially in rural areas is between married couples. Studies show that for an increasing number of women in rural Mexico, sexual relations with their spouse is the single greatest risk factor for contracting HIV (“Men’s Infidelity,” 2007). In the “Ruralization of AIDS” study conducted in 2004, both males and females from rural areas in Mexico were interviewed to evaluate the risk of transmission specific to their communities. The majority of the responses in the interviews had the underlying notion that migration was largely to blame. It was noted that the dynamics of discussion among partners became increasingly complex with issues such as fidelity and contraceptive use (Hernandez et al., 2008). Furthermore, data indicate that in addition to the added stress of maintaining a relationship over long distances, seasonal migration to the US actually increases the risk of contracting communicable diseases like HIV. In fact, an estimated 90% of those living in the state of Zacatecas and who are HIV positive reported contracting the virus while in the United States (Flores, Corresponsales, 2006). These findings suggest that upon the husband’s return, the virus will be spread via unprotected sex, to his wife or partner. Migration is not only shown to affect adults, but adolescents and young adults as well.

Not only does migration increase the likelihood of contracting HIV but also abandonment of school. Lack of sex education also increases the odds for unknowingly participating in riskier behavior. Other studies confirm that the incidence rate among young adults is also increasing. In 2000, a study in Mexico reported that there were 14.7 recorded cases per hundred thousand people, which increased to 22.6 cases per hundred thousand eight years later, in 2008 (“HIV & AIDS,” 2010).



### *Herpes (HSV-2)*

There are two types of the herpes virus, HSV-1 and HSV-2. HSV-1 or herpes simplex virus-1 is very common and typically not associated with sexual transmission although this can and does occur (“Herpes Transmission,” n.d.). HSV-1 usually manifests itself as a cold sore or cancerous lesion in or around the mouth. Herpes simplex virus-2 or simply HSV-2 is the sexually transmitted version and the cause of genital herpes (“Herpes Transmission,” n.d.). Any references to the herpes virus in this study will be specific to HSV-2.

One population-based study conducted in 2000, focused specifically on the prevalence of HSV-2 among women in Mexico City (Lazcano-Ponce, Smith, Munoz, Conde-Glez, Juarez-Figuroa, Cruz, Hernandez, 2001). The findings suggest that there is an increase in prevalence of infection in older women (Lazcano-Ponce et al., 2001). The study concluded that there was a direct correlation between the risk of contracting the virus and with the number of sexual partners throughout a lifetime (Lazcano-Ponce et al., 2001). Moreover, the number of sexual partners was related to the age at first intercourse (Lazcano-Ponce et al., 2001). There are substantial statistical data on other STIs such as Chlamydia, Gonorrhea and Syphilis, and certain studies have been dedicated to investigating the variables affecting high prevalence rates of these diseases. However, very few reports mention or even recognize the numerous other sexually transmitted infections.

### *Humanpapilloma Virus (HPV)*

Similar to the Herpes virus there is a lack of studies documenting the prevalence or incidence of infection rates for the Humanpapilloma Virus or HPV. Even though HPV might not have as high a prevalence as Chlamydia or Gonorrhea, its potential to progress into cervical cancer increases its threat as a public health risk (“HPV: MedlinePlus,” 2010). Out of the 100 different

strains of the virus, 10 are known to cause the outbreak of genital warts, and around 30 have been identified as cancer causing (“HPV: MedlinePlus,” 2010). Although it usually takes many years for it to develop into cervical cancer, the virus can be asymptomatic and often goes unnoticed, until it is too late. Cancer of the cervix can lead to reproductive problems such as the inability to have children, and could potentially result in death (“HPV: MedlinePlus,” 2010). The lack of information reported about these two viruses, Herpes and HPV, begs the question of whether they have also been omitted from the sex education curriculum.

## *UNPLANNED PREGNANCY*

Unplanned pregnancies at an early age are largely due to the failure to use or improper use of contraceptives resulting in unprotected sexual relations. Regardless of whether it was planned or not, there is evidence to suggest that becoming pregnant at a young age is potentially a health risk (“El Embarazo,” 2000). An investigation in 2000 revealed that complications during pregnancy were the fourth leading cause of death among young women in Mexico (“El Embarazo,” 2000). The findings in the study concluded that becoming pregnant at such an early age not only places the fetus’s life at risk but the mother’s as well, with a maternal mortality rate 2-5 times higher than observed in older women (“El Embarazo,” 2000). Along with the greater risk of maternal mortality, is the likelihood that the pregnancy will be terminated, often the result of a self-induced abortion (“Facts on Induced,” 2008). National findings reported that central Mexico, including Zacatecas, had the highest total number of self-induced abortions in 2006, as well as the greatest estimated abortion rate of 36 per 1,000 (“Facts on Induced,” 2008).

### *Abortion*

Ignoring the philosophical, ethical-moral dilemma of abortion, the 2007 legalization of first trimester abortion in Mexico City was a great achievement in the country’s progress towards equality in reproductive rights (McKinley, 2007). For many years it was only available to victims of rape, or if mother’s life was jeopardized and even then economic stratification further decreased accessibility (Pick de Weis, Henry, 1990). It is estimated that of the nearly 30,000 annual pregnancies of mothers 19 and younger, 10% end by abortion (Santos-Preciados et al., 2003). Nationally among women 15-44, 33 of every 100 live births are terminated via abortion methods (“Facts on Induced,” 2008). The reasons for abortion are complex and varied. From a public health perspective, equal and fair access to abortion is critical for the advancement of

women's reproductive rights as well as a potentially reducing the risk of early unplanned pregnancies that all too often end in the unsterile, clandestine clinics (Santos-Preciados et al., 2003).

### **C. SIGNIFICANCE OF PROPOSED STUDY**

In summary, many aspects of this project contribute to its significance. First, the research examines awareness and knowledge surrounding the risks of STIs and the available contraceptive methods. In light of the fact that young adults in rural areas are an understudied population and because only a few studies addressing STIs focus on Herpes and HSV-2, this study is addressing a gap in the literature. Second, it will explore the attitudes and values that influence behavior ultimately affecting the decisions surrounding contraceptive use and sexual activity. Finally, the project combines a mainly qualitative investigation with the support of quantitative data collected from the survey to numerically support the findings. The results will contribute towards a more collective understanding of the reproductive health knowledge from the perspective of young adults in rural Mexico.

### **D. RESEARCH DESIGN AND MEHODS**

#### ***STUDY OVERVIEW***

This study was designed to include both a qualitative and quantitative examination of a rural sample of young adults in La Pitahaya. This thesis is a result of primary research that I conducted during a 10 day period in March 2010. I conducted and recorded a total of ten in-depth interviews investigating personal beliefs and influential variables about reproductive health practices. All participants also completed a survey regarding knowledge of STIs including Herpes, HPV, and HIV/AIDS. In the following sections, the research setting, study sample, along with data collection and analysis procedures will be described.

### ***RESEARCH SETTING***

Zacatecas as seen in Figure 1 below is located in central Mexico, with a population of nearly 1.5 million people. La Pitahaya is one of three communities in the province of Jalpa that has a rural clinic, implemented by the government with support from the IMSS (Instituto Mexicano del Seguro Social) (“The Hispanic,” n.d.). Zacatecas, originally believed to have been named by the early Aztecs, roughly translates to grass-land, is perhaps best known for its rich soils, mineral deposits and ore production (“The Hispanic,” n.d.). The largest source of economic income is from agriculture in Jalpa with corn, wheat, and beans as the most abundant crops.



**Figure 1. Zacatecas, Mexico**

La Pitahaya is 45 minutes via an unpaved road from the closest town of Jalpa. The majority of the land in and around La Pitahaya is dedicated to the growing of livestock, and the cultivation of crops. However, unlike in Jalpa, La Pitahaya appears to be largely based on subsistent agriculture, because the yield is hardly enough to feed their own. If a household has access to running water it is likely to come from a well. Drinking water is either collected as it rains and put through a filter, or purchased from a store and transported to the residence. There is a local

kindergarten, elementary, and middle school that serves La Pitahaya and other nearby communities. Transportation is usually in the form of horseback or by donkey, although a few families own an automobile, or can ride the bus that passes through the town daily. Even though La Pitahaya has a local clinic, many of the community members had a doctor that was in the town of Jalpa that they seemed to feel more comfortable visiting, and only seemed to use the local clinic in case of emergency.

Roughly 150 people make up the community and about half of them are under the age of 28, and about one fourth of those were at least 18 years of age. This greatly reduced the number of potential participants that were greater than 18 and no older than 28, to around 20 people.

### ***RECRUITMENT OF STUDY SAMPLE***

In order to be eligible to participate in this study, the candidate had to be 18 years or older and lived in La Pitahaya for the majority of their lifetime. Each participant had to be able to speak and read Spanish at approximately a fifth grade reading level because the consent forms and explanation of the study was written accordingly. Oregon State University Institutional Review Board reviewed and approved the project protocol #4568, interview, survey, recruitment guide as well as the consent form (both in English and Spanish) (see Appendix B p. 47-67).

Based on observations made during a previous visit to the community, I thought it was most appropriate to recruit potential participants by visiting their home in order to maximize confidentiality. I introduced myself using the recruitment guide (see attached R.G.). The guide assisted me in describing the study and reviewing the eligibility criteria. I also answered any initial questions that he/she may have had. I first let them know that they could only participate if they were 18 years or older. The potential participant was left with a copy of the consent form along with a list of the questions that they would be asked during the interview, to further inform

the participant about the study and to help them decide if they would feel comfortable participating. During a follow up visit, if the prospective candidate indicated that he/she would like to participate I re-iterated the right to skip any section of the interview or questionnaire as well as end participation at any time. Before signing the consent form, the participant and I discussed a potential place in which the interview would be conducted that was private and comfortable for them. No person other than the interviewee and myself would be able to be present during the time of the interview, so it often took place in a private room such as a bedroom.

### ***QUANTITATIVE DATA COLLECTION***

After obtaining written informed consent and agreeing to be audio-recorded, the participant was given the STI & HIV/AIDS questionnaire and requested to fill it out to the best of their knowledge. The survey (see Appendix B p. 47-67) was divided into three parts inquiring about knowledge on HIV/AIDS, Herpes (HSV-2), and HPV. Before each section they indicated whether or not they were familiar with the infections and then proceeded to answer 4-5 questions about each STI. The questions were closed-ended focusing on the identification of the origin of infection, along with the mode of transmission and means for detection. As seen in appendix B, the question were either yes-no, true-false, or selecting from given options and the participants did not elaborate on their responses. In general, it took five minutes for them to complete the survey. Ten participants completed the survey, five females and five males.

### ***QUALITATIVE DATA COLLECTION***

A total of 10 interviews, containing both open-ended and closed-ended questions, were conducted from the same five males and five females that completed the questionnaire. The interviews were guided by a set of previously designed questions (see attached interview guide)

exploring their behavior, educational background, knowledge, and opinions of issues surrounding reproductive health decisions. The majority of the questions were open ended and beckoned a wide variety of responses. Questions were the same for the men and women except for two that were specific to gender. The participants were asked if they had, and where they received sexual education. They were asked their opinions about being sexually active before marriage, their preferences and beliefs about the use of contraceptives and whether their religion was a factor in their decision surrounding these issues. The interviews varied in length from 10 to 20 minutes. It should be noted that within the Mexican community, issues such as sexual experience and reproductive health are not usually openly discussed and often considered taboo which could have affected the comfort level of those participating, especially by the young women.

### ***QUALIFICATIONS OF STUDENT RESEARCHER***

As the student researcher, I translated the documents into Spanish, with some review provided by my previous Spanish professors at Oregon State University. My previous studies of the language have allowed me to achieve a level of proficiency that allowed me to conduct the informed consent process, the survey and interview as well as answer pertinent questions. I have extensive years of exposure with the Spanish language, both written and spoken. I previously lived in Ecuador for three months fulfilling a medical internship through Child Family Health International (CFHI). Also, I have worked with a student working on her Master's in Public Health assisting her in recruiting Latinos as well as participating as a team leader for the youth focus groups. In previous terms, I worked as a volunteer at Community Outreach Center, interpreting for Latino patients that did not speak English and for the physicians that did not speak Spanish.



### ***ANALYSIS OF DATA***

The data from the questionnaires were put into an excel spreadsheet analyzed and displayed in tables and figures (see Appendix B p. 47-67). Each interview was transcribed and translated into English. I personally did the transcriptions as well as translations into English, and data entry. These data were then analyzed to identify common themes and responses. Questions about unclear responses or regional terminology that I was unfamiliar with were directed to a Spanish professor at the University.

### **E. RESULTS**

The results are presented to address the specific aims of the study, providing direct quotations that support the findings. Certain questions in particular yielded a variety of different responses from the male and female participants, and the results are separated by gender. I present the themes that were identified as most significant to the study and that were common responses throughout the interviews. Some individuals had unique opinions that were not consistent with the majority opinion and will be presented only if they are significant to understanding the different perspectives of the topic.

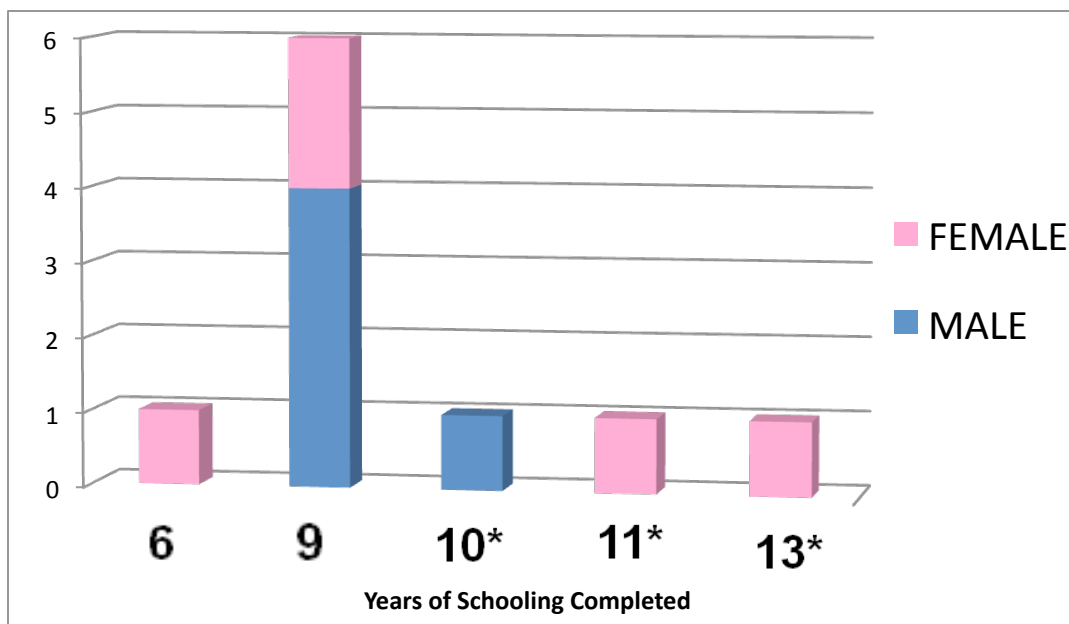
### ***DEMOGRAPHIC OF SAMPLE***

An equal number of five males and five females completed the interviews. The participants had the median age of 18.5 and range 18-25 years. None of the participants were married and two of the male participants have children; one having one son, and the other with three daughters. Both of the fathers are separated from the children's mothers and did not live with their children. All of the participants lived with their mother and/or father in La Pitahaya.

### ***KNOWLEDGE***

From living in the community, I learned that education is provided locally to the community of La Pitahaya through completion of secondary school, which is a total of nine years. There are

three separate schools, '*la guardería*' for pre-k and kindergarten, '*la primaria*' or elementary school which serves grades 1-6, and '*la secundaria*' or middle school for grades 7-9. The kindergarten has one teacher for all children. In the elementary school, there are three teachers all together; each teacher is in charge of two consecutive grades and the age range for students in the classroom is usually from 1-3 years difference. The middle school has two teachers; one teaches two grades at a time, and the other teaches only the last year students. They are public schools, free to all students and located within walking distance from any household within the community. The only requirement is that a child brings his/her own lunch and writing utensils. The school day begins when the teacher arrives to La Pitahaya from the nearby town of Jalpa. If a student has the opportunity to continue beyond the compulsory nine years, they most likely come from a family with some financial stability, such as the owners of the local store. Furthermore, the students that do go on and come from rural communities are awarded governmental stipends that contribute towards their tuition and required uniforms. In '*la preparatoria*' or high school, there are different teachers divided by subject and teach multiple classes, much like the education system here in the US.



**Figure 2. Academic Years Completed.** (10\* represents the students that entered high school, but did not finish. 11\* represents the students currently in high school. 13\* represents the students that have entered a university but did not graduate.)

As shown in Figure 2, all but one participant completed secondary schooling. The average years completed overall was 9.4. All males went on to secondary education, while one female did not. The two females currently in High School or at the University were sisters and, to the best of my knowledge, they were the only two girls from the community who had the opportunity to continue their education beyond secondary school.

The number of participants who openly discuss issues surrounding sex with a parent, and/ or whether they had received formal sex education is displayed in Table 1.

**Table 1. Sex education and discussion of sex with family**

Question asked	Males	Females
Openly discuss sex with parent(s)	0	3
Received sex education	5	4

Nine of the ten participants received formal sex education, and only one female that did not continue on to middle school reported that she did not.

The open discussion of sex in the Latino culture has historically and continues to be a social taboo. For many families it is thought to be the responsibility of the local doctor at the clinic, or in the school. As reported in Table 1, no males reported discussing sex with their parents, while 3 of the females said that they could comfortably communicate about these issues. However, the three females indicated that they would only consider communication with their mothers. The following are excerpts from the dialogue of discussing sex related issues with a parent.

*“...Pues, en veces con mi mama, ella nos da a entender de que nos podemos esperar, de que no debemos de tener relaciones a una temprana edad para no tener algún problema, como algún embarazo o algo así...pero con mi papa no; porque, quizás porque no se habla con una hija de eso.”*

“...Well, sometimes with my mom, she tells us that we should wait, that we shouldn't be having sexual relations at an early age to avoid any problems, like a pregnancy or something like that...But not with my dad, just because that's not something that a father and a daughter would discuss.”

*“...¡Con mi papa no, nunca!...Pero, con mi mama, a veces. Sale, yo casi nunca les pregunto cosas del sexo; casi siempre por mis hermanas les preguntan algo – y por eso...pero yo casi nunca les pregunto nada...Mi hermana es más abierta, ella pregunta muchas cosas, yo casi nunca les pregunto nada, realmente no. No me llama la atención preguntar...como ya casi todo nos lo dan, nos lo explican.”*

“...Not with my dad, never!...But, sometimes with my mom. Well actually, I hardly ever ask anything that has to do with sex; it's usually always that one of my sisters asks. I hardly ever ask them anything, but that's just my personality, I don't really like to ask questions...My sister though, she is really open; she always asks questions, while I hardly ever ask anything...It just doesn't occur to me to ask my parents questions about that kind of stuff, since they explain these types of things in school.”

In La Pitahaya, there is one teacher per grade who teaches every subject to a class size of about 12-15, which is often mixed with adolescents of different ages. Sex is not introduced into

the curriculum until secondary school; although as indicated in Table 2, there are other means by which they are learning about reproductive health.

**Table 2. Sexual Education Received**

Question asked	Clinic	School	Both	Other*
Where did you learn about reproductive health (i.e., contraceptives, STIs, pregnancy)	2	4	2	2

\* (doctors, television, and friends).

Four participants identified school as the main source of information about reproductive health. Two of them said that they received this education in the clinic alone, and two stated that they received it in both from the clinic and the school. The remaining two, reported that they received the knowledge surrounding this issue either from a doctor, the television, or from friends.

The participants were asked various questions about available contraceptives and about their personal preferences for methods. They were asked if they felt as though they had received a thorough explanation and understanding of each to ensure that they could decide which methods might be best for them, and were then asked to describe which method they preferred. Some of the responses that were given are presented in Box 1.

### Box 1. Knowledge of contraceptives and preference

Men	Women
<p>Question: Have you ever had someone explain to you all of the different forms of contraceptives that are available so that you could make an informed decision? Which seemed the most appealing and why?</p> <p><i>“Yo sí, porque como desde adolescente a mi me enseñaron mucho de la educación sexual, ¡mucho!... yo digo que el condón, pues el que uno, el hombre tiene más protección de la mujer.”</i></p> <p>“Yeah, I think so – because like since I was a kid they have taught me a lot about sex-ed, a lot... I think that I would prefer the condom just because it allows the man to protect himself from the woman.”</p> <p><i>“Los condones, porque son los más fácil de obtener.”</i></p> <p>“The condoms, because they are the easiest to get a hold of.”</p> <p><i>“Sí, con lo que nos han enseñado en la escuela entiendo cuáles son los mejores... Yo creo que el condón parece ser el mejor porque es el más efectivo y fácil de conseguir.”</i></p> <p>“Yes, I think with what they have taught us in the school I understand which ones are better... I think that the condom seems the best because it is the most effective and the easiest to obtain.”</p> <p><i>“Creo que sí. Para una mujer la mejor manera para prevenir un embarazo es que amaren sus tubos de Eustaquio, y para los hombres – el uso del condón.”</i></p> <p>“Yes, I think so. For a girl the best way to protect against pregnancy is by having her tubes tied, and for guys – using condoms.”</p>	<p><i>“No, no creo que me hayan dado suficiente información. En la escuela no me dieron suficientes instrucciones sobre esto.”</i></p> <p>“No, I don’t think that I have been given enough information. I think that I wasn’t given very much instruction when we were taught about this in school.”</p> <p><i>“Pues no... yo creo que todavía podría aprender más... pero, si quisiera más información podría ir a la clínica o preguntarle a alguien que sepa mucho de esas cosas... pues está el condón, la pastilla, y el DU y esos son los únicos que he escuchado; y de esos, yo creo que el condón es el mejor.”</i></p> <p>“Well, no... I think that I could still learn more...but, If I wanted more information about it I could just go to the clinic or ask somebody else that knows a lot about that stuff...well there’s the condom, the pill, and the IUD (<i>intrauterine device</i>) and those are the only ones that I have heard of; and out of those, I think the condom would be the best.”</p> <p><i>“No, no creo que conozco de todos, pero yo creo que el condón es el mejor; pues realmente yo lo digo porque he escuchado que es el que más...de otras personas. Pero yo de saber, realmente, no.”</i></p> <p>“No, I don’t know about all of them, and I think that the condom would be the best, at least that’s what I have heard from other people...but for me to know personally, I really don’t have a clue.”</p>

Seven out of the 10 felt that they had received enough of an explanation of the different methods. More women reported wanting more information about different contraceptives. The availability of the contraceptive was often used in the explanation for preference for the males. Eight reported that the condom would be preferred over any other form as it was “the easiest to get a hold of.” Of the three that indicated they would still like more information about the various forms of contraceptives, each ultimately concluded that the condom would be the best. Something worth noting is that out of all the responses given, only 3 identified three or more different methods of birth control and of those 2 were female had received the highest level of education.

The next questions asked which forms of contraceptives were the most effective in preventing unplanned pregnancy and STIs.

**Table 3. Effectiveness of Contraceptives**

Question asked	Condom	All equal	Does not know	Other*
The most effective form of contraceptive	7	1	1	1
Most effectively prevents against STIs	10			

\* Lubricated forms.

The majority reported the condom was the most effective form of contraceptive (Table 3). One indicated that there is no difference between the effectiveness, as long as it is used. One did not know, and one reported that lubricated forms were most effective. The following discussions provide insight into some of the opinions about the different methods.

*“...Del mejor yo supongo que es el condón. Es mi opinión porque me quiero evitar un embarazo – por eso.”*

“...I suppose that the condom is the best. That’s just my personal opinion, because I want to avoid becoming pregnant.”

*“Pues no sé, porque las pastillas cuando las tomas – se te pueden olvidar, y si se te olvida un día el siguiente día tomas dos, y si se te olvida otro, tres – pero ya no...entonces, realmente no creo que es tan eficaz...pero eficaz, eficaz, no se – yo creo que el condón.”*

“Well I don’t know, I mean if you are on the pill, you could forget to take one. And if you forget a day, the next day you would have to take two or even three and then they wouldn’t be working, so I don’t think the pill very effective. As for the most effective, I think that would probably be the condom.”

*“...Por ejemplo, el condón es como de 100%, quizá 99.99% de seguro, y las pastillas no, porque las pastillas te las puede tomar y si se te olvida y tener relaciones, puedes tener riesgo del embarazo...además también si tomas pastillas puedes tener algún contagio de alguna enfermedad.”*

“...For example the condom is 100%, or like 99.99% effective, and the pill isn’t...because with the pill you could be taking them regularly, and then forget to one day, and if you have intercourse well then you could become pregnant...also, if you are only using the pill, you could still become infected with an STI.”

It was commonly expressed among the females, that the method of birth control most effective was the condom, and then connected the condom with the prevention of undesired pregnancies.

All of the participants reported that a condom would be the best form of contraceptive to prevent the transmission of an STI. The following responses were given in support of their beliefs:

*“Pues, sobre todo el condón...el condón es el mejor porque no hay contacto directo y por eso no se transmite nada de una persona a otra.”*

“Above all the condom, the condom is the best because there is no direct contact and therefore nothing is transmitted from one person to another.”

*“Pues yo creo que las pastillas anticonceptivas lo hacen, pero la verdad que no estoy segura si evitan las transmisiones de enfermedades... yo creo que el condón sería lo mejor para eso.”*



“Well I think that the birth control pill would, but actually I am not sure if they prevent the transmission of STIs. The most effective for that would be the condom.”

*“Pues las que yo conozco son las pastillas anticonceptivas, si la mujer se las toma como se debe...pues la protege, pero en realidad no creo que la proteja de las enfermedades... y entonces yo creo que el condón sería lo mejor.”*

“Well the one that I know about is the birth control pill, if the girl takes it right it protects her, but actually I don’t think it would protect her from STIs...I think that the condom would probably be the best for that.”

Although some of the women mentioned the potential use of the birth control pill as an STI preventative, they conclude that the condom is the most effective overall.

The next question asked if they were aware that many forms of birth control are not 100% effective. Seven reported that they understood that no form of birth control was 100% effective.

The following responses were presented

*“Sí, yo sabía que algunas veces no tienen los mismos efectos o no funcionan para algunas personas.”*

“Yes, I knew that because sometimes they don’t always have the same effects, or don’t work for some people.”

*“Sí, lo sabía—porque muchas veces fallan.”*

“Yes, I knew that – because often times they can fail.”

*“Ah, sí es cierto, porque no todos los métodos son exactamente 100% seguros, con las pastillas pues, pueden que funcionan, pueden que no...el condón también, es igual, de repente pues se rompe o algo, y ya, no funcionó...y pues igual, todos son iguales, bien, también con el DU puedes quedar embarazada, también...y pues no, no hay ningún eficaz...De mi, según eso mi mamá, para que no naciera yo, se estaba inyectándose – y ¿ya ves, salió embarazada de mí? ...casi de todos estaba utilizando algún anticonceptivo, y no, no funcionó.”*

“Yeah, that’s true because not all of the methods are 100% certain, the pills might work, or they might not and well it’s the same with the condom, it could all of a sudden break and well then it’s ineffective. They’re all the same in that respect.

Also with IDU you could become pregnant. So, nothing is completely certain. My mom for example was using the injection (*Norplant, or alike*) when she became pregnant with me. The same is true with almost all of my siblings, none of the methods worked for her.”

*“Si estoy consciente, y corro el riesgo de llevar a un embarazo porque pues con el condón pues se puede romper...por eso hay una probabilidad de embarazo.”*

“Yes, I am aware and I run the risk of becoming pregnant because the condom could break and therefore, there is a probability of becoming pregnant.”

A common response detailed the breakage of a condom as the main risk to the effectiveness of birth control. It was apparent that they were aware that each form may have varied effects depending on the person using them and that there was a possibility for error.

They were asked about the awareness of side effects that might be associated with the use of birth control pill. Six reported hearing about side effects, four women, and two men. The following examples were shared based on what they knew.

*“Pues con las pastillas, creo que...depende en cuando las toman, creo que producen vomito, o algo así, y nausea, bueno es lo mismo...es lo que creo, es el único que sé.”*

“Well with the birth control pill, depending on when you take them I think they can make you sick, like nauseous and can cause you to vomit – well that’s the same. That’s what I think anyway, and that’s the only one that I know of.”

*“Pues como de las pastillas, yo se que...casi siempre pues engordas con eso, por las hormonas y eso, y engordas, y que te duele mucho la cabeza – yo lo sé porque a veces mi mama nos decía - ¿verdad?...o con las inyecciones, que se sentía muy mal, o su regla se alteraba también – por las inyecciones...o sea, cuando no era tiempo de reglar, reglaba muchos días; como una semana, sí, y luego una semana no, y otra semana si, así...y el DU, los doctores nos explicaron que cuando te lo ponían, que el cuerpo lo reaccionaba, que era una cosa extraña, que no era tu cuerpo y pues te inflamabas y te sentías a disgusto, por ejemplo, es como cuando te haces una herida y...la piel luego-luego reacciona se pone roja, se hincha, y pues duele y así es con el DU. Con el condón, pues no, nada más que, hay unas personas alérgicas a Látex. Del ‘parche’, pues no, nada más que, pues debe de ir en un parte donde no te afecta, porque dicen que si te pones en el pecho te*

*cambia las hormonas y te duele mucho si te lo pones ahí, y que no lo pongas en partes así.”*

“Well, like with the pill, I know that almost always you experience weight gain like from all the hormonal changes and that it can cause headaches. I only know because sometimes my mom would tell me...or with the injection (*Norplant, or alike*), she would feel bad, or it would cause her to have abnormal menstruation periods and sometimes it would last for a very long time; like one week she would have her period, then the next week she wouldn't and then she would have it for another week. And with IUD the doctors explained to us that when they put it into you, the body could react negatively causing inflammation and you would feel discomfort, it is similar to something like a cut in the skin when your skin turns red and becomes inflamed and it hurts. As far as with the condom, one could have an allergy to Latex. With the patch, they told us that it needs to go in a specific spot, like if you place it on your chest it can do something to your hormones and cause pain and so should go in a spot that is not too sensitive.”

The awareness of different side effects allows us to understand their wealth of knowledge about contraceptive use which may be influencing their preference for use. Only one person identified the side effects caused by the other forms of birth control other than the pill.

The survey inquired directly about their understanding and breadth of knowledge surrounding STIs including Herpes, HPV, and HIV/AIDS. The findings are presented below in Table 4.

**Table 4. Awareness and Knowledge of Sexually Transmitted Infections**

<b>Humanpapilloma Virus (HPV)</b>	Males	Females	# Out of 10
Indicated they were aware what HPV is	3	3	6
Correctly identified all its modes of transmission	1	2	3
Correctly identified that it may be asymptomatic	2	1	3
Correctly identified that it may develop into cervical cancer	2	4	6
Correctly identified that there is a way to detect the virus	3	2	5
Correctly identified that currently there is a vaccine for women	2	2	4
Correctly identified that it can be treated before it becomes cancerous	4	3	7
<b>Herpes</b>			
Indicated they were aware what Herpes is	4	3	7
Correctly identified it as a viral infection	2	3	5
Correctly identified its modes of transmission	0	0	0*
Correctly identified that it cannot be cured	1	1	2
<b>HIV &amp; AIDS</b>			
Indicated they were aware what HIV & AIDS is	5	5	10
Correctly identified transmission via a virus	4	4	8
Correctly identified that a person may be HIV positive and not have any symptoms	3	5	8
Correctly identified the modes of transmission	0	0	0**

\* 30% correctly identified that it is transmitted sexually; however, they were not aware that it may also be transmitted from mother to child during birth.

\*\* 60% correctly identified its 3 modes of transmission; however, had misconceptions of other ways in which the virus may be transmitted.

As shown in Table 4, six of the participants indicated that they knew what HPV was. Each person who answered the question correctly identified that the virus could be transmitted through sexual contact; however, half incorrectly marked that the virus could not be passed from mother

to child during child birth. Each correctly identified that some types of HPV can cause cervical cancer, but six did not know that a vaccine is available for women. Also, each person correctly identified that if caught in time, there are forms of treatment which can prevent the development of cancer.

Seven participants indicated that they knew what Herpes was. Only three out of seven correctly identified one mode of transmission, but failed to recognize all modes of possible transmission correctly. Five people correctly identified Herpes as a virus; however, all but two thought that it could be cured.

Ten out of 10 said that they knew what HIV/AIDS was. Eight correctly identified it as a viral infection, although none of them correctly identified all the ways in which it was transmitted. Similarly, eight out of 10 were aware that a person that is HIV positive may not exhibit any symptoms.

#### ***ATTITUDES ABOUT PRE-MARITAL SEX AND CONTRACEPTIVE USE***

Rural communities throughout Mexico are deeply rooted in strong traditional values along with Catholic religious beliefs which can influence one's decision to wait until marriage to become sexually active. Other behaviors might be affected as well, such as the use of contraceptives and the preference for one method over another. Of the 10 participants, nine indicated belonging to the Catholic religion while one claimed no religious affiliation.

When asked whether or not it was necessary to wait until marriage to enter into a sexual relationship, nine out of the 10 replied that they do not believe it would be inappropriate to have sex before marriage, while one reported that it is important to wait. The following are some of the responses the question provoked.

*“Bueno, yo digo que no; porque así uno pues, conoce más amor...más muchachas, no nomas con la que te vas a casar, antes de que te cases - ¿verdad?”*

“Personally I don’t think so; because that’s a long time to wait and this way you feel more love, from more women – not just with the one that you are going to get married.”

*“No, porque la iglesia que pone eso de que te casas, y que, no, no, no se puede...todo el mundo tiene relaciones antes de casarse – antes si, pero ahorita no, estamos en el 2010.”*

“No, because well the church has these rules, like that you should wait until marriage, and that it’s prohibited and you can’t do it, but everyone does, everyone has sexual relations before getting married. A long time ago, that’s how it was, but not anymore, now we’re in the year 2010.”

*“No, pues si quieres a la persona, no tienes por qué esperarte hasta que se case, para mi...entonces yo digo que no.”*

“No, because if you love the other person, there’s no reason to wait until the marriage – but that’s just my opinion.”

*“Bueno, primera que nada – pues nadie te asegura que te vas a casar...de lo que yo opino de una persona que espera hasta que se case, que abstiene de tener relaciones...pues que es una persona muy segura que sí misma, yo supongo que hace bien a no tener – ¿no?”*

“Alright well first of all, nothing assures you that you are ever going to get married...I think that someone that waits until marriage, that abstains from sex is someone very sure of herself and I think that it is a good thing.”

*“Bueno, pues es que hay diferentes formas de pensar - ¿verdad? Cada quien sabe de lo que hace, cuando lo hace, y porque lo hace; pero, como a mí me colocaron, yo creo que... no pues, yo no, la verdad yo no, no podría, pero las demás personas, yo creo que, pues si se cuidan, pues está bien, cada persona según lo que crea...Para mi tiene mucho que ver con mi mama -¿verdad?, ya ves, de las pensamientos de las señoras, de las mamas y que quieren que sus hijas se enverguen al matrimonio y pues mi mama es igual, por eso nos tiene mucho confianza cuando salimos así, y no..Yo creo que yo no, pues tal vez sí lo haría, pero me sentiría mal...”*

“Well...there are many different perspectives about this – right? I believe that everybody is aware of what they do, when they do it, and why they do it, at least that is how I was raised and I think that, well for me personally I couldn’t do it, but as far as other people I believe that if they are responsible and take care of themselves, well then it’s alright. It’s their beliefs, whatever they are. For me, I think it has a lot to do with when I think about what my mother wants for me, you know to remain a virgin until marriage; and that’s part of the reason why she has so much trust in us and lets us go out like we do. And so I don’t think that I could, no I never could. Well maybe I would do it, but I would feel bad...”

*“Si, porque así estamos acostumbrados a que tenemos que tener relaciones sexuales hasta que nos casemos.”*

“I believe that you should wait until marriage because that is what we are accustomed to...to wait until after you have married.”

As seen from these responses, there is an underlying theme of personal choice and less of a religious influence on their opinion. Most responses indicated that it is the extent of the wait in finding a partner for marriage or the uncertainty of ever getting married that is used to justify pre-marital sex. Abstinence was more commonly attributed to not having found a person with whom they feel a strong enough bond to become sexually active with.

Although religion was not reported as a rationale for abstaining from being sexually active, the influence of the social norms emerged as a theme in many of the discussions. Apart from the dilemma of finding the right person, external pressures from family members or from members of the community seemed to influence the perceived stigma of sex, and in particular sex before marriage. The following responses were offered about the opinions from other members of the community regarding sex.

*“...No pues, como en una mujer, siempre la tiene como de ‘ay, es bien zorra,’ o ‘es bien golfa,’ algo así...siempre como que, como siempre en el rancho la gente es como más cerrado de mente, no están abiertas, y eso pues a la gente no les gusta...ven así a una persona y siempre lo critican, no les agrada e que eso sea...aunque pase, no, no les gusta.”*

“... As far as from the girl’s perspective, they (members of the community) would think ‘aw, she’s a real tramp, a slut’, you know, it’s like people from here (La Pitahaya) are more closed minded, they’re not very open. There are very judgmental of other people. And so they wouldn’t like it very much, even though it happens, they don’t agree with it.”

*“...Pero de la perspectiva de una persona de la comunidad, yo creo que...se ponen a pensar cosas malas, y pues te tratan de mal persona, y te faltan el respeto, y te dicen cosas que te pueden hacer sentirte mal.”*

“... But as far as the perspective of someone from the community, I think that they would begin to think bad things about you and may start to treat you poorly and would lose respect for you and say things that would make you feel bad.”

It is possible that the pressures from home or within the community are a cause of greater influence than those from religious convictions. This would suggest that the family members’ concerns for waiting until marriage, regardless of religious background, provide a large impact on later decisions. There is a saying in the community that, ‘en La Pitahaya, *las paredes oyen, y los pajaritos del alambre hablan*’ which roughly translates to ‘here, the walls are listening, and the birds on the wire speak,’ meaning that there is little that goes on within the community without everybody finding out.

In order to understand the influence of religion on contraceptive use, participants were asked whether the use of contraceptives fit in with their religious beliefs. Except from the one individual who claimed no current religion, each indicated that they did not agree with the restrictions their religion placed on contraceptive use. In Box 2, I present the quotes of some of the participants that reflect their opinions on the influence that religion has on contraceptive use.



## Box 2. Does Religion Influence Contraceptive Choice

Question: Would using birth control fit with or go against your personal religious beliefs? Please tell me more about that.	
Men	Women
<p><i>“Bueno, nuestra religión no dice nada de los anticonceptivos, ni nada de eso.”</i></p> <p>“Well, our religion doesn’t say anything about contraceptives, or that sort of stuff.”</p> <p><i>“Creo que es mejor usar métodos artificiales para que no resulten embarazadas.”</i></p> <p>“I think it is safer to use artificial methods, so that they don’t get pregnant.”</p> <p><i>“Yo no tengo una preferencia, pero para mí, yo creo que la religión no tiene nada que ver con esas cosas... yo creo que la religión no debería de ser involucrada en nuestra salud.”</i></p> <p>“I don’t have a preference, but well to me, religion has nothing to do with those sorts of things...I don’t think that religion should be involved in one’s health.”</p>	<p><i>“Yo no creo que usar un condón sea algo malo, y no estoy de acuerdo con la religión de estar controlando eso, porque puedes evitar las enfermedades o un embarazo.”</i></p> <p>“I don’t think that using a condom is bad, and I don’t agree with religion controlling it, because you could prevent the transmission of diseases or pregnancies.”</p> <p><i>“...Digamos que, una persona por muy religiosa que sea no tiene que dejar de usarlos nada más por eso, si quiere puede.”</i></p> <p>“...Well let’s just say that it does not matter how religious a person is, they don’t have to stop using them just because of that, if they want they should.”</p> <p><i>“Pues yo creo que...pues según cada persona que quiere utilizar con el que se sienta más cómoda, pues así está bien. Pero yo no, no tengo ningún problema.”</i></p> <p>“Well I believe that every person has the right to use which ever method they find the most comforting, so it’s okay. No, I wouldn’t have any problem with it.”</p> <p><i>“Yo no estoy de acuerdo porque, pues no, si soy católica, pero...pero esas tipas de cosas no van conmigo...yo prefiero los métodos, los otros, los artificiales.”</i></p> <p>“No, I don’t agree with that (prohibition of use by the church) because, well, so I am definitely Catholic but those types of things don’t sit well with me. I would prefer the other methods, the artificial methods.”</p>

Males and Females appear to have different perceptions regarding religious beliefs. For the most part, the males replied that religion did not restrict the use of contraceptives and/or that the artificial forms of birth control would not contradict their religious beliefs. Females identified that the Catholic religion has regulations on the use of birth control, but that they did not agree with it. Females also stated that they would use birth control and that it would not conflict with their understanding of their religion.

### ***SEXUAL RISK BEHAVIOR AND RISK AWARENESS***

Regardless of religious or personal beliefs, sexual intimacy is a natural part of human development and in this study more participants reported being sexually active than remaining abstinent. Level of risky behavior including age of first sexual experience and the use of contraceptive methods are represented in Table 5.

**Table 5. Sexual Risk Behavior**

Question asked	Males	Females
Sexually active	5	1
Avg. age of first sexual encounter (years)	12.5	17
Ever participated in sex without protection	4	0
Ever been tested for STI	3	1

All of the males reported that they were currently in a sexual relationship, or having had previous sexual relations. Only one of the females indicated that she was sexually active. The average age of first sexual activity for the males was 12.5 years. Since only one female reported being active, there was no average to be calculated. Of those that had reported using birth control methods,

two stated that both a condom and the birth control pill were used simultaneously. The rest indicated that the condom was the only form that they had used.

Perhaps a more important question apart from whether they ever had unprotected sex is why they did not use protection. None of them indicated that it was due to lack of information, or for financial reasons, rather a conscious decision and a personal preference.

*“...Pues, no más porque no quería.”*

“...Well, just because I didn’t want to (use a condom).”

*“Yo casi nunca uso los condones; pues porque no...porque cuando estaba con la mama de mis hijas, sabia que ella estaba limpia y por eso no los usaba.”*

“I hardly ever use condoms; I didn’t see the need to because when I was with the mother of my children I knew that she was clean, so we didn’t use them.”

*“... Porque no había ningún problema con eso.”*

“...because I didn’t see a problem with it.”

Although only one of the sexually active participants reported never using some form of contraceptive, the lack of importance and consistency from the others seemed to be a common theme. Furthermore, two thirds of those sexually active reported having been tested for STIs.

## **F. DISCUSSION & CONCLUSION**

In this study I explored the level of awareness and knowledge surrounding HIV/STIs, beliefs and attitudes about sexual relations and contraceptive use, as well as the sexual risk behaviors from the perspective of young adults living in a rural community of Mexico. Consistent with previous studies, I found that multiple factors contribute towards one’s awareness and knowledge regarding these reproductive health issues, including education received, personal beliefs, societal pressures, and personal risks. Some results were unexpected and seem to be unique to a rural community. Other findings were congruent with previous studies conducted in

urban settings, specifically with respect to sexual risk behavior and contraceptive use (Castañeda, Brindis, Comey, 2001; Uribe, Covarrubias, Andrade, 2008).

The average years of schooling achieved was 9.4 years, which was considerably higher than the results of the National Youth Survey conducted in both urban and rural zones, 9.2 and 6.5 respectively (Santos-Preciados et al., 2003). I found that all but two participants had left school by the age of 19 which was consistent with the National Youth Survey (Santos-Preciados et al., 2003). The discussion of sex within families was uncommon and education about sex was primarily reported to come from school curriculum. Most identified that their knowledge of reproductive health came from the local school, or the clinic, and a few mentioned that their information came by word of mouth from peers or what is presented in the media. The females seemed to have a greater breadth of knowledge about contraceptives, identifying various different forms and were more aware of the potential side effects. Awareness about STIs such as Herpes and HPV was limited, and knowledge about the correct identification of the modes of transmission was uncommon. In contrast, awareness about HIV/AIDS was greater, although knowledge about the modes of transmission was also low, leading to misconceptions about the virus.

Although it was not directly asked during the interview or survey, through observations I noted that none of the female participants had ever traveled to the United States, and that three out of the five males had. I did not learn whether their travel interrupted their pursuit of further education. Furthermore, the two males who have children impregnated their girlfriends while in the U.S. and that is the current location of the children.

The years of education completed appeared to be related to the amount of knowledge surrounding reproductive health. Those who completed more years of education knew more

about the effectiveness and utilization of contraceptives; however, they were not necessarily more aware of the various forms of contraceptives. The lack of information about different forms of contraceptives (female condom, diaphragm, cervical cap, vaginal ring (NuvaRing), dental dam, finger cot) suggests that this information may not have been presented. Furthermore, since the main difference associated with increased years of school was greater knowledge and not awareness, it appears that the information presented in the education system may be the limiting variable. The little information known about Herpes and HPV might be due to the lack of importance placed on these infections, which is consistent with the lack of research and studies dedicated to these viruses.

Surprisingly, nine out of ten reported that sexual intercourse before marriage would not go against their beliefs, either personal or religious. Furthermore, the use of contraceptives seemed to coincide with their beliefs and religion was not a variable influencing their use. Even though the females were more likely to identify a variety of contraceptives, they believed that the condom is the most effective contraceptive method, and also the most preferred method. Females reported waiting to engage in sexual relationships until they found the right person, not necessarily waiting until marriage. Many of the responses given by the females about why they were waiting was woven into the communal stigma of pre-marital relations as well as from within the family. It was also noted that these standards were not the same for the males. These findings are consistent with a previous study conducted in Mexico (Uribe et al., 2008).

It was interesting to find that females would prefer the condoms in opposition to other forms of female-controlled birth control that they identified, such as the pill, IUD, Norplant among others. Although the primary concern mentioned by the majority of females with respect to

contraceptive use was prevention of pregnancy, their responses about the preference of the male condom may be related to the need to also protect themselves from STIs.

As the Barrera study concluded, the age of first sexual experience would appear to be decreasing. The average age at first sex for this sample was 13.4 years, slightly lower than 14.5 found in the Barrera study; for the males specifically it was 12.5 years, which was considerably lower (Santos-Preciados et al., 2003). This was an unexpected finding, and the discrepancy between this average and that reported by the Nation Youth Survey of 16 years old, is a total of 2.4 years. Similar to the findings reported in the Nebulous Margins study, almost all of the males reported engaging in unprotected sexual relations (Castañeda et al., 2001). Most responses to why contraception was not used indicated that there was no perceived risk to either the contraction of an STI, or an unwanted pregnancy, and that it was their decision, not related to lack of access to services. Another unexpected finding was that more than half of those who reported being sexually active had been tested for STIs.

The low average age of becoming sexually active among the males, in combination with the fact that most had engaged in unprotected sex without a method of contraceptive indicates that they are at an increased risk for contracting an STI or getting their partner pregnant. The fact that most had been tested for STIs indicates that there is some awareness about their risk. However, the lack of contraceptive use might mean that they are less concerned about unplanned pregnancies. One explanation might be that because men do not get pregnant, they are willing to take the risk. This finding may also reflect on the sex education taught in the school. It could be that the material presented delivers the message that STIs like HIV, as well as unwanted pregnancies are the result of promiscuous sex or habitual drug use, only affecting people who live in metropolitan cities.

Some limitations to this study are worth noting. First, this study was limited to 10 participants. An equal number of males and females were interviewed; however, with the small sample size of ten and the fact that it was conducted in one single community, the findings cannot be generalized to all young adults living in rural communities. Second, I was the only researcher involved in the study in Mexico, recruiting, conducting the interviews and administering the questionnaire. The males were open to discussing these private issues in detail; however, the young females were more reserved. This may be attributed to them feeling uncomfortable disclosing certain information with a male acquaintance. Finally, the responses were limited to self report and it is possible that the participants provided socially desirable responses.

I have recommendations to improve the study. The first adjustment that could enhance the results would be to train both male and female interviewers in order to eliminate discomfort for the participants being interviewed. Another edition that could possibly strengthen the responses could come from modification of the closed-ended questions to yield more of an open discussion. For example, many of the participants were unsure of the natural family planning method as introduced by the Catholic Church as an acceptable 'natural' form of birth control. It might provide more insightful responses if this question was better phrased and/or accompanied with an explanation of what the natural form is.

In summary, years of education and religious background were found to not greatly influence knowledge and beliefs surrounding contraceptives and STIs. The condom was the most popular contraceptive among both males and females. This may lead to a decrease in incidence of STI transmission; however, it may not be in the best interest of women living in a society where the requests for the use of condoms carry negative connotations (Loza, Gomez-Maqueo, 2008).

Furthermore, the failure to identify other forms of contraceptives specifically for women like the diaphragm or female condom raises the question about whether the current sex education is conducive to women's reproductive health issues and/or if it could be altered to be more inclusive to women's issues. Moreover, the co-ed instruction of sensitive subject matter may inhibit learning, especially for young women in a society that often associate this knowledge with promiscuity. The lack of knowledge about STIs seemed to be from the lack of emphasis on the various STIs and could be improved to diminish the current misconceptions that were observed. Moreover, universal sex education instruction with general information may not be the most effective for rural areas, and in fact may contribute to a lower perceived risk. Rural sexual education might be reformed to include the instruction of risks more specific to rural communities.

#### ***FURTHER QUESTIONS TO BE ANSWERED***

If I were to expand this study, I would design it to include a comparison with young adults in the town of Jalpa, where the education system would be structured differently. I would compare and contrast their level of awareness and depth of knowledge surrounding these issues. Also, I would revise the instruments to include more socio-cultural factors that are likely to affect sexual health decisions including their ability to communicate with partners about using condoms and contraceptives and the influence of cultural machismo along with their access to health care services.



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## Appendix A

## Regional HIV and AIDS statistics 2008 and 2001

	Adults & children living with HIV		Adults & children newly infected with HIV	
	2008	2001	2008	2001
Sub-Saharan Africa	<b>22.4 million</b> [20.8 – 24.1 million]	<b>19.7 million</b> [18.3 – 21.2 million]	<b>1.9 million</b> [1.6 – 2.2 million]	<b>2.3 million</b> [2.0 – 2.5 million]
Middle East & North Africa	<b>310 000</b> [250 000 – 380 000]	<b>200 000</b> [150 000 – 250 000]	<b>35 000</b> [24 000 – 46 000]	<b>30 000</b> [23 000 – 40 000]
South and South-East Asia	<b>3.8 million</b> [3.4 – 4.3 million]	<b>4.0 million</b> [3.5 – 4.5 million]	<b>280 000</b> [240 000 – 320 000]	<b>310 000</b> [270 000 – 350 000]
East Asia	<b>850 000</b> [700 000 – 1.0 million]	<b>560 000</b> [480 000 – 650 000]	<b>75 000</b> [58 000 – 88 000]	<b>99 000</b> [75 000 – 120 000]
Latin America	<b>2.0 million</b> [1.8 – 2.2 million]	<b>1.6 million</b> [1.2 – 1.6 million]	<b>170 000</b> [150 000 – 200 000]	<b>150 000</b> [140 000 – 170 000]
Caribbean	<b>240 000</b> [220 000 – 260 000]	<b>220 000</b> [200 000 – 240 000]	<b>20 000</b> [16 000 – 24 000]	<b>21 000</b> [17 000 – 24 000]
Eastern Europe & Central Asia	<b>1.5 million</b> [1.4 – 1.7 million]	<b>900 000</b> [800 000 – 1.1 million]	<b>110 000</b> [100 000 – 130 000]	<b>280 000</b> [240 000 – 320 000]
Western & Central Europe	<b>850 000</b> [710 000 – 970 000]	<b>660 000</b> [580 000 – 760 000]	<b>30 000</b> [23 000 – 35 000]	<b>40 000</b> [31 000 – 47 000]
North America	<b>1.4 million</b> [1.2 – 1.6 million]	<b>1.2 million</b> [1.1 – 1.4 million]	<b>55 000</b> [36 000 – 61 000]	<b>52 000</b> [42 000 – 60 000]
Oceania	<b>59 000</b> [51 000 – 68 000]	<b>36 000</b> [29 000 – 45 000]	<b>3900</b> [2900 – 5100]	<b>5900</b> [4800 – 7300]
<b>TOTAL</b>	<b>33.4 million</b> [31.1 – 35.8 million]	<b>29.0 million</b> [27.0 – 31.0 million]	<b>2.7 million</b> [2.4 – 3.0 million]	<b>3.2 million</b> [2.9 – 3.6 million]

## Appendix B

**DATA COLLECTION INSTRUMENTS***INFORMED CONSENT DOCUMENT (English)*

Project Title: **Investigation of Reproductive Health in rural Zacatecas, Mexico**

Principal Investigator: **Dr. S. Marie Harvey; Department of Public Health**

Student researcher: **Garrett C. Jones**

**WHAT IS THE PURPOSE OF THIS STUDY?**

You are being invited to be part of a study to learn more about what influences decisions about sexual health in the rural community of La Pitahaya, Mexico. We believe that the traditional roots and beliefs of those who live in a small community may influence decisions about sexual health. We are hoping to learn more about the knowledge and attitudes about sexual health including sexually transmitted infections, the different forms of contraceptives, and sexual risk taking. Up to 20 adults will be invited to take part in a questionnaire and an interview about these topics. We will combine the answers from you and others in a written format for a college level thesis. We are studying this to learn the main influences of how the people of this community maintain sexual health and to finish a student thesis. This study will be of interest to the community of La Pitahaya because little attention is given to the rural communities of Mexico.

**WHAT IS THE PURPOSE OF THIS FORM?**

Please read this form very carefully. This form gives you the information you will need to help you decide whether to be in the study or not. You may ask questions about anything that is not clear. When all of your questions have been answered, you can decide if you want to be in this study or not.

**WHY AM I BEING INVITED TO TAKE PART IN THIS STUDY?**

You are being invited to take part in this study because you are a member of La Pitahaya community, at least 18 years of age, and able to speak and read Spanish well enough to read a newspaper, about fifth-grade reading level.

**WHAT WILL HAPPEN DURING THIS STUDY AND HOW LONG WILL IT TAKE?**

The study activities include an interview with the student researcher and a questionnaire. The interview and questionnaire will take place in a private location either in your home, or a location like an empty building. Study duration: The interview and the questionnaire combined will take about one hour of your time.

We will need to audio record the interview. The student researcher will not be able to write down your responses fast enough to keep up. This is mainly because the interviewer will not be able to transcribe as fast as you speak. If this is not ok with you, then you should not enroll.

**WHAT ARE THE RISKS OF THIS STUDY?**

The possible risks and/or discomforts associated with being in this study may include: topics are rather personal and you may feel uncomfortable because of some of the questions we ask. You do not have to take part in this study. If you do agree to take part, you are free to skip any questions that you would prefer not to answer. If you don't want to go on with either the questionnaire or the interview, you can stop at any time. You may get tired due to the length of the interview and we can provide a brief pause in between sections, if you would like.

**WHAT ARE THE BENEFITS OF THIS STUDY?**

You will not benefit from being in this study. However, we hope that in the future, other people might benefit from this study to help us better understand what influences decisions about sexual health in a rural community in Mexico.

**WILL I BE PAID FOR PARTICIPATING?**

You will not be paid for being in this research study.

**WHO WILL SEE THE INFORMATION I GIVE?**

The information you provide during this research study will be kept confidential to the extent permitted by law. We have taken several steps to help ensure confidentiality. We won't tell anyone if you take part in this study or not. Only those involved in this study, Dr. Harvey and the student researcher will have access to all data collected including audio recordings. We will not use your actual name on the questionnaire or during the interview and will devise a code to link the responses on the questionnaire to the interview. In Mexico all consent forms will be stored separately in a locked money safe. Audio files will be sent electronically via email to Dr. Harvey and after Dr. Harvey confirms she has received each audio file, the student researcher will delete the file from his equipment. A laptop will be used and the information will be encrypted or coded so the information is protected if the laptop is stolen. The interviewer will transcribe every word that is said in the interview; however, no names or other identifiable information will be transcribed. Once back in Oregon, all research data will be stored in Dr. Harvey's research office. At the chance that the results of this project are published, your identity will not be made public.

**DO I HAVE A CHOICE TO BE IN THE STUDY?**

If you decide to take part in the study, it should be because you really want to volunteer.

You will not be treated differently if you decide to stop taking part in the study. You are also able to choose to skip any questions asked of you. If you choose to withdraw from this project before it ends, the researchers may keep information collected about you and this information may be included in study reports.

### **WHO DO I CONTACT IF I HAVE QUESTIONS?**

If you have any questions about this research project, please contact: Garrett Jones, local number: 4639530251; however, Mr. Jones will only be available for a short length of time; long-distance number: 00115416460266, [jonegarr@onid.orst.edu](mailto:jonegarr@onid.orst.edu); or S. Marie Harvey, [marie.harvey@oregonstate.edu](mailto:marie.harvey@oregonstate.edu). If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Human Protections Administrator, at 0011(541) 737-8008 or by email at [IRB@oregonstate.edu](mailto:IRB@oregonstate.edu). Your signature indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

**I agree to have the interview audio recorded \_\_\_\_\_ (Initials)**

Participant's Name (printed): \_\_\_\_\_

\_\_\_\_\_  
(Signature of Participant)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Signature of Person Obtaining Consent)

\_\_\_\_\_  
(Date)



*INFORMED CONSENT DOCUMENT (Spanish)*

Título del Proyecto: **Investigación de la salud reproductiva en zonas rurales de Zacatecas, México**

Investigador Principal: **Dr. S. Marie Harvey; Departamento de Salud Pública**

Investigador estudiantil: **Garrett C. Jones**

**¿CUÁL ES EL PROPÓSITO DE ESTE ESTUDIO?**

Está invitado a participar en este estudio para aprender más de las influencias sobre las decisiones de la salud sexual en la comunidad rural de La Pitahaya, México. Pensamos que las tradiciones y creencias de los que viven en una comunidad pequeña pueden influenciar en las decisiones que toma uno sobre la salud sexual. Esperamos aprender más sobre el conocimiento y opiniones de la salud sexual que incluye las enfermedades de transmisión sexual, los anticonceptivos y la práctica de tener relaciones sexuales en general. Al máximo, 20 adultos van a ser invitados a participar en la encuesta y entrevista que trataran sobre este tema. Vamos a combinar las respuestas tuyas con las de los demás en forma escrita para cumplir una tesis a nivel universitario. Estamos estudiando este tema para informarnos sobre las áreas de influencia en la salud reproductiva específicamente en esta comunidad y también para cumplir los requisitos de la tesis. Este estudio será interesante para la comunidad de La Pitahaya, por la razón de que no hay muchas investigaciones sobre estos temas en las comunidades rurales de México.

**¿CUÁL ES EL PROPÓSITO DE ESTE DOCUMENTO?**

Por favor lea este documento despacio para asegurarse de que usted entiende el propósito claramente. Este documento de autorización le entregará la información necesaria para decidir su participación en este estudio. Favor leer el documento cuidadosamente. Usted puede hacer

cualquier pregunta que no le quede clara. Cuando todas las inquietudes que tenga sean aclaradas, usted podría decidir si desea participar en este estudio o no.

### **¿PORQUÉ ME INVITA A HACER ESTE ESTUDIO?**

Le invitamos a participar en este estudio porque usted cumple con los siguientes requisitos: es de la comunidad de La Pitahaya, es mayor de 18 años, habla y lee español al nivel de quinto grado de la primaria.

### **¿QUÉ PASARÁ DURANTE ESTE ESTUDIO Y CUÁNTO TIEMPO DURARÁ?**

Este estudio incluye una entrevista con el investigador estudiantil y una encuesta. La entrevista y la encuesta se llevarán a cabo en un lugar privado como en su casa, o en otro lugar fuera del público. Podría incluir, si usted lo permite, una encuesta y una sección de discusión. Duración del estudio: la encuesta en combinación con la entrevista durará aproximadamente una hora.

Vamos a necesitar grabar la entrevista debido a que el investigador estudiantil no podrá escribir todo lo que usted responda, así que va a ser esencial que lo graben. Si no quiere que su entrevista sea grabada, tiene la opción de no participar.

### **¿CUÁLES SON LOS POSIBLES RIESGOS DE ESTE ESTUDIO?**

Los posibles riesgos y/o las incomodidades de los procedimientos del estudio pueden ser: algunas preguntas pueden causarle incomodidad por ser preguntas personales. Usted no está obligado(a) a participar pero si quiere participar no tiene que contestar todas o algunas de las preguntas, y en cualquier momento del estudio puede decidir no continuar. Debido a la duración de la entrevista, puede sentirse cansado; en este caso, podemos tomar un descanso entre las secciones.

### **¿CUÁLES SON LOS BENEFICIOS DE ESTE ESTUDIO?**

Usted no obtendrá beneficios de este estudio. Sin embargo, esperamos que en un futuro otras personas sean beneficiadas con su información, o tratar de entender cuáles son los riesgos que trae tomar decisiones sexuales en una comunidad rural de México.

### **¿ME PAGARÁN PARA MI PARTICIPACIÓN?**

A usted no se le pagará por su participación en este estudio.

### **¿QUIÉN TENDRÁ ACCESO A LA INFORMACIÓN QUE USTED PROPORCIONE?**

La información que usted proporcione en este estudio será confidencial hasta el punto permitido por la ley. Hemos tomado varios pasos para asegurar su confidencialidad. Su identidad no será revelada a nadie si participa en este estudio o si decide no hacerlo. Solo los que formaran parte de la investigación, Dra. Harvey y el investigador estudiantil tendrán acceso a los resultados, incluyendo las grabaciones. No vamos a usar su nombre de verdad en las encuestas o en las entrevistas, se usaran números en vez de los nombres. En México los documentos de autorización van a estar guardados separados en una caja de seguridad. Las grabaciones van a ser enviadas por la red de internet directamente a la Dra. Harvey y borrados después de esto. El investigador estudiantil va a transcribir cada palabra que sea dicha durante la entrevista; pero sin usar nombres o información que sea confidencial. En los Estados Unidos la información del estudio estará guardada en la oficina de la Dra. Harvey. Si los resultados de este proyecto son publicados, su identidad no será revelada.

### **¿TENGO LA OPORTUNIDAD DE SER PARTE DE ESTE ESTUDIO?**

Si decide participar en el estudio, debe ser porque usted realmente quiere ser voluntario. No será tratado diferente si usted decide dejar el proyecto. También tiene el derecho de no contestar alguna pregunta que no le resulte apropiada. Si usted decide retirarse del proyecto antes de que

termine, los investigadores se quedaran con la información que esta recopilada en ese momento y esta información puede que se incluya en los reportes escritos del estudio.

### **¿QUÉ HAGO SI TENGO PREGUNTAS?**

Si tiene cualquier inquietud sobre este proyecto, por favor póngase en contacto con: Garrett Jones, número local: 4639530251; pero el Sr. Jones solo estará en la localidad por muy poco tiempo; número de larga distancia: 00115416460266 jonegarr@onid.orst.edu o S. Marie Harvey, marie.harvey@oregonstate.edu.

Si tiene preguntas sobre sus derechos o beneficios como participante, por favor póngase en contacto con: El Comité Institucional de Revisión (IRB) de La Universidad del Estado de Oregon, La Administración y Protección de Derechos Humanos, 0011(541) 737-8008 o por vía email [IRB@oregonstate.edu](mailto:IRB@oregonstate.edu).

Al firmar usted estará aceptando que se le ha explicado el propósito de este estudio, que todas sus preguntas han sido contestadas, y que usted está de acuerdo en formar parte de este estudio. También, recibirá una copia de este documento.

**Yo doy permiso de ser entrevistada y grabada durante este estudio \_\_\_\_\_ (iniciales)**

Nombre del Participante (en letra): \_\_\_\_\_

\_\_\_\_\_  
(Firma del Participante)

\_\_\_\_\_  
(Fecha)

\_\_\_\_\_  
(Firma del Investigador estudiantil)

\_\_\_\_\_  
(Fecha)



HIV / AIDS

14. Do you know what HIV/AIDS is?

Yes

No

15. AIDS is caused by a

Virus

Bacteria

Parasite

16. You can be HIV positive and have no symptoms

True

False

17. What are the forms through which HIV can be transmitted (check all that apply)

Sharing needles (drug use or for tattoos)  Blood transfusions

Sexual contact (vaginal, anal, oral)  Kissing

Mother to baby during the pregnancy, birth or breast feeding

*SURVEY (Spanish)*

## Encuesta

¿Ha recibido antes un examen de enfermedad transmitida sexualmente?

Sí       No

El Virus del Papiloma Humano (VPH)

1. ¿Sabe Usted qué es el virus del papiloma humano (VPH)?  
 Sí       No
2. ¿Cómo son transmitidos varios tipos de (VPH)?  
 Besando     El uso de drogas     Contacto sexual
3. Algunos tipos de VPH no causan problemas  
 Cierto     Falso
4. Algunos tipos de VPH pueden causar ciertos tipos de cánceres (específicamente el cáncer del cérvix)  
 Cierto     Falso
5. No hay ninguna manera de detectar el VPH  
 Cierto     Falso
6. Una vacuna de VPH sí existe para las mujeres  
 Cierto     Falso
7. VPH puede ser tratado antes de que se vuelva de ser cáncer del cérvix  
 Cierto     Falso
8. Se puede transmitir el VPH al bebé durante el parto  
 Cierto     Falso

El Herpes

9. ¿Sabe usted qué es el herpes?  
 Sí       No
10. Herpes es una  
 Virus       Bacteria       Fungi
11. La única manera de contagiarlo es del sexo  
 Cierto       Falso
12. Se puede curar el herpes  
 Cierto       Falso
13. Se puede transmitir el herpes al bebé durante el parto  
 Cierto       Falso

VIH / SIDA

14. ¿Sabe usted qué es el VIH/SIDA?

Sí  No

15. SIDA es causada por un(a)

Virus  Bacteria  Parasito

16. Uno sí puede ser VIH positivo y no tener ninguna síntoma

Cierto  Falso

17. Cuáles son las formas en cual VIH se puede transmitir (Marque todas que son correctas)

Por medio de agujas (el uso de drogas o para tatuajes)  Transfusiones de sangre

El acto sexual (vaginal, anal o oral)  Besando

De madre a su bebé, durante el embarazo, el parto, o al darle el pecho



*FEMALE INTERVIEW GUIDE (English)*

[ ] Female

Age \_\_\_\_\_ Number of Pregnancies \_\_\_\_\_ Number of kids \_\_\_\_\_

Religious beliefs: \_\_\_\_\_  
\_\_\_\_\_Grade and year of completed education: \_\_\_\_\_  
\_\_\_\_\_

1. Have you received a formal education in sex-ed, (as in a class room or from a clinic)?
2. When and where did you get this education, and what do you remember them teaching you?
3. Do you and your parents openly discuss sex, and how open are your conversations with your parents about topics about sex)?
4. Have you been sexually active?
5. How old were you when you first became sexually active?
6. What forms of contraceptives, also called birth control, do you know about... have you used any of them... and why did you chose those... do you prefer one over the others?
7. How effective do you think each of those types of contraceptives are at preventing an unplanned pregnancy?
8. How would you obtain each of those?
9. How have you come to learn about reproductive or sexual health (i.e., STD/STIs, contraceptives, pregnancy)? Have you ever been to a clinic to counseling, STD/STI testing, contraceptives etc.?
10. What are your thoughts about becoming sexually active before marriage? How do you think other members of the community feel about someone becoming sexually active before marriage?
11. Would using birth control fit with or go against your personal religious beliefs? Please tell me more about that?
12. If you have ever had sexual relations without using a condom and or without using something to prevent an unplanned pregnancy such as birth control/contraceptives, why do you think you did not use protection at that time?
13. Have you heard of any secondary side effects of using different forms of contraceptives such as (the pill, DEPO etc.) if so, can you recall any of them?
14. Are you aware that if you are using a form of contraceptive it is not 100% certain that you will not become pregnant and how do you know this?
15. If you use a condom or another method to prevent unwanted pregnancy, what method do you prefer and why?

16. Have you ever had someone explain to you all of the different forms of contraceptives that are available so that you could make an informed decision? Which seemed the most appealing and why?
17. Would you like to have more information about different forms of contraceptives? How would you like to receive this information, such as, internet, classroom, clinic from a health care provider or pamphlet etc.?
18. Some types of contraceptives also protect against sexually transmitted diseases, can you tell me about that?
19. Are you aware that in order to start taking contraceptives you need to see a doctor and can you tell me why?
20. Where you would go to obtain sexual health counseling, information, see a health care provider, and get contraceptives?

Thank you very much for your time.

*FEMALE INTERVIEW GUIDE (Spanish)*

[ ] Mujer

Edad \_\_\_\_\_ Números de Embarazos \_\_\_\_\_ Número de hijos \_\_\_\_\_

Creencia religiosa: \_\_\_\_\_

Nivel y año de estudios terminado: \_\_\_\_\_

1. ¿Ha recibido educación sexual (en la escuela o en una clínica)?
2. ¿Cuándo, y donde recibió la educación sexual y que es lo que recuerda haber aprendido?
3. ¿Habla usted con sus padres de sexo, si la respuesta es sí, que tan abiertas son las conversaciones sobre ese tema?
4. ¿Ha tenido relaciones sexuales?
5. ¿Cuántos años tenía cuando tuvo su primera relación sexual?
6. ¿Qué tipo de anticonceptivos conoce usted... ha utilizado alguno...y por que escogió ese sobre los demás...tiene preferencia por alguno en particular?
7. ¿Qué tan eficaz cree usted son los diferentes tipos de anticonceptivos para prevenir el embarazo?
8. ¿Cómo podría obtener cada uno de ellos?
9. ¿Específicamente, como aprendió de la educación sexual o sobre la salud reproductiva (por ejemplo, de las enfermedades transmitidas sexualmente, de los anticonceptivos, del embarazo)? Alguna vez ha ido a una junta de la clínica donde le enseñaron sobre esa tema, si es que si donde y que puede recordar de lo que le dijeron.
10. ¿Qué opina usted de entrar en una relación sexual antes de casarse? ¿Cómo cree usted que una persona de la comunidad reaccionaría a una pareja que sostiene relaciones sexuales antes de casarse?
11. ¿Usted está de acuerdo o está contra el uso de algún método anticonceptivo...y son por razones personales o religiosas? ¿Por favor, me podría explicar un poco de eso?
12. ¿Alguna vez ha tenido relaciones sexuales sin protección? ¿Ha sido porque no tuvo suficiente información o por sus creencias personales o religiosas?
13. ¿Usted sabe los efectos secundarios de los métodos anticonceptivos tales como las pastillas, la inyección, y cuáles son?
14. ¿Sabía usted que si está tomando algún método anticonceptivo no es cien por ciento seguro que no quede embarazada y como lo sabe?
15. ¿Si usted usa algún método de anticonceptivo para prevenir el embarazo, cual es y por qué lo prefiere?

16. ¿Alguna vez le han hablado a usted sobre todos los métodos anticonceptivos que hay disponibles para que usted pueda utilizar y cual le parece mejor?
17. ¿Quisiera tener más información sobre los diferentes tipos de anticonceptivos? ¿En qué manera le gustaría recibirla...por internet, de la escuela, de un doctor en una clínica, por un panfleto etc.?
18. ¿Cuáles son los métodos anticonceptivos que usted conoce que le protegen contra las enfermedades transmitidas sexualmente y cuáles son?
19. ¿Usted sabe que necesita una cita con un doctor para poder empezar a tomar anticonceptivos y por qué es necesaria esta cita?
20. ¿Dónde iría usted para obtener más información de este tema, y también para conseguir los métodos anticonceptivos?

Muchas gracias por su tiempo

*MALE INTERVIEW GUIDE (English)*

[ ] Male

Age \_\_\_\_\_ Number of kids \_\_\_\_\_

Religious beliefs: \_\_\_\_\_  
\_\_\_\_\_Grade and year of completed education: \_\_\_\_\_  
\_\_\_\_\_

1. Have you received a formal education in sex-ed, (as in a class room or from a clinic)?
2. When and where did you get this education, and what do you remember them teaching you?
3. Do you and your parents openly discuss sex, and how open are your conversations with your parents about topics about sex)?
4. Have you been sexually active?
5. How old were you when you first became sexually active?
6. What forms of contraceptives, also called birth control, do you know about... have you used any of them... and why did you chose those... do you prefer one over the others?
7. How effective do you think each of those types of contraceptives are at preventing an unplanned pregnancy?
8. How would you obtain each of those?
9. How have you come to learn about reproductive or sexual health (i.e., STD/STIs, contraceptives, pregnancy)? Have you ever been to a clinic to counseling, STD/STI testing, contraceptives etc.?
10. What are your thoughts about becoming sexually active before marriage? How do you think other members of the community feel about someone becoming sexually active before marriage?
11. Would using birth control fit with or go against your personal religious beliefs? Please tell me more about that?
12. If you have ever had sexual relations without using a condom and or without using something to prevent an unplanned pregnancy such as birth control/contraceptives, why do you think you did not use protection at that time?
13. Have you heard of any secondary effects of using different forms of contraceptives such as (the pill, DEPO etc.) if so, can you recall any of them?
14. Are you aware that if you are using a form of contraceptive it is not 100% certain that a female will not become pregnant and how do you know this?
15. If you use a condom or another method to prevent unwanted pregnancy, what method do you prefer and why?

16. Have you ever had someone explain to you all of the different forms of contraceptives that are available so that you could make an informed decision? Which seemed the most appealing and why?
17. Would you like to have more information about different forms of contraceptives? How would you like to receive this information, such as, internet, classroom, clinic from a health care provider or pamphlet etc.?
18. Some types of contraceptives also protect against sexually transmitted diseases, can you tell me about that?
19. Where you would go to obtain sexual health counseling, information, see a health care provider, and get contraceptives?

Thank you very much for your time.

*MALE INTERVIEW GUIDE (Spanish)*

[ ] Hombre

Edad \_\_\_\_\_ Número de hijos \_\_\_\_\_

Creencia religiosa: \_\_\_\_\_

Nivel y año de estudios terminado: \_\_\_\_\_

1. ¿Ha recibido educación sexual (en la escuela o en una clínica)?
2. ¿Cuándo, y donde recibió la educación sexual y que es lo que recuerda haber aprendido?
3. ¿Habla usted con sus padres de sexo, si la respuesta es sí, que tan abiertas son las conversaciones sobre ese tema?
4. ¿Ha tenido relaciones sexuales?
5. ¿Cuántos años tenía cuando tuvo su primera relación sexual?
6. ¿Qué tipo de anticonceptivos conoce usted... ha utilizado alguno...y por que escogió ese sobre los demás...tiene preferencia por alguno en particular?
7. ¿Qué tan eficaz cree usted son los diferentes tipos de anticonceptivos para prevenir el embarazo?
8. ¿Cómo podría obtener cada uno de ellos?
9. ¿Específicamente, como aprendió de la educación sexual o sobre la salud reproductiva (por ejemplo, de las enfermedades transmitidas sexualmente, de los anticonceptivos, del embarazo)? Alguna vez ha ido a una junta de la clínica donde le enseñaron sobre esa tema, si es que si donde y que puede recordar de lo que le dijeron.
10. ¿Qué opina usted de entrar en una relación sexual antes de casarse? ¿Cómo cree usted que una persona de la comunidad reaccionaría a una pareja que sostiene relaciones sexuales antes de casarse?
11. ¿Usted está de acuerdo o está contra el uso de algún método anticonceptivo...y son por razones personales o religiosas? ¿Por favor, me podría explicar un poco de eso?
12. ¿Alguna vez ha tenido relaciones sexuales sin protección? ¿Ha sido porque no tuvo suficiente información o por sus creencias personales o religiosas?
13. ¿Usted sabe los efectos secundarios de los métodos anticonceptivos tales como las pastillas, la inyección y cuáles son?
14. ¿Sabía usted que si está tomando algún método anticonceptivo no es cien por ciento seguro que no quede embarazada y como lo sabe?
15. ¿Si usted usa algún método de anticonceptivo para prevenir el embarazo, cual es y por qué lo prefiere?

16. ¿Alguna vez le han hablado a usted sobre todos los métodos anticonceptivos que hay disponibles para que usted pueda utilizar y cual le parece mejor?
17. ¿Quisiera tener más información sobre los diferentes tipos de anticonceptivos? ¿En qué manera le gustaría recibirla: por internet, de la escuela, de un doctor en una clínica, por un panfleto?
18. ¿Cuáles son los métodos anticonceptivos que usted conoce que le protegen contra las enfermedades transmitidas sexualmente y cuáles son?
19. ¿Dónde iría usted para obtener más información de este tema, y también para conseguir los métodos anticonceptivos?

Muchas gracias por todo su tiempo



*RECRUITMENT GUIDE*

Hello. My name is Garrett Jones and I am a student at Oregon State University in the United States. I am here for a short time doing research as part of my college studies. If you have a few minutes I would like to describe the study to see if you might be interested to take part in a survey and an interview.

First of all in order to participate in this study you must be at least eighteen years old and be from the community of La Pitahaya and speak Spanish and be able to read Spanish at about a fifth grade reading level. The first form that I am giving you, the consent form, explains the reason and goals for this study, along with an explanation of what will occur and your rights as a potential participant. I can come back at another time or I have time now to discuss this with you. I will leave this with you so that you can familiarize yourself with it and decide if it is something that you would like to participate in. I can answer any questions that pertain to this document or about the study. The other documents are also for you to keep, and are a list of the questions that will be presented throughout the interview, and if you do not feel comfortable answering one, or any of them you can elect to terminate the interview, at any moment.

Note: Due to the fact that I am the only person collecting data in this project along with the fact that this document will serve as a guide, and not as a script, a translation will not be necessary.