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# An Interaction Model of Parents' and Adolescents' Influences on Mexican Adolescents' Intentions for Contraception and Condom Use

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# An Interaction Model of Parents' and Adolescents' Influences on Mexican Adolescents' Intentions for Contraception and Condom Use

by

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# Dedication

This dissertation is dedicated to my God, who has enabled me to come this far. I also dedicate this dissertation to my husband, Leandro Ornelas Gonzalez, for his continuous support and understanding in this research journey. I dedicate this work with a special feeling of gratitude to my loving parents, Ubaldino and Raquel, whose words of encouragement helped me to make my dream a reality. I also give special thanks to the nurses in Mexico who pushed me forward with tenacity that rang in my ears.

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An Interaction Model of Parents' and Adolescents' Influences on Mexican Adolescents' Intentions for Contraception and Condom Use

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The purpose of this cross-sectional and exploratory study was to describe an interaction model of parental and adolescent attributes and sexual communication influences on intentions for contraception and condom use in Mexican high school students between 14 and 17 years of age. This study utilized a secondary analysis of data from an existing experimental study. Concepts from the Theory of Planned Behavior, the Social Cognitive Theory, and the Ecodevelopmental Theory provided the contexts with which to guide this study. The study sample consisted of 756 adolescents and their parents. A SEM model building approach was used to guide the analyses. The model fit indices suggested that the sample data did not have an acceptable fit to the combined measurement model ($X^2_{(30)}$ = 92.215, $p$ = 0.0000, *CFI* = 0.97, *TLI* = 0.95, *RMSEA* = 0.05, *SRMR* = 0.04). Based on the correlation coefficients, the observed variables of parents'

and adolescents' familialism and religiosity and adolescents' intentions for contraception and condom use were excluded from the structural equation modeling analyses. Two alternative models were constructed form the original and both had an acceptable fit, but based on the theoretical background, one was selected ($X^2_{(15)}$ = 27.289, *p* = .0265, *CFI* = .99, *TLI* = .99, *RMSEA* = .03, *SRMR* = .02).

The revised model parents' attributes (self-efficacy for sex communication and beliefs toward sex) showed a strong relationship (*r* = 0.80) with parents' sexual communication (communication about sex and comfort with sex communication). An additional moderately strong correlation was found between adolescents' sexual communication (communication about sex and comfort with sex communication) and parents' sexual communication (*r* = .31). Although the final model in this study did not explain the direct and mediator effects on adolescents' intentions for contraception and condom use, findings add new information in relation to the phenomenon of parent-adolescent communication about sex in Mexico. Several conclusions were also drawn from the relationships among parents' attributes, adolescents' attributes, parents' sexual communication, adolescents' sexual communication, and adolescents' intentions for contraception and condom use. Findings from this study are congruent with similar research and can be useful in developing intervention programs to prevent HIV/AIDS in Mexican adolescents.

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# CHAPTER I

## Introduction

Acquired Immune Deficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) first appeared in the 1980s and quickly became a pandemic illness. Since then, more than 25 million people have died of AIDS worldwide. Every day around 14 thousand people become infected with HIV (Joint United Nations Program on HIV/AIDS [UNAIDS] & World Health Organization [WHO], 2005). The overall number of people living with HIV/AIDS has continued to increase in the world and has reached its highest level with an estimated 40.3 million people affected (UNAIDS & WHO, 2005).

In the countries of Latin America, Mexico ranks third in reported HIV/AIDS cases (United States Agency for International Development [USAID], 2005). In the last decade HIV/AIDS was the 11$^{th}$ highest cause of death in Mexicans aged 15 to 29 years yet and now it is the fourth highest cause of death in this group (Instituto Nacional de Estadistica Geografia e Informatica [INEGI], 2005). Mexicans in the 18–35 age group account for 76% of total HIV/AIDS cases (Secretaria de Salud, 2003). Given the long incubation period (2 to 10 years), usually seen with HIV it can be assumed that a high percentage of these infections occurred during adolescence (Pilcher et al., 2001). Adolescents are at most risk for HIV/AIDS because this developmental stage is characterized by

taking risks that allow them to define and to discover their identity (Tiezzi, Lipshutz, Wrobleski, Vaughan, & McCarthy, 1997).

Adolescents need to try things in order to find out who they are and become more independent, which puts them at higher risk of developing HIV/AIDS (Martinez, 2003). Those at most risk of contracting HIV/AIDS are adolescents who have unprotected sex (sex without using some form of contraceptive barrier method), those who have multiple partners, and those whose sex partners include intravenous drug users (Villasenor-Sierra, Caballero-Hoyos, Hidalgo-San Martin, & Santos-Preciado, 2003). These sexual risk behaviors have future consequences in terms of adolescents' mortality and morbidity (e.g. unplanned pregnancies, sexual transmitted diseases [STD], and HIV/AIDS) and have a significant impact on social, economic, and political progress in Mexico (Santos-Preciado, 2003). It is well known that prevention is the key against AIDS terrible disease, but most of the Mexican studies have focused attention on socio-demographic variables.

## PURPOSE

It is imperative that adolescent HIV/AIDS prevention measures focus on variables that are open to change, and, therefore, research should address social cognitive determinants (Armitage & Conner, 2000). In Mexico, HIV/AIDS is a sensitive topic, thus knowing an adolescents' motivations regarding sex is useful, because being motivated is the first required step to performing sexual behavior

(Bennett & Bozionelos, 2000). Intention is the proximal motivation to determining a particular behavior, so the more an adolescent intends to perform sexual behaviors; the more likely is her/his performance (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Therefore, the purpose of this cross-sectional and exploratory study was to describe an interaction model of parental and adolescent attributes and sexual communication influences on intentions for contraception and condom use in Mexican youths between 14 and 17 years of age in high school.

## BACKGROUND AND SIGNIFICANCE

Adolescence is a period of development, not only physically and socially, but also emotionally (Rew, 2005). An important task during adolescence is to develop a sense of personal and sexual identity that starts in puberty and continues all the way to the completion of adolescent growth. With the development of secondary sex characteristics, sexuality becomes an increasing concern for adolescents, and the ways in which they respond to these changes contribute to their overall identity and sexual health (Neinstein, 2002). It is a time when youth are extremely vulnerable because adolescents experience stress and insecurity as they navigate within this progression to adulthood.

In Mexico, adolescents represent 10% of the population, and this percentage is increasing rapidly. It is expected that by 2010 Mexico will have more than 11 million adolescents, constituting the largest segment of the Mexican

population (INEGI, 2004). Considering these numbers, HIV/AIDS prevention among adolescents must become a priority, because if no action is taken, the future of Mexico in terms of mortality and morbidity will dramatically be affected. The health system in Mexico focuses more on the prevention of other chronic illnesses or acute diseases in other age groups rather than on prevention of HIV/AIDS in adolescents. Most adolescents are physically healthy, yet it is imperative to be aware of the danger that sexual risk behaviors represent during adolescence (Santos-Preciado, 2003).

Mexican reports estimate that 31% to 68% of teenagers aged 15 to 19 years engage in sexual intercourse (Caballero-Hoyos & Villasenor-Sierra, 2001; Mexican Institute of Youths, 2002). Most of these adolescents had their first sexual encounter at the age of approximately 15 years (Gayet, Pedrosa, Juarez, & Magis, 2003; Gayet, Rosas, Magis, & Uribe, 2002; Stewart et al., 2001; Vernon & Dura 2004). In urban areas, the mean age for first sexual intercourse is 16.7; the use of condoms at this age is not a primary consideration because adolescents use other forms of birth control that do not protect them from HIV/AIDS (Mexican Institute of Youths, 2002). In addition, the age of first sexual intercourse has become progressively younger. Adolescents at 12 years of age reported almost no sexual activity, but more than half have had sex at 19 years of age (Gayet, Juarez, Pedrosa, & Magis, 2003).

Martinez (2003) and the Population Council (2002) found that older adolescents are more likely to engage in sexual activity and more likely to have

more sexual partners in their lives (Huerta-Franco, 1999; Martinez-Donate, Melbourne et al., 2004). Some studies, however, reported that older adolescents are more likely to use a condom (Martinez-Donate, 2004; Population Council, 2002; Tapia-Aguirre et al., 2004; Vernon & Dura, 2004), yet conversely, Martinez-Donate, Blumberg et al. (2004) found that older adolescents were less likely to use a condom at three months' follow up. Many studies report that one of the most common risk factors among adolescents is unprotected sex (69%) or inconsistent use of contraception (Caballero-Hoyos & Villasenor-Sierra, 2001). Many sexually active adolescents are at high risk of contracting HIV/AIDS because 72% reported that they never used a condom when having sex (Caballero-Hoyos & Villasenor-Sierra, 2001). In addition, most adolescents do not perceive themselves as vulnerable, and yet unprotected sex with multiple partners puts them at high risk of becoming infected with HIV/AIDS (Villasenor-Sierra, et al., 2003).

The adolescents' family plays a very important role in sexual development and in the promotion of HIV/AIDS prevention. Family members have a significant influence on the adolescent as role models and to provide opportunities to promote health (Kingon & Sullivan, 2001). Some authors mentioned that families are sources of information when adolescents have doubts about sexual health, and therefore this transmission of information helps adolescents to make the best decisions concerning their sexual behavior (Romo, Lefkowitz, Sigman, & Au, 2001). Parent–child communication about sex is an important medium for

adolescents because it provides them with a source of information and values that allow them to make safe sex decisions. DiClemente et al. (2001) reported that parents who talk with their children about sexual matters, provide sexual education, or contraceptive information at home are more likely to postpone sexual activity in their children. In addition, when these adolescents become sexually active, they have fewer sexual partners and are more likely to use contraceptives, condoms, and other preventive measures (DiClemente et al., 2001).

From the evidence above, it is clear that parents play an important role on HIV/AIDS prevention in Mexican adolescents. Most Mexican families, however, tend not to discuss sexual issues (Mexican Institute of Youths, 2002). One explanation may be that parent communication about sex may be influenced by parent beliefs around communication. Beliefs are subjective mental interpretations of the truth derived from convictions, perceptions, reasoning, or communication (The American Heritage Dictionary, 2004). The adolescents' case is similar, it is expected that they perform sexual health behaviors. However, most adolescents tend to engage in sexual risk behaviors. The development of new cognitive skills (including abstract thinking capacities) and emotional, personal, and financial independence from parents play an important role in adolescent decision-making (Christie & Viner, 2005).

## STATEMENT OF THE PROBLEM

Many adolescents face adverse physical and emotional problems related to their experiences of sexual intercourse such as STDs, HIV infections, AIDS, and unplanned pregnancies (Maldonado, Morello, Infante-Espinola, 2003). Since the Mexican adolescent population is large and continues to increase, it is imperative that the aforementioned problems are prevented as much as possible. Many adolescents experience increased freedom from parents, although many have a sense of invincibility and often engage in risky behaviors. Society and the media create an environment in which risky teen behavior is condoned, which may ultimately lead to HIV infection (Martinez, 2003). Adolescent sexual health has a significant impact on social, economic, and political progress in Mexico, but regrettably, government institutions often ignore this issue. One explanation for this is that adolescents have lower rates of morbidity and mortality in comparison with other age groups, and therefore, it is widely believed that they are healthier (Huerta-Franco, 1999).

HIV infections in youths are a problem that affects the whole of society. There are several gaps in the literature related to the reality of AIDS in Mexico. Although healthcare professionals have tried to alleviate this problem, research is limited to descriptive studies. In addition, parent–child interaction has not been considered for HIV/AIDS prevention in Mexican studies. Taking into account the above evidence and the considerations relating to the prevalence and incidence of HIV/AIDS, it is clear that the factors related to sexual behaviors for HIV/AIDS

prevention in adolescents are still unknown. It is well known that an adolescents' decision about whether or not to engage in unsafe sexual practices may be influenced by a variety of parent and adolescent attributes (Steinberg, 2001). To provide a clearer explanation of this phenomenon, it is important to know parental and adolescent attributes that influence adolescents' intentions for contraception and condom use in order to develop efficient health policies and intervention programs.

## CONCEPTUAL FRAMEWORK

Adolescents' decision whether or not to perform sexual health behaviors such as contraception and condom use is a complex process in which multiple influences are involved. Models from other disciplines may help to better understand the phenomenon of HIV/AIDS prevention regarding Mexican adolescents (Villarruel, Bishop, Simpson, Jemmott, & Fawcett, 2001). Important concepts from the Theory of Planned Behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), the Social Cognitive Theory (Bandura, 1986), and the Ecodevelopmental Theory (Scazapocznick & Coatsworth, 1999) provided the contexts with which to guide this study.

Studies focused on HIV/AIDS prevention often used motivational models employing measures of intentions (Armitage & Conner, 2000). One popular motivation model of health behavior is the Theory of Reasoned Action and Planned Behavior (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). The Theory

of Planned Behavior is an extension of the Theory of Reasoned Action. The principal assumption in the former theory suggests that a person's behavior is determined by his/her intention to perform the behavior; thus the best predictor of behavior is intention (Ajzen, 1991). In this study, the intention for contraception and condom use is the cognitive representation of the adolescents' readiness to perform the sexual behavior and is considered to be the immediate antecedent of the sexual behavior. Intentions implicitly rely on the motivational factors that influence the adolescents' sexual behavior; motivations imply the willingness and hardiness of the adolescents' degree of planning regarding performing the sexual behavior (Ajzen, 1991).

This intention is determined by the person's beliefs about the outcomes of the behavior and beliefs about what other people think the person should do (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). A belief is a degree of certainty one has that something is true. Moreover, beliefs surrounding the carrying out of a particular behavior are a function of the salient information gathered from the positive and negative evaluations of the consequences of a human behavior (Ajzen, 1991). In addition, core beliefs are often based on the beliefs of other people one has unconsciously accepted as true, so it is likely some adolescent beliefs may be adopted from their parents. The concept of beliefs has also been used when talking about self-efficacy. A general rule is that the more favorable the belief, the greater the perceived self-efficacy of the person's

intention to perform the behavior in question (Albarracin, Johnson, Fishbein, & Muellerleile, 2001). Therefore another important concept is self-efficacy.

The first person to introduce the self-efficacy construct was Albert Bandura, who used a Social Cognitive Theory as a basis for his analysis. This theory posits self-efficacy and outcome expectation as a central determinant of a behavior. “Perceived self-efficacy is a person’s judgment of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has, but with the judgments of what one can do with whatever skills one possesses” (Bandura, 1986, p. 391). A person must believe in his or her capability to perform the behavior and must perceive an incentive to do so. Additionally, a person must value the outcomes or consequences that he or she believes will occur as a result of performing a specific behavior or action.

The Ecodevelopmental Theory has been found to provide context to explore the adolescents’ and parents’ interactions (Scazapocznick & Coatsworth, 1999). It is important to mention that most of the work has been done with the United States’ population, but knowledge on how to translate the findings with regard to Mexican adolescents will provide a significant contribution to the fight against HIV/AIDS in Mexico.

The Ecodevelopmental Theory was created based on the Social Ecology Theory (Bronfenbrenner, 1979), the Structural System Theory (Minuchin & Fishman, 1981), multisystems intervention (Henggeler & Borduin, 1990), and

lifespan development approaches (Baltes, Reese, & Nesselroad, 1977). The theory allows for examining the influences on sexual behaviors within various environmental and developmental contexts. The use of the theory is appropriate because it takes into account the fact that the protective and risk factors do not operate in isolation (Rew, 2002). The theory integrates three primary and integrated elements: the socio-ecological approach, the developmental processes, and the emphasis on social interactions. The socio-ecological approach includes all child-related information across various domains regarding social and behavioral risks and protective factors. The developmental process takes into account all the risk and protective factors across the social domains present during adolescence and beyond. The incorporation of social interactions between the individual, the family, and his/her culture helps to understand the complexities in which the adolescents' behavior occurs.

The basic tenets of the theory propose that understanding risk and protective factors regarding adolescent behaviors requires an understanding of individual and developmental processes and a consideration of the social systems in which they occur. Child development is presented within the context of the related system in his/her environment. Bronfenbrenner's theory defines "layers" of environment, each having an effect on a child's development. The interaction between factors in the child's maturing biology, his/her immediate family/community environment, and society, affects his/her development. It is important to mention that these layers interact with each other and that adolescent

behaviors may be explained by a combination and interaction of the various systems. This combination and interaction between the adolescent and the parent is taken into account in the proposed conceptual framework. The *mesosystem* and *macrosystem* layers provide context to explore aspects related to sexual communication and cultural factors.

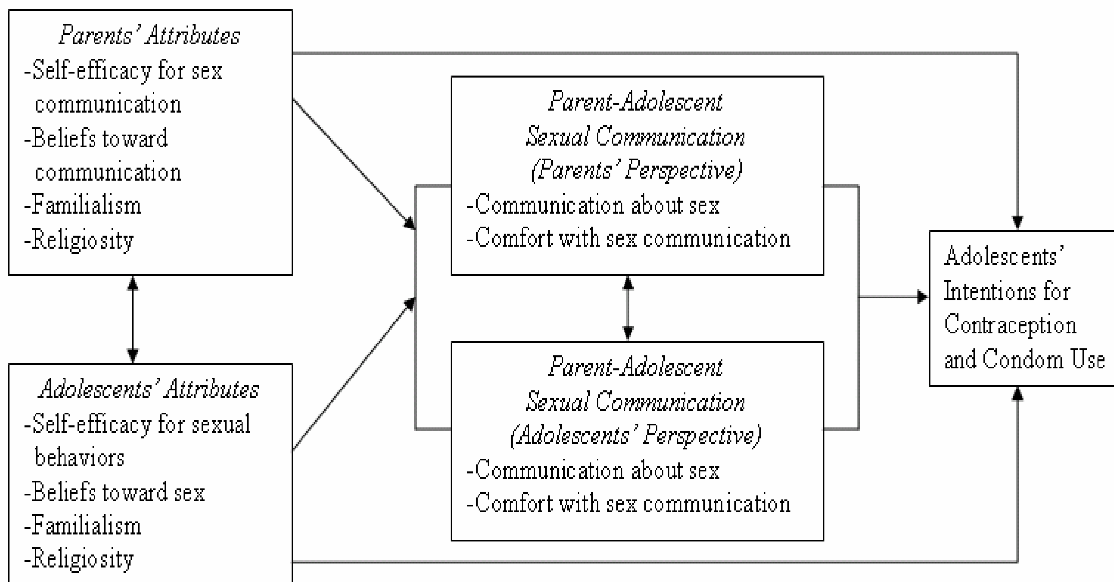
The *mesosystem* contains the structures with which the child has direct contact. At this level, relationships have impacts in two directions: from the adolescent and toward the adolescent. These bi-directional influences occur among all levels of environment. Both the interaction of structures within a layer and interactions of structures between layers are important to this theory. Bi-directional influences are strongest and have the greatest impact on the child. This idea supports the inclusion of variables such as, parent–adolescent communication about sex and comfort with sex communication (Pantin, Schwartz, Sullivan, Prado, & Scazapocznik, 2004). The literature shows this bi-directional influence, as parents see the need for communication about sex when they are aware of adolescents who may be involved in sexually risky behaviors. On the other hand, adolescents report that they prefer to receive information from parents when they have any doubts relating to sexual issues (Palacios, 2001).

The *macrosystem* layer may be considered the outermost layer in the child's environment and comprises cultural values and customs (Berk, 2003). The effects of larger principles defined by the macrosystem have a cascading influence throughout the interactions of all the other layers. The macrosystem

encompasses the social and philosophical ideas that are imbedded within a society. Cultural attributes affect the individual and the family because Mexican communities tend to be conservative and rigid and focus on more traditional ways of life. Many attitudes and beliefs are shaped by cultural and societal norms. Cultural characteristics identify the individual as a member of a community with various traditions, religions, and beliefs (Pajewski & Enriquez 1996; Rizo et al., 2004). Cultural attributes such as familialism and religiosity have been included in this study. Familialism is a cultural value that involves feelings of unity, reciprocity and trust. Religiosity is a comprehensive sociological term used to refer to the various aspects of religious activity, dedication, and beliefs.

In summary, the Theory of Planned Behavior, the Social Cognitive Theory, and the Ecodevelopmental Theory provide context to explore the relationships and effects between parents' attributes, adolescents' attributes, parent-adolescent sexual communication, and adolescents' intention for contraception and condom use in Mexican adolescents (Figure 1).

Figure 1. An Interaction Model of Parents' and Adolescents' Attributes and Sexual Communication Influences on Adolescents' Intentions for Contraception and Condom Use.




One of the characteristics of the model depicts parents-adolescents interactions as having effects on adolescents' intentions for contraception and condom use. Parents' attributes included: self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity. Adolescents' attributes included: self-efficacy for sexual behaviors, beliefs toward sex, familialism, and religiosity. The parent and adolescent sexual communication included: communication about sex and comfort with sex communication. Finally, the dependent variable was intentions for contraception and condom use.

The main assumption of this model was that parents' and adolescents' attributes and sexual communication affect adolescents' intentions for contraception and condom use.

## RESEARCH QUESTIONS

These were the research questions answered in this study:

1. What are parents' attributes (self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?
2. What are adolescents' attributes (self-efficacy for sexual behaviors, beliefs towards sex, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?
3. What are the relationships between parents' attributes and adolescents' attributes?
4. What are the relationships between parents' attributes and their sexual communication?
5. What are the relationships between adolescents' attributes and their sexual communication?
6. What are the relationships between parents' attributes and adolescents' intentions for contraception and condom use?

7. What are the relationships between adolescents' attributes and adolescents' intentions for contraception and condom use?

8. What are the relationships between adolescents' sexual communication and their intentions for contraception and condom use?

9. What are the relationships between parental sexual communication and adolescents' intentions for contraception and condom use?

10. What are the relationships between parents' and adolescents' communication about sex?

11. What are the relationships between parents' and adolescents' comfort with sex communication?

12. What are the attributes of adolescents and parents that have direct effects on adolescents' intentions for contraception and condom use?

13. Does the parents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?

14. Does the adolescents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?

15. Are there gender differences in adolescents' attributes, sexual communication, and intentions for contraception and condom use?

16. Are there differences in parents' attributes and sexual communication by adolescents' gender?

## DEFINITIONS

### Parent Variables

#### *Attributes*

*Self-efficacy for sex communication* refers to a parents' confidence about his/her capacity to communicate about sex with his/her child.

*Beliefs toward communication* comprise parents' feelings about talking with their child.

*Religiosity* is the parents' religious practices and belief, church attendance, and valuing religion.

*Familialism* is a parents' cultural value that involves feelings of unity, reciprocity, and trust.

#### *Sexual Communication*

*Communication about sex* comprises a parents' perception about the amount of information on sexual topics that he/she transmits to his/her adolescent child.

*Comfort with sex communication* regards how comfortable the parent feels talking about sex with their adolescent child.

## Adolescent Variables

### ***Attributes***

*Self-efficacy for sexual behaviors* refers to an adolescents' confidence about his/her capacity to have sex, to use condoms, and to use contraception.

*Beliefs toward sex* comprise adolescents' feelings about having sex and its relationship to HIV/AIDS prevention and the approval of others. It also includes adolescents' feelings about using condoms and contraception and its relationship to HIV/AIDS prevention and the approval of others.

*Familialism* is an adolescents' cultural value that involves feelings of unity, reciprocity, and trust.

*Religiosity* is the adolescents' religious practices and belief, church attendance, and valuing religion.

### ***Sexual Communication***

*Communication about sex* comprises an adolescents' perception about the amount of information regarding sexual topics that he/she receives from his/her parents.

*Comfort with sex communication* regards how comfortable the adolescents feel talking about sex with their parents.

*Intention for contraception and condom use* is the cognitive representation of the adolescents' readiness to perform the sexual behavior (contraception and

condom use) and is considered to be the immediate antecedent of the sexual behavior.

## ASSUMPTIONS

1. Scales that were used are valid measures of theoretical constructs in the interaction model.
2. The adolescents and parents who agreed to participate were willing to share and were truthful about, their experiences.
3. The adolescents and parents who participated were not harmed by participation in the study.
4. The validity of the measures was ensured by the principal researcher in the original study.

## LIMITATIONS

1. This was a cross-sectional study, and therefore data over time will be missing thus, no cause-effect can be determined.
2. Data were obtained from a sample in a single geographical area.
3. Volunteer or participation bias may exist because of the sensitive nature of the study.
4. Because this study used secondary analysis data, the model was limited by the variables available.
5. High schools were not randomly selected

# CHAPTER II

## Review of the Literature

This chapter focuses on a review of the literature relating to the research questions and the main variables of the study. It is important to mention that an exhaustive review of the literature was carried out regarding the Mexican population. To complement this review, this section also includes literature regarding Hispanics and a review of sexual health and HIV/AIDS prevention in Mexican adolescents.

### ADOLESCENTS' INTENTIONS FOR CONTRACEPTION AND CONDOM USE

The Theory of Planed Behavior affirms that a persons' behavior is determined by his/her intention to perform the behavior thus, the best predictor of behavior is intention (Ajzen, 1991; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). In Mexico, researchers have focused more on the study of adolescents' sexual behaviors and their related factors, but only few studies with Mexican adolescents have studied their intentions for sexual behaviors. A study by Diaz-Loving and Villagran-Vazquez (1999) found that the best predictor of condom use in Mexican adolescents' is their intention to use condoms. An average of 20% of the variance in sexual behavior was predicted by adolescents' intention for condom use (Diaz-Loving & Villagran-Vazquez, 1999).

In another study with Mexican adolescents' prostitutes, researchers assessed women's intentions to use condoms for vaginal, oral, and anal sex with clients in a 3-month period. A mean score of 4.4 (range 1 to 5) was found with respect to their intentions to always use condoms with clients for all types of sex (Patterson, Semple, Fraga, Bucardo, Davila-Fraga, & Strathdee, 2005). Other studies reported score means below the midpoint and reported that in general Mexican students had low intentions to avoid unprotected sex in future encounters (Martinez-Donate et al., 2005; Pergallo et al., 2005).

Some studies have investigated adolescent's intentions in terms of gender. Males have reported less intention to avoid unprotected sex compared to females. However, females engage in risk behaviors despite having stronger intentions (Guivaudan, Van de Vijver, & Poortinga, 2005; Martinez-Donate et al., 2005). One study found that 24% of the variance of the intention of condom use was explained for females with regular partners (Diaz-Loving & Villagran-Vazquez, 1999). In addition, females Adolescents' perceptions of what significant others desired of them, perceptions of general social norms, and whether they were sexually active predicted intentions to have sex (Flores, Tschann, & Marin, 2002).

Other studies have focused on adolescent's intentions for sexual behaviors and their related factors. Behavioral attitudes, norms, and intentions to engage in sexual behavior vary depending on both the sexual practice and the belief that condom use makes sex safer. In addition, behavioral beliefs about the utility of condom use and about the pleasure of condom use found to be the principal

predictor of intentions to use condoms with occasional sex partners (Diaz-Loving & Villagran-Vazquez, 1999). Moreover, attitudes and subjective norms about the use of condoms are reliable predictors of intentions to perform healthy behaviors in adolescents. Adolescents' self-efficacy and attitudes have a direct effect on adolescent's intention to use condoms and partner communication in adolescents with and without sexual experience (Guivaudan, Van de Vijver, & Poortinga, 2005).

A telephone survey with Mexican adolescent females, aged 14-19 years, showed that intentions to engage in sex are predicted by their attitudes and the approval of others with personal attitudes being more significant. Adolescents who have high intentions to use birth control and ask partners to use a condom: feel positive about sex, do not feel they will get a bad reputation, are less sure parents will become angry or discuss their actions, feel friends and their partner would support them having sex, are less afraid of becoming pregnant, feel closer to partners if they have sex, are more motivated to do what partners want, and are less capable of insisting that partners use condoms than non-intenders, and are more educated (Flores, 1992).

## ATTRIBUTES

### Adolescents' Self-efficacy for Sexual Behaviors

The behavior, characteristics, and environment of a person are represented as constantly interacting (Bandura, 1986, 1997). Cognitive, social, and behavioral skills must be organized for an action to be taken and control the events that may occur in people's lives. Perceived self-efficacy is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has, but with judgments of what one can do with whatever skills one possesses" (Bandura, 1986, p. 391). In this theory the behavior is acquired and regulated by a cognitive process.

Diverse studies with Mexican adolescents have used the term self-efficacy in relation to intentions and sexual behaviors. Researchers suggested that female adolescents have significantly higher levels of self-efficacy for those activities than do males (Lopez, 1998; Martinez-Donate, Blumberg, et al., 2004). After controlling for age and sexual experience, males still reported less self-efficacy in refusing to have sex without a condom than did females (Marinez , 2004). Adolescents who have never had sexual activity had higher self-efficacy regarding HIV/AIDS prevention than those who were sexually active (Martinez, 2004; McCauley, Pick, Givaudan, & Greene, 2004). Moreover, those adolescents who have had sexual experience are more likely to use a condom (Pineda, Ramos,

Frias, & Cantu, 2000; Stewart et al., 2001). Self-efficacy also correlated with the number of sexual partners; adolescents with a higher level of self-efficacy have fewer sexual partners (Lopez & Moral de la Rubia, 2001).

Students from an urban area in Mexico had low levels of self-efficacy in sexual behaviors regarding HIV/AIDS prevention. Researchers asked about the perceived capacity for abstinence, talking with partners about sexual history, and the use of condoms. In addition, adolescents with higher levels of self-efficacy regarding HIV/AIDS prevention were more likely to delay sexual activity, use condoms, and practice abstinence (Lopez & Moral de la Rubia, 2001). Additionally, those with a high level of self-efficacy regarding protective behaviors (i.e. they refused to have sex without condoms, avoided mixing sex with alcohol and drug use, and asked their partners about their sexual history and drug use), reported always using condoms (Marinez , 2004).

**Parents' Self-efficacy for Sex Communication**

There is limited literature about self-efficacy regarding sex communication with parents. The evidence, however, shows that parents might not talk with their child because they believe that they do not know enough about the subject to do so (Benavides, 2003). As Bandura (1977) mentioned, motivation is related to the behavior's persistence, which is strongly related to a cognitive process in the person. Available literature supports the view that the parental outcome expectation may predict the possibility of sex communication. Parents

who perceive that such communication will have positive outcomes will talk with their child more often (DiIorio, Dudley, Leer, & Soet, 2000). Parents who perceive that such communication will prevent HIV, STDs, and pregnancy are more likely to talk with their child. Additionally, parents who perceive that they have enough skills whit which to communicate constructively are more likely to transmit clear messages to their children (Whitaker, Miller, May, & Levin, 1999). It seems that when adolescents perceive a positive interaction with their parents, ongoing conversations occur more often (Perrino, Gonzalez-Soldevilla, Pantin, & Scazapocznik, 2000).

**Adolescents' Beliefs toward Sex**

Adolescents with more positive beliefs about sexuality are more likely to have sex (Huerta-Franco, 1999). Adolescents' beliefs also included the views that abstinence is important to prevent HIV/AIDS, that the use of condoms is important, that many adolescents are having sex without condoms, that many adolescents do not know how to use a condom, and that condom use is the best method to prevent HIV/AIDS (Martinez, 2004; Villarruel et al., 2003). Lopez and Moral de la Rosa (2001) found that 61% of sexually active adolescents do not use condoms because they see condoms as being uncomfortable, less pleasurable, and expensive (Martinez-Donate, Melbourne, et al., 2004). When controlling for age and sexual experience, compared with females, males are more likely to agree somewhat or completely with the view that condoms make sex less exciting,

romantic, pleasurable, and make them appear too experienced. In general, males held more negative beliefs about condoms than did females (Martinez-Donate, Melbourne, et al., 2004). These beliefs are associated with intentions regarding abstinence and condom use (Martinez, 2004; Villarruel et al., 2003).

Moreover, an adolescents' belief that he/she is very knowledgeable about HIV/AIDS predicts the probability of condom use (Villaseñor-Sierra, et al., 2003). Another study with Mexican-Americans in high school showed that adolescents' perceptions of congruency with parental values are a good predictor of adolescents' delays in sexual intercourse (Liebowitz, et al, 1999). Another interesting perception of adolescents is that they do not consider themselves as being vulnerable to HIV infections and that using a condom is a distrustful practice for sexually experienced adolescents (Stewart et al., 2001). Another study by Pineda et al. (2000) showed that more than half of adolescents did not engage in sexual activity because of their goals or beliefs about completing school.

Other researchers have studied beliefs form different perspectives. Beliefs about sexuality and/or people living with HIV/AIDS are an important factor in Mexican adolescents' intentions and sexual health behaviors. Beliefs about sex are related to myths and stereotypes (Huerta-Franco, 1999). A study involving focus groups showed that adolescents do not believe that AIDS is a homosexual disease. They believe that AIDS is a fatal disease that could be prevented and that using condoms is very important. Adolescents' beliefs toward people living with

HIV were found to be related to being unhealthy, and participants did not think that HIV-positive adolescents should continue in school (Stewart et al., 2001).

Furthermore, students who perceive difficulties in acquiring condoms were less likely to have had unprotected sex during the last three months (Villarruel et al., 2003; Lopez & Moral de la Rosa, 2001). The use of condoms is also related to cultural values and beliefs. For example, Latinos would not use condoms or contraception because of religion (92% are Catholics), and they would not use condoms because of beliefs of machismo. Among Hispanics, the influence of parents, older family members, and other family members is thought to be particularly strong. Parental opinion of sexual behavior, including condom use, was more highly related than the opinion of peers (Jemmott, Jemmott, & Villarruel, 2002). Condom use in Hispanic adolescents is more likely if they believe that a significant person would approve of them doing so and if they believe that they have the ability to use condoms (Villarruel, et al., 2003). Approval or disapproval of a behavior has big implications for the individual regarding performing an action. Adolescents' beliefs about the approval of others are a deciding factor in their sexual intentions and in having sex (Villarruel et al., 2003). In the case of adolescents, if significant others, such as a partner, parents, or peers disapprove of condom use; an adolescent may be less likely to use condoms than if others approved (Bogart, Cecil, & Pinkerton, 2000).

**Parents' Beliefs toward Communication**

Hutchinson and Coney (1998) presented strong evidence about the relationship between beliefs regarding the behavior of a young women, parental communication about sex, and condom use. In addition, the degree of an adolescents' concern about the importance of completing school is a predictor of the intentions of engaging in sexual activity and of having sex before marriage (Liebowitz, Castellano, & Cuellar, 1999).

Beliefs can be an interesting predictor for parent–child communication about sex and for sexual health behaviors. Negative beliefs about sex among parents are that parents are conservative and do not want their adolescent children to learn about sex, and that parents are not the best people to teach adolescents about sex. In the parents' case there are different beliefs relating to the right amount and right time regarding discussions about sex with their child. Parents not only transmit information through communication, they also transmit values. There is evidence that adolescents' perceptions of agreement between their values and their parents' values is a strong predictor of their intentions to engage in sex activity, of their intentions of having sex before marriage, and of having sex in general (Liebowitz, Castellano, & Cuellar, 1999). Nevertheless, beliefs about pre-marital sex have become more permissive among Hispanics (Kirby, Lepore, & Ryan, 2005).

Evidence has shown that greater communication may have a positive impact if parents' beliefs about sexual intercourse are more liberal and if they

accept their adolescent children's sexual activity (Kirby, 1999). Parents' roles as sex educators have been associated with a greater quantity and quality of communication about sex. Rosental and Feldman (2000), studied parents' evaluations as sex educators. They found that there was a significant relationship between mothers' positive views as sex educators and the frequency of parent–adolescent sex communication about safe sex, masturbation, and sexual experiences. In the case of fathers, the more positive their views are as sex educators, the more frequent was their parent–adolescent communication about safe sex. Carroll et al. (1999), in a secondary analysis of data using national data, reported that parents who perceived high-risk behaviors regarding AIDS carried out by their children had greater communication about sex with their children. Romo, et al. (2001), studied Hispanic mothers and their children through a videotape while they conducted conversations about dating and sexuality. They reported that mothers who talked more about sexuality were those who perceived that their children were exposed to HIV and drugs.

The capacity to represent positive outcomes may produce the tendency to repeat those behaviors that prevent HIV contraction. Outcome expectations in adolescents include: the positive future outcomes such as prevention of HIV, STDs, and pregnancy; the benefits of abstinence, the use of condoms, and negotiations with a partner; and the expectation of maintaining safe sex with a partner. In addition to these outcome expectations, most parental beliefs about communication may increase closeness between parents and their children so that

they are more likely to communicate about sex (Hutchinson & Conney, 1998). DiIorio, et al., (2000) analyzed the pattern and content of mother–child communication about sex. They reported that dyadic discussions about sex were related to positive beliefs about the outcome of such sex communication. This indicated that those mothers who perceived more positive sex communication results discussed more sexual topics with their children. Hutchinson and Cooney (1998) studied the influence of sexual communication on older adolescents' beliefs. They reported that discussions about various sexual topics had a positive relationship with the belief that they would be closer to their children after such sexual discussions.

**Parents' and Adolescents' Familialism**

The family or "la familia" is a close group of relatives and kin that is considered as the main unit of the Mexican society. Most Hispanic families are structured in terms of traditional gender roles where the father is the primary authority figure and provider while the mother is responsible for child rearing and housework (Hispanic Ministry in the Southeast, 2003). Familialism is therefore a significant cultural value that can be found in a nuclear or extended family; it involves feelings of unity, reciprocity and trust. The family is considered the supportive system where members who are in different life situations (problems, sickness, and developmental processes) help each other for their overall wellbeing (Marín & VanOss, 1991). Familialism is a cultural characteristic that affects

parent–child communication about sex. By paralleling parent–child communication with familialism, parents will be more likely to consider the importance of communication and help their adolescent children with decisions about their sexual behavior. From the adolescents' perspective, they will be able to understand their parents' beliefs about sexual issues, which will further facilitate parent–child communication about sex (Benavides, 2003).

Mexican families have more close and open relationships with their children than do American families; Hispanic parents usually express their physical and verbal affection. The adolescent-rearing process among Hispanic adolescents emphasizes the receiving of support from the family, rather than the receiving of such support from outside of the home. A study with Latina adolescents found that those who perceive warm care from their father are more attached to the family and carry out more safe behaviors (Tacón & Caldera, 2001). Supportive and affectionate relationships between Hispanic parents and adolescents have been found to be a protective factor against sexually risky behaviors in adolescents. Another study of adolescents demonstrated that there was a significant association between the affective relationships with parents and adolescents' desires to share their family's beliefs and values (Okagaki & Moore, 2000).

## Parents' and Adolescents' Religiosity

The topic of religion is very important in Mexican society, although studies of adolescents that include religion as a variable are very limited. Religion is a system of social coherence based on a common group of beliefs or attitudes concerning an object, person, unseen being, or system of thought considered to be supernatural, sacred, divine, or the highest truth. Every religion includes moral codes, practices, values, institutions, traditions, and rituals associated with its belief system (McCutcheon, 2003). Sociologists and anthropologists see religion as an abstract set of ideas, values, or experiences developed as part of a cultural matrix. In summary, it may be said that almost every known culture involves the religious in the above sense of a depth dimension in cultural experiences at all levels (Winston King, 2005, p. 7693).

Going beyond religion, religiosity is a comprehensive sociological term used to refer to the various aspects of religious activity, dedication, and belief. A variety of studies have explored the different components of human religiosity (Hill & Hood, 1999). What most have found is that there are multiple dimensions. Cornwall, Albrecht, Cunningham, and Pitcher (1986) identify six dimensions of religiosity based on the understanding that there are at least three components to religious behavior: cognition, affection, and behavior. In ranking religious denominations, the Roman Catholic Church is the largest single denomination in Mexico. In addition, most adolescents in Mexico define themselves as Catholics (82% to 90%); however, most recognize that they do not practice their religion

(INEGI, 2005). Therefore, most ideas and values are centered on the Catholic system of beliefs. Virginity is seen as a necessary condition for women to marry, and this belief is supported by the family as well as by the Church (Rosengard et. al., 2001). In terms of contraception, the use of condoms is not approved by the Catholic system of beliefs.

In a study undertaken by the Mexican Institute of Youths (Luengo Gonzalez, 2004) on values and religion in youths, the following was found. Most of the adolescents, who defined themselves as Catholics, live in urban areas, do not have professional studies, and are predominantly females. Less than 10% of these adolescents defined themselves as Protestant or Christians. A high percentage referred to not practicing religion, although most of them did respect their traditions, the Catholic Church, and churches. These adolescents did not consider religion as a central component in their lives. Nevertheless, 78% defined themselves as being religious, 70% considered that religion was important in their life, and 71% said that God gave meaning to their life. In addition, more than 40% of the adolescents believed that the only true religion is Catholicism. Similar to the results for religious beliefs, the youths showed different religious practices. Religious practices were to pray when having problems (72%), to assist in religious meetings (60%), to make the sign of the cross when in front of a church or when leaving home (78%), to read the bible (48%), and to pray frequently (53%). These religious practices are more frequent in Mexico between the ages of

15 and 17 years and less frequent between those of 23 and 30 years. Nevertheless, they become important again from the age of 40.

Other studies report that religiosity was associated with delaying the initiation of sexual intercourse and with reporting fewer sexual partners (Kirby, 1999). In a review of longitudinal studies published between 1980 and 2001 (*N* = 10) there was evidence that the religiosity of adolescents is causally related to their sexual behaviors. Findings suggest that religious affiliation, church attendance, self-reports of the importance of religion, or a composite of these, delay the coital debut of adolescent females (Mott, Fondell, Hu, Kowaleski-Jones, & Menaghan, 1996; Rostosky, Wilcox, Wright, & Randall, 2004). Nevertheless, Miller et al.'s (1997) analysis of three waves of the National Survey of Children failed to find any correlation between religious participation and delayed coital debut in adolescents. Along with parents, religion is a primary socialization agent influencing adolescent beliefs and attitudes (Wallace & Williams, 1997). Religiosity has been associated with more conservative attitudes and beliefs about sex before marriage (Ku, Sonenstein, & Pleck, 1993; Werner-Wilson, 1998). Likewise, other studies have demonstrated that adolescents with high scores of religiosity are more likely to disagree about premarital sex and the timing of their sexual debut. In addition, virginity seems to be more important to those who belong to a religious organization than to those who do not (Bearman & Bruckner, 2001).

Another study, undertaken by Rostosky, Regnerus, and Wright (2003) showed that there are significant gender differences among religiosity scores. Adolescent females with higher scores in religiosity anticipated more negative emotional outcomes as a result of engaging in sexual intercourse. A higher proportion of females (22%) compared with males (13%) reported that they preferred to remain virgins until marriage. For both males and females, significant positive associations between first sexual intercourse and lower scores in religiosity were found. Religiosity was also associated with more negative beliefs and attitudes about sexual intercourse, more negative pregnancy outcomes, and anticipating fewer negative health outcomes. Among male and female adolescents, religiosity reduced the likelihood of coital debuts, even when controlling for demographic characteristics such as age, race, and parental education, and for the availability of romantic partners. Religiosity, therefore, has an impact on the sexual attitudes, beliefs, and sexual behaviors of adolescents.

## SEXUAL COMMUNICATION

### Parent–adolescent Communication about Sex

Before taking into consideration the concept of communication about sex, it is crucial to have an understanding of communication. Looking at the etymology of the word "communication", the ancients labeled what we know as the process of human communication "communication" (in its Latin form). The

word communication contains two root words: com for the Latin “cum” translating as “with” or “together with” and unit the Latin for “union”, from which our English word directly comes (Olsen & Bullinger, 1999). Therefore, communication implies the union of signs and symbols that creates a message, and thus communication is the verbal process in which parents transmit information useful for their children’s development (Clarke-Stewart & Dunn, 2006)

Parent–child communication about sex has often been studied in terms of quantity and quality (Dutra, Miller, & Forehand, 1999). The quantity of communication aims to provide the child with the information that the adolescent needs and the appropriate amount that clarifies doubts. The appropriate amount of information is a matter of concern for parents, but there is no one who is considered a better source of information of information to provide their adolescents with than their own parents, and thus they are trusted to know the correct amount better that anyone else (Whitaker & Miller, 2000). The quality of communication about sex includes talking openly and freely, welcoming questions from the adolescent, and listening to the adolescents’ concerns and feelings about the topics (Steinberg, 2001). Therefore, when studying communication about sex, it is important to consider the quantity and quality of the information about sex imparted between parents and adolescents.

Communication with parents is a good source of information for Mexican adolescents. Adolescents reported having greater communication with their

mothers than with their fathers (Gayet et al., 2002). In addition, adolescents mentioned that they seek a parents' advice when they have concerns about sexually transmitted diseases, AIDS, or sex (Pineda et al., 2000). Most adolescents, however, believed that they should receive this information from parents without having to seek it (Villarruel et al., 2003). Furthermore, teenagers are less likely to initiate sexual activity after they have talked with parents about sex (Vernon & Dura, 2004.; Stewart et al.; Gayet et al., 2002). The use of contraceptives and condoms was found to be more frequent among those who had talked with parents about sex (Villarruel et al., 2003; Pick & Palos, 1995).

Communication about sex plays an important role in adolescents' sexual health. Adolescent girls who talked frequently with their mothers about sexual concerns have lower probabilities of having begun sexual activity and higher probabilities of using contraception for those who are sexually active (Pick & Palos, 1995). Other studies explored the factors associated with sexual experiences in adolescents. Reported data included a higher percentage of females, compared with males, who perceived parent–child communication as being more clear and direct. Communication about sex was found to have a significant influence on the use of contraceptives (Huerta-Franco, 1999). In addition, those adolescents who received information from their parents about sexuality were more likely to have higher levels of knowledge about HIV/AIDS (Tapia-Aguirre, et al., 2004). From a qualitative perspective, Stern, Fuentes, Lozano, and Reynoso (2003) reported that male adolescents received counseling

from their mothers about sexuality. Communication about sex represents an inclination in relation to gender. Females prefer to talk with their mothers, whereas males have a preference to talk with their fathers (Gayet, Rosas, Maguis, & Uribe, 2002). Findings from were that most adolescents receive information about sex from their teachers, and when they have sexual issues, they look for counseling from their parents (Pineda, Ramos, Frias, & Cantu, 2000).

In addition, adolescents who live with parents had a higher probability of delayed sexual activity (Lopez & Moral de la Rosa, 2001). However, adolescents who perceived more problems at home were more likely to be sexually active. Conversely, those adolescents who feel closer to their parents are less likely to use contraception (Huerta-Franco, 1999). Adolescents' perceptions of the frequency of sexual communication and thoughts about what is right and wrong are predictors of sexual health behaviors among Mexican-American students (Liebowitz, Castellano, & Cuellar, 1999).

**Parent-adolescent Comfort with Sex Communication**

Parents' personal comfort with sex communication determines communication about sex between the parents and adolescents. Only when parents feel comfortable and demonstrate skills in communication, can the communication about sex have positive outcomes regarding the adolescents (Perrino et al., 2000). Parents' beliefs relating to values regarding the fact that adolescents must respect and obey parents may affect parent–child

communication about sex and the adolescents' and parents' comfort with sex communication (Pantin, et al., 2004). Miller and Whitaker (2001) studied mother–adolescent sexual communication and related factors, for which they reported that it is more likely that discussions about condom use occur when mothers feel more comfortable talking about sex.

Evidence supports the view that parental communication about sex offers diverse benefits for adolescents such as responsible decision-making about not having sex at an early age and the use of condoms and contraception. Finding of a study with Puerto Rican parents indicated that open and comfortable communication about sex is linked to the use of condoms in sexually active adolescents (Miller, Kotchick, Forehand, & Ham, 1998; Villarruel, 1998; Whitaker, Miller, May, & Levin, 1999). Additionally, Whitaker, et al., (1999) reported that mothers' sexual discussions are more frequent when parents have a more open attitude, skills, and comfort regarding sexual discussions. Hispanic parents often have negative feelings about having sexual discussions with their children. However, adolescents' reports of parent–child communication about sex show that more than half of parents discuss topics with their children about reproduction and sexually transmitted diseases (Miller et al., 1998).

## GENDER DIFFERENCES AND SEXUAL BEHAVIORS IN ADOLESCENTS

In Mexico, the mean age at which sexual intercourse takes place before 15 years of age is higher for boys than it is for girls (Stewart et al., 2001). For

example, the average age of sexual debut is 15.4; however, boys debut earlier than girls (Santos-Preciado et al., 2003). Researchers found that, when controlling for age, males were more likely to be sexually experienced and have experience of vaginal sex than were females. In the case of females, they were more likely to report having had oral sex with multiple partners than were males (Martinez-Donate, Melbourne, et al., 2004). In addition, when controlling for the probability of having had sex over the three months prior to questioning, females were more likely to have had unprotected sex than were males (Marinez-Donate, Blumberg, et al., 2004).

The use of condoms during first intercourse is significantly different according to gender. A higher proportion of boys used condoms during their first sexual intercourse in comparison with girls (Gayet et al., 2003; Tapia-Aguirre, et al., 2004; Villaseñor-Sierra, et al., 2003). One in two males versus one in five females used a condom during their first sexual intercourse. However, girls who had not used a condom during their first intercourse were later found to have a higher percentage of condom use compared with males (Gayet et al., 2003; Martinez, 2003). In addition, adolescents who have had sexual experience are more likely to use a condom (Pineda, Ramos, Frias, & Cantu, 2000; Stewart et al., 2001).

## Cultural Characteristics of Mexicans and Hispanics

Society-based cultural patterns or cultural ideologies shape the individual's development and beliefs. Therefore, knowing such cultural characteristics is important for understanding how they influence the parent and the adolescent. Marin and VanOss (1991) considered allocentrism, familialism, personal space, time orientation, gender roles, and fatalism as essential components when studying the Hispanic population. However, not all these characteristics will be included in this study; a review of those components will help us to gain a better understanding of the culture of Mexicans and Hispanics. In the proposed model, only familialism is included; therefore, for this component, a more detailed review of the literature is presented separately. *Allocentrism* or collectivism refers to the sense of membership of a particular social group (Marin & VanOss, 1991). Hispanics tend to share differing opinions on societal issues and to help other members within their community. Furthermore, Hispanics tend to enjoy group activities, which help to foster a sense of solidarity and community.

Another cultural characteristic is *time orientation*. For Mexicans and Hispanics, orientation towards time is primarily focused on the present and less likely to focus on or plan for the future (Marin & VanOss, 1991). The present is deemed more valuable than the future, and prevention is largely considered after the fact. For example, a mother begins to talk with her daughter only after realizing that she has had sex with her boyfriend (Benavides, Bonazzo, & Torres,

2006). Another example would be when an adolescent visits a doctor after having sex with someone suspected to have an STD (Lipson, Dibble, & Minarik, 1996; Pajowsky & Enrriquez, 1996). Time orientation is an important cultural value that affects adolescents' beliefs about personal goals, dreams, and obstacles (such as AIDS, HIV, death, and/or pregnancy) in achieving these goals (e.g. completing school, getting married, and/or owning a home) (Marin, 2003).

The next cultural characteristic is power distance (respect). Power distance is the interpersonal authority or influence that exists between two persons. Power is related to the society and its norms. People with higher levels of education, money, and information generally have more power within that society (Marin & VanOss, 1991). Parents have authority and generally demand respect (respeto), and because of this focus on respect, some adolescents may be afraid to talk to their parents. Because of the cultural characteristic of personal distance, Hispanics generally prefer shorter distances in interactions than do other groups such as white North Americans.

A common belief among the Hispanic culture is fatalism. This belief presumes that the individual is guided by fate and has no personal control over the outcomes of his/her future. The degree of fatalism a person adopts may be affected by the options he/she believes are available to him/her. Fewer options can lead to a greater sense of fatalism (Hondagneu-Sotelo, 1993). One example of fatalism in adolescents is, "I am young and gay, so I am eventually going to get AIDS. I might as well enjoy myself while I am alive." This can be countered, for

instance, if the parent tells the adolescent, “If you practice safe sex by using a condom or practice abstinence, you can enjoy your life for a longer time” (Benavides et al., 2006).

Most of the literature available explores sexual behaviors in relation to gender. Going beyond biological aspects, *gender role* refers to masculine and feminine behavioral norms differentiated by gender (Tolman, Striepe, & Harmon, 2003). Machismo is a Hispanic male characteristic that emphasizes the strength and dominance of the male. For example, machismo can disempower both men and women. In the Hispanic culture, sex is seen as an opportunity for men to prove their masculinity. This perspective influences the behavior of both men and women because it may promote infrequent condom use and shift the focus to seeking multiple sexual partners, placing them at risk of STDs (VanOss, 2003; Marin & VanOss, 1991).

Women are socialized to take a submissive role and possess less power in a relationship. Hispanic women are generally discouraged from discussing their sexual feelings, which impedes the negotiation of safe sex and at times may encourage sexual abuse (VanOss, 2003; Werner-Wilson, 1998). On the other hand, highlighting the positive aspects of male chauvinism and submissive women in a sexual context is vital to prevent such negative conditions. In a qualitative study on masculinity and sexual health, Mexican male adolescents described that being seen as “macho” implies being responsible, respecting females, and providing for his family. Male adolescents believe that using

condoms depends on their sexual partner; for example, it is more likely that they will use a condom if they have sex with “easy” girls than if they have sex with their girlfriend (Stern et al., 2003). Another qualitative study discussed the aspects relating to gender roles and condom use: females are disadvantaged with an unfavorable reputation if they carry condoms and suggest their use. On the other hand, boys believe that contraception is a feminine matter, because some stated that, “A man can go as far as a woman wants”, and therefore they take the view that every unwanted consequence is a women’s responsibility (Castro-Vazquez, 2000). Gayet et al. (2003), in a quantitative study, showed that, in general, females and males believe that boys should be the ones to propose condom use.

The association between gender roles and gender is unclear because both males and females perceive roles in relation to gender. We can, however, affirm that beliefs influence intentions regarding sexual health behaviors. Many adolescent sexual behaviors are influenced by cultural norms (Stewart et al., 2001). Adolescent females believe that they need to remain sexually abstinent to avoid possible family problems and rejection from males through not being a virgin (Vernon & Dura, 2004). Virginity is believed to be a necessary condition for women to marry, and this belief is supported by Catholicism (92% of Mexicans are Catholics). In addition, religious beliefs do not support condom use (Ortiz, Cohen, Izurieta, & Bellman, 1997). In Mexican society, men believe that girls are responsible for persuading men to use a condom, which reinforces the idea that woman are primarily responsible for having safe sex (Castro-Vazquez,

2000). This report is contradictory with other studies where men believe that the proposition for use of condoms should be males', older partners', and sexually experienced adolescents' responsibility (Gayet et al., 2003; Martinez-Donate, Melbourne, et al, 2004).

Therefore, boys are more focused on proving themselves to be "real" men, or "macho" men. On the other hand, girls consider that both sexual participants must make the decision regarding condom use, and they also believe that abstinence is associated with negotiation skills and peer communication (Villarruel, et al., 2003). In addition, adolescents who perceived gender roles in the family were more likely to be sexually active (Huerta-Franco, 1999). Values attached to virginity trouble adolescents when thinking about sexual activity (McCauley, et al., 2004).

## SEXUAL HEALTH AND HIV/AIDS PREVENTION IN MEXICO

### Adolescence and sexual health in Mexico

Adolescence is a critical stage of life characterized by emotional, intellectual, sexual, and social transitions affecting behavior. Environmental and societal factors in an adolescents' life during this process to adulthood shape their personality. Adolescents are vulnerable because this stage is characterized by an effort to become independent, and, therefore, decision-making occurs in an atmosphere of uncertainty and unreality. The sense of invulnerability and the

necessity of freedom for exploring their capabilities and gaining new experiences provide adolescents with a permissive environment created by society. This environment engages them in risky behaviors that may create risky circumstances regarding sexual health (Martinez, 2003).

The Mexican health system defines sexual health as a general physical, mental, and social wellbeing in the function of the reproductive system (Pérez-Palacios & Gálvez-Garza, 2003). Adolescents should have the benefit of an appropriate sexual life without health problems in order to progress to enjoying the liberty of taking conscious decisions about sexual intercourse, its frequency, and choosing a partner (Hidalgo-San Martin, Caballero-Hoyos, Celis-de la Rosa, & Rasmussen-Cruz, 2003; Jejeebhoy, Shah, & Yount, 1999; Pineda, Ramos, Frias, & Cantu, 2000). Sexual health in general is the capacity of individuals and partners to experience the pleasure of sexual life and reproductive health without risks. Adolescents should be free to choose in a responsible and informative way when to reproduce and the number of children to have (Perez-Palacios & Galvez-Garza, 2003).

In addition, adequate sexual health should enable adolescents to make responsible and well-informed decisions regarding first intercourse, to negotiate whether or not to engage in sexual activity, how to react to social sexual pressure, contraceptive use, the timing of having babies, and on STD and HIV/AIDS protection (Guzman, Conteras, Hakkert, & Falconier, 2000). Santos-Preciado et al. (2003) defined sexual health as the integration of somatic, emotional,

intellectual, and social elements of sexual humanity with positive outcomes that contribute to personality, communication, and love. They considered components such as sexual activity, pregnancy and abortion prevention, contraceptive use, family planning services, and women's sexual health. Sexual health services in Mexico should include confidential counseling to address adolescents' concerns. Counseling services available regarding sexual health address sexual behavior, abuse, masturbation and pornography, the use of contraceptives, abortion and pregnancy, and the prevention of STDs (Rasmussen, 2001).

There are some factors that do not contribute to sexual health. Martinez-Donate, Blumberg, et al. (2004) and Martinez-Donate (2004) found that factors interfering with sexual health among adolescents in Mexico include unprotected sexual practices, the lifetime rates of pregnancy and sexually transmitted infections, and needle-sharing practices. They emphasized that sexual health suggests the need for HIV/AIDS prevention among adolescents. Stern, Fuentes-Zurita, Lozano-Trevino, and Reynoso (2003) stated that the social construction and expression of masculinity among male adolescents and adults is related to the risk of lack of good sexual health. In other words, a component to consider in sexual health is how gender matters in Mexican society.

The Center for Reproductive Health Research and Policy (2004) mentioned that promoting reproductive health involves working with relatives on issues of sexuality, contraception, the prevention of STDs and AIDS, pregnancy and abortion, and health policies. Another program by a non-governmental

institution (Mexfam) stated that sexual health services should serve young people by focusing on an adolescents' sexual health and developing three main activities: 1) providing information and education to in-school youths and trainee teachers; 2) organizing activities for out-of-school youths; and 3) offering adolescent-friendly sexual health services (Mexfam, 2004). Some programs focus on briefly intervening to promote good sexual health behavior in adolescents and include the importance of communicating the sense of vulnerability in feeling exposed (Marin, 2002). Some programs help adolescents in biological aspects, since puberty is an important issue for adolescents; in order to achieve good sexual health, adolescents should be in control of physiological and social changes that they may experience, such as excitation, cognitive and affective processes, beliefs, expectancies, and fantasies. Therefore, in order to achieve good sexual health, adolescents should be in control of their physical excitation and social interactions (Hidalgo-San Marin et al., 2003). In addition, sexual interest by adolescents for the opposite sex could lead to taking certain sexually risky behaviors that could affect their health throughout their lifetimes. Every healthy pattern of conduct adopted in adolescent years should be continued into adulthood so that, if they have good sexual health in adolescence, they will continue to have wellbeing with age (Calero & Santana, 2001).

A prohibitive society where sexuality is seen as a taboo can impede sexual health. Another obstacle is the parental perspective related to sex: parents usually think that, if they talk with their children about sexual issues, adolescents could be

encouraged to become sexually active (CONASIDA, 2001). Therefore, in order to have good sexual health in any society, an open perspective about sexual issues is very important. Furthermore, understanding cultural values related to sexuality before marriage in a society with changes in fecundity, marital status, and gender roles is valuable in achieving good sexual health. These situations provide more options to adolescents between sexual maturation and family roles, where support for youths prepares them for unplanned pregnancies, STDs, and HIV/AIDS problems (Forman & Ghosh, 2000). If adolescents enjoy good sexual health they could be more successful as persons in their adulthood (Stern et al., 2003). Some programs mention that the fundamental outcomes to maintaining good sexual health in adolescents are an amplification in the age of first pregnancy, an increase in the gap between born and born, the adoption of a contraceptive method accord to needs, and the attention to pregnancy and delivery by suitable health providers (Instituto Mexicano del Seguro Social, 2004; Secretaria de Salud, 2002).

Sexuality and sex are often used when referring to sexual health. Sex refers to the sum of biological characteristics that define a spectrum of humans as females and males (Stern et al., 2003). The usual meaning of the term "sex" in colloquial language includes its usage as an activity (e.g., having sex) and as a set of behaviors (e.g., sex roles). However, for conceptual precision, it was agreed that for technical discussions and documents the usage of the term "sex" be restricted to biological dimensions (The Center for Reproductive Health Research

and Policy, 2004). Sexuality refers to a core dimension of being human, which includes sex, gender, sexual and gender identity, sexual orientation, eroticism, emotional attachment/love, and reproduction. It is experienced or expressed in thoughts, fantasies, desires, beliefs, attitudes, values, activities, practices, roles, and relationships (The Center for Reproductive Health Research and Policy, 2004). Sexuality is a result of the interplay of biological, psychological, socio-economic, cultural, ethical, and religious/spiritual factors. While sexuality can include all of these aspects, not all of these dimensions need to be experienced or expressed. However, in sum, our sexuality is experienced and expressed in all that we are, feel, think, and do (Stern et al., 2003).

Sexual health education and sexual health promotion are closely related to sexual health. However, sexual health education is one of the components of sexual health promotion, and each of these concepts will be described separately. The principal goal of sexual health promotion is to increase personal and societal wellbeing with attainment and maintenance of sexual health (Secretaria de Salud, 2002). There are five principal components to improving sexual health: 1) to eliminate barriers to sexual health; 2) to provide comprehensive sexual education to adolescents; 3) to provide education, training, and support to professionals working in sexual health-related fields; 4) to develop and provide access to comprehensive sexual health services for adolescents; and 5) to promote and sponsor research and evaluation in sexuality and sexual health and the dissemination of the knowledge derived from it (PAHO & WHO, 2000; Pick,

Givaudan, & Gohen, 1995).

Sexual education should begin early in life, should be age and developmentally appropriate, and should promote a positive attitude toward sexuality (Ehrenfed-Lenkiweicks, 1994; PAHO & WHO, 2000). Within sexual education there are two main categories identified for sexual health education providers, namely family and others (Contreras, Guzman, & Hakkert, 2001. 'Others' may include school, churches, and social institutions. To provide sexual health education promotion, equality between men and women should be addressed. Sexual health education should cover aspects such as physical changes in adolescents, family communication, sexuality and adolescence, STDs and HIV prevention, early pregnancy and contraception, gender and adolescence, and gender violence (Mexfam, 2004). Sexual health education could also be obtained from adolescents' families. Family orientation about sexual matters is important for adolescents because it provides them with information and allows them to clarify their doubts. Pick (1995) reported that children whose parents talk with them about sexual matters, or provide sexual education or contraceptive information at home are more likely than others to postpone sexual activity. In addition, when these adolescents become sexually active, they have fewer sexual partners and are more likely to use contraceptives, condoms, and other methods (Huerta-Franco, 1999).

**Adolescent HIV/AIDS prevention in Mexico**

The health system in Mexico categorizes HIV/AIDS prevention according to the mode of transmission: mother–child, intravenous, and sexual (CONASIDA, 2001). Mother–child transmission is the most common type of infection in children aged 15 years or under. In Mexico, AIDS treatment is free for all pregnant woman and children aged eight years or under (Pedrosa, Ramos, Teran, & Hernandez, 2001). Intravenous transmission is very common in donors and drug users. Since 1986 the commercialization of blood has been prohibited, and all blood derivatives are analyzed carefully before transfusions. In the case of drug users, many programs treating addictions focus on drug prevention, although this type of prevention does not include HIV/AIDS prevention (Magis, 2001). Nevertheless, these two other types of transmission are very important when talking about adolescent HIV/AIDS prevention based on sexual behavior, since most cases (39%) are caused by sexual transmission.

HIV/AIDS prevention in Mexico includes the following components, the first being actions to prevent HIV/AIDS infection (Perez-Palacios & Galvez-Garza, 2003; Stern et al., 2003). These actions include interventions, sexual education, and programs (Mexfam, 2004). Actions that work toward HIV/AIDS prevention are: 1) to increase knowledge about sexuality, anatomy, physiology, and social aspects (Caballero-Hoyos & Villaseñor-Sierra, 2003; McCauley, Pick, Givaudan, & Greene, 2004); 2) to transmit the importance of values and parent–child communication about sex (Pick et al., 1995; Villarruel, Gallegos, Loveland,

& Duran, 2003); 3) to clarify misconceptions about HIV/AIDS and modes of transmission types and to address myths (McCouley et al., 2004); 4) to transmit a positive perception of risks, safe sex (no fluid exchange), and abstinence (Egremy & Saavedra, 2003; Villaseñor-Sierra et al., 2003); 5) to encourage the correct and consistent use of condoms (Marinez-Donate et al., 2004; Pick et al., 1996); 6) to provide training about decision making, assertiveness, and negotiation techniques (Fuensanta & Moral de la Rubia, 2001; Gayet, Rosas, Magis, & Uribe, 2003); 7) to support adolescent development of sexual orientation and gender roles (Caballero-Hoyos & Villaseñor-Sierra, 2003); 8) to increase self-esteem, self-efficacy, and empowerment (Martinez-Donate, Melbourne, et al., 2004; Tapia-Aguirre et al., 2004); 9) to encourage adolescents to plan for their future (Pick et al., 1995; Villarruel et al., 2003); and 10) to teach adolescents how to deal with peer pressure (Perez- Palacios & Galvez-Garza, 2003; Rasmussen, Hidalgo-San Martin, & Alfaro-Alfaro, 2003).

The second component is the promotion of good sexual health behaviors, safe sex, responsibility, HIV testing, monogamy, abstinence, and condom use (CONASIDA, 2001; Project Hope, 2005). The promotion of good sexual health behaviors is a basic strategy for HIV/AIDS prevention. It is well-known that information is not enough to change behaviors, and it is, therefore, necessary to implement new actions. Interventions that include face-to-face communication and group discussions have been shown to be more effective than information alone (Pick, 1999; Pick et al., 1995). HIV infection may be prevented via

abstinence, monogamy, the absence of fluid exchange during sex, and using condoms (Instituto Mexicano del Seguro Social, 2004; Gente Joven, 2004; Pedrosa, 2001).

The third component is related to the type of strategies. All actions and strategies should be gender neutral and sensitive to one's sexual orientation (Castro-Vasquez, 2000; Herrera, Caballero, Campero, & Kendall, 2004). One's gender and sexual orientation are barriers for HIV/AIDS prevention because they influence adolescents' beliefs and attitudes (Fuensanta & Moral de la Rubia, 2001; Mercado, Egremy, & Saavedra, 2004). In addition, strategies for men who have sex with other men may include psycho-affective aspects because such men are marginalized by society. Adolescents with homosexual or bisexual preferences should be addressed as individuals who are searching for a comfortable sexual identity (Bertozzi, Conde, & Leyva, 2005; Parra, Doran, Ivy, Ramirez, & Hernandez, 2001). HIV prevention in adolescents should be emphatic and should not stigmatize or judge an individual's sexual orientation or gender (Ponce, 2001; Rasmussen, 2001).

The fourth component is time. The timing of HIV/AIDS prevention is imperative, as it should take place before unsafe behaviors occur (Pedrosa et al., 2001). Prevention is, therefore, needed before adolescents engage in and maintain sexually unsafe behaviors, and hence, action should be opportunistic and anticipated (CONASIDA, 2001; Gente Joven, 2004). The last component found in the literature is that of participation (CONASIDA, 2001). Parents play a central

role in HIV/AIDS prevention because they are a source of values and information for adolescents. In Mexico, parents are highly respected, and, therefore, their opinions and communication are valued by adolescents (Villarruel et al., 2003). Another instance of participation is that with teachers, because they spend a considerable amount of time with adolescents. The evidence indicates that teachers are the second most important source of support for adolescents when they have a problem or a sexual concern (Secretaria de Salud, 2002; 2003). Nevertheless, neither teachers nor parents can fully participate without health providers' help. Institutional organizations should aid in the distribution of condoms and make condom access easy for adolescents (Instituto Mexicano del Seguro Social, 2004; UNAIDS, PAHO, UNICEF, & WHO, 2004).

There are related concepts to HIV/AIDS prevention, one of which is safe sex involving the correct and consistent use of condoms (male and female) (CONASIDA, 2001). Parra et al.'s (2001) definition of safe sex includes two additional components, namely abstinence and monogamy. In addition, Pedrosa (2001) stated that safe sex is the maintenance and correct use of condoms following 12 steps. Another related concept is sexual health promotion. The principal goal of sexual health promotion is to increase personal and collective wellbeing with the attainment and maintenance of good sexual health (Secretaria de Salud, 2002; PAHO & WHO, 2000).

Yet another related concept is sexual education. Sexual education should begin early in life, be appropriate according to the age and developmental stage,

and should promote positive attitudes toward sexuality (Ehrenfed-Lenkiweicks, 1994; PAHO & WHO, 2000). Within sexual education, there are two main categories identified for sexual health education providers: family and others (Guzman et al., 2000). 'Others' may include school, churches, and social institutions. To provide sexual health education, the promotion of equality between men and women should be addressed. Sexual health education should cover aspects such as physical changes, family communication, sexuality and adolescence, STDs and HIV prevention, early pregnancy and contraception, gender and adolescence, and gender violence (Mexfam, 2004).

Another common concept is sexual health or reproductive health, which includes the process of biological changes that precede puberty. During this process, adolescents should be in control of physiological and emotional changes such as excitation, cognitive and affective processes, beliefs, expectancies, and fantasies (Villaseñor-Sierra et al., 2003). Sexual health encompasses sexuality, attitudes, behaviors, and knowledge. To be sexually healthy in society, an open perspective about sexual issues is very important. Based on the above components, HIV/AIDS prevention in Mexico includes opportunistic, sensitive, and participative actions to promote, adopt, and/or maintain safe sexual health behaviors in adolescents in order to prevent the spread of HIV/AIDS.

**SUMMARY**

Adolescence is a critical stage of life characterized by emotional,

intellectual, sexual, and social transitions that affect behavior. In addition, environmental and societal factors shape an adolescents' personality as they progress into adulthood. However, many factors that affect the adolescents' sexual behaviors remain unknown. Studies report that prior to the behavior, the adolescents' intentions are good determinants of healthy sexual behaviors. Therefore, this chapter presents a literature review of parents' attributes (self-efficacy for sex communication, beliefs toward communication, famlialism, and religiosity), adolescents' attributes (self-efficacy for sexual behaviors, beliefs toward sex, famlialism, and religiosity), and parent-adolescent sexual communication (communication about sex and comfort with sex communication) in relation to adolescents' intentions for sexual behaviors.

Adolescents with higher levels of self-efficacy regarding HIV/AIDS prevention were more likely to delay sexual activity, to use condoms, to practice abstinence, and to practice monogamy. There is limited literature about self-efficacy regarding sexual communication with parents. The evidence, however, shows that parents might not talk with their child because they believe that they do not know enough about the subject to do so. Parents who perceive that such communication will prevent HIV, STDs, and pregnancy are more likely to talk with their child. Beliefs about sex are related to myths and stereotypes. Adolescents do not use condoms because they see condoms as being uncomfortable, less pleasurable, and expensive. The use of condoms is also related to cultural values and beliefs. In addition, if significant others, disapprove

of condom use, an adolescent may be less likely to use condoms than if others approved.

The family or “la familia” is a close group of relatives and kin that is considered as the main unit of the Mexican society. Familialism involves feelings of unity, reciprocity and trust. Familialism is a cultural characteristic that affects parent–child communication about sex. The adolescent-rearing process among Hispanic adolescents emphasizes the receiving of support from the family, rather than the receiving of such support from outside of the home. Adolescents who perceive warm care from their parents are more attached to the family and carry out more safe behaviors. Parents with higher levels of familialism are more likely to consider the importance of communication and to help their adolescent children with decisions about their sexual behavior. The topic of religion is very important in Mexican society, although studies of adolescents that include religion as a variable are very limited. Virginity is seen as a necessary condition for women to marry, and this belief is supported by the family as well as by the Church. Religiosity was associated with delaying the initiation of sexual intercourse and with reporting fewer sexual partners. Religiosity has been also associated with more conservative attitudes and beliefs about sex before marriage.

Communication about sex plays an important role in adolescents’ sexual health. Parent–child communication about sex has often been studied in terms of quantity and quality. Adolescents reported having greater communication with their mothers than with their fathers. Teenagers are less likely to initiate sexual

activity after they have talked with parents about sex. The use of contraceptives and condoms was found to be more frequent among those who had talked with parents about sex. Parents' personal comfort with sex communication determines communication about sex between the parents and adolescents. Parents' sexual discussions are more frequent when parents have a more open attitude, skills, and comfort regarding sexual discussions.

In summary, the literature review presented suggests that adolescents' attributes such as self-efficacy for sexual behaviors and beliefs toward sex are strongly related to adolescent intentions for sexual behaviors. Although adolescents' familialism and religiosity are related to adolescents' sexual behaviors, it is unknown whether their intention for contraception and condom use is influenced by these attributes. Despite the gap in the literature regarding the relationship between parents' attributes and adolescents' attributes, studies show that adolescents and parents share common values and beliefs about sex. Thus, adolescents' self-efficacy for sexual behaviors, beliefs toward sex, familialism, and religiosity may be related to parental self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity. Numerous studies have found correlations between adolescents' and parents' attributes and parent-adolescent sexual communication, and between sexual communication and intentions for healthy sexual behaviors. These findings support other researches that indicate parent-adolescent sexual communication serves as a mediator between parent and adolescent influences and intentions for sexual behaviors. In

addition, the literature indicates gender differences between adolescents' and parents' variables in this study.

# CHAPTER III

## Methods

The purpose of this chapter is to describe the methods that will be used in the study. The research design, population sample, procedures for data collection and settings, tools, human subjects' considerations, and statistical analysis procedures will be presented. Copies of the consent and assent forms provided to study participants along with a list of research tools are included in the Appendices.

### DESIGN

This was an exploratory study with secondary analysis of data from an existing experimental study with adolescents in an urban area in Mexico. The present study design was cross-sectional because only pre-test parent and adolescent data was used.

### SAMPLE

The target population for this study was the parents of adolescents between 14 and 17 years of age along with the adolescents themselves from four high schools. These high schools are part of the metropolitan area in Monterrey, Mexico. The schools were selected from this urban area because there is evidence that adolescents in urban areas are more likely to engage in sexually risky

behavior. The high schools are part of the Universidad Autonoma de Nuevo Leon (public school), and the criterion for selecting these schools was that they have monthly parent meetings in their schedules in order to facilitate parental contact for consent. Additionally, this geographical area included people from different backgrounds and with different socioeconomic statuses. Adolescents in Nuevo Leon make up 18% of the total population, 95% of the adolescents in the age group of 10–14 years go to school, and 51% in the age group of 15–19 years go to school.

The sample size was determined by the principal researcher in the original study, taking into account a meta-analysis (Kalichman, Carey, & Johnson, 1996) that revealed that the mean weighted effect size in 12 interventions studies was 0.25 standard deviations. The statistical power for the baseline sample size was 0.87 using an alpha of 0.05 for a two-tailed test. In the case of the present study, a sample of 756 adolescents and their parents was selected (effect size = .03, Power=.91, Critical $F_{(12,751)}$ =1.7651, Lambda=22.92). This was a non-probability sample because neither the high school nor the participants were randomly selected.

The criteria of inclusion were: adolescent was between 14 and 17 years of age, enrolled in the selected high school, at least one parent to participate in the study, willing to answer the survey's questions on health and sexual topics, and able to speak, write and understand Spanish. The initial dataset included 829 adolescents and 791 parents. The final sample of 756 adolescents and parents

resulted from the exclusion of 35 cases of parents with more than one adolescent completing the survey. Therefore, 73 adolescents who corresponded to those parents had to be eliminated from the dataset. The justification for this exclusion was that there was no way to know about which of the adolescents who participated in the study the parents were answering the survey about.

## DATA COLLECTION PROCEDURES

The recruitment of participants was made during the monthly parent meeting in the high schools. This comprised a brief presentation of the study in the school rooms, and if the parents agreed to participate, a contact information sheet was filled out by the participants. Adolescents and parents who met the criteria and were willing to participate selected one of the dates for data collection. They also filled out a contact information sheet and were contacted by phone for any remaining or changed information. In order to not interfere with regular class sessions, the selected days for data collection were during the weekend.

The data collection sessions were held in the high schools, following assignment by the school administrators. Parents and adolescents were separated in different rooms in order to avoid biased responses and ensure privacy. Prior to filling out the survey, parents signed a consent form and adolescents an assent form, and any questions about the study were answered before data collection. Parents and adolescents were given a copy of the forms for their own records. The

data were collected using a small booklet that included all the questionnaires and that required 45 to 60 minutes to complete. The questionnaires were filled out with pencil by the participants. Parents and adolescents were thanked for filling out the survey, and then refreshments were provided for them. Afterwards, parents and adolescents were assigned to separate rooms to receive the intervention from the original study.

## MEASURES

The questionnaires have been used in previous research with inner-city adolescents' parents, including Latino and Spanish-speaking (Jemmott, Jemmott, & Villarruel, 2002; Villarruel, Jemmott, & Jemmott, 1999). There was no evidence that the measures pose any reading or comprehension issues. The questionnaires were translated to Spanish. After this, group sessions with parents and adolescents took place during which the questionnaires were read page by page in order to find unintelligible items. Finally, a group of nurses in the field revised the questionnaires to assess the content.

The written survey consisted of a demographic sheet, a series of surveys about sexual topics and health in general, and a blank space for comments or suggestions. In the case of this study, only 7 scales were used for the adolescents and 6 scales were used for the parents. Additionally, some demographic information was included. The tools that were used only for adolescents are

presented in Table 1, the ones for parents are presented in Table 2, and the ones that for both parents and adolescents are presented in Table 3.

Table 1: Description of Adolescent Instruments

| Variable to measure | Abbreviations | Items | Cronbach's α |
| --- | --- | --- | --- |
| Self-efficacy for sexual behaviors | SESB | 5/ likert | .75 |
| Beliefs toward sex | BS | 12/ likert | .75 |
| Intentions for contraception and condom use | ICC | 4/ likert | .68 |

**Adolescents' Self-efficacy for Sexual Behaviors**

The self-efficacy/perceived behavioral control questionnaire was developed to measure adolescents' perceptions of having sufficient resources, skills, and confidence to perform certain protective sexual behaviors. This tool was originally used in a culturally based effective behavioral intervention to reduce HIV-risky behaviors among Latina adolescents (Villarruel, Jemmott, & Jemmott, 1999). Using the methods described by Fishbein and Ajzen (1975), Ajzen (1985), and Bandura (1986), the researchers constructed a self-efficacy/perceived behavioral control questionnaire. Ajzen (2002) noted the necessity of selecting appropriate items that secure reliable, internally consistent

measures. Therefore, this tool was developed using methods for direct measurement of perceived behavioral control. These items reflect people's confidence in being capable of using condoms and contraception and of having/ refusing sexual intercourse.

The complete scale has 19 items, although in the case of this study, only the five items regarding self-efficacy about sexual behaviors (SESB) will be used, i.e. self-efficacy, impulse control, negotiation beliefs, availability, and technical skills. Self-efficacy was assessed by asking people to report how difficult they found performing certain sexual behavior and how confident they were in doing it. Two questions concerned how easy or hard they found using condoms, one question asked how easy or hard they found using contraception, one concerned how easy or hard they found sexual abstinence, and one further question asked how confident they felt using condoms. For the first four questions the responses were indicated by: (1) very hard, (2) hard, (3) neither hard nor easy, (4) easy, and (5) very easy. For the last question, response rates went from 1= totally disagree to 5= totally agree. Overall perceived self-efficacy was obtained by calculating the mean of the items' scores. High scores according to the scale indicated high levels of self-efficacy regarding sexual behaviors. Those items showed acceptable levels of internal reliability in previous studies. Villarruel, Jemmott, Jemmott, and Ronis (2004) found an internal coefficient of 0.63 in the questions about self-efficacy regarding condom use in a sample of 141 Spanish-speaking Latina adolescents. The content of the questions was revised in focus groups by

participants and nurses in the field. In the case of this study, the scale showed a Cronbach's alpha of 0.75.

**Adolescents' Beliefs toward Sex**

The behavioral/normative beliefs questionnaire was developed) to measure adolescents' feelings about having sex and the relation with prevention, goals, popularity, pride, and the approval of others (Jemmott, Jemmott, and Villarruel, 2002; Villarruel, Jemmott, & Jemmott, 1999). It also included adolescents' feelings about using condoms and contraception and the relation with prevention, hedonistic, partner reaction, and the approval of others. This tool was also originally used in the behavioral intervention mentioned above (Villarruel, Jemmott, & Jemmott, 1999). The methods described by Fishbein and Ajzen (1975), Ajzen (1985), and Bandura (1986) were used to develop the questions. These items reflect adolescents' beliefs about sexual intercourse and their beliefs about condom and contraceptive use.

The Beliefs about Sex (BS) questionnaire had 12 measurable items. The instrument has two subscales that measure: a) condom and contraceptive beliefs about prevention (6 items) and b) condom and contraceptive beliefs about parental approval (6 items). These questions' responses were recorded according to the scale: (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. The response rate differed from the answers relating to parental approval of contraception and condom use, which went from 1=

strongly disapprove to 5= strongly approve. The scores for each subgroup of beliefs were obtained by calculating the mean of the items' scores. Higher scores according to the scale indicated more positive beliefs about sex. The subscales showed acceptable levels of internal reliability in a previous study about condom use (Villarruel, Jemmott, Jemmott, & Ronis, 2004). In the case of this study, all the subscales showed a Cronbach's alpha above 0.68 (see Table 1). The same process used to revise the content in the self-efficacy tool was used with this questionnaire.

**Adolescents' Intentions for Contraception and Condom Use**

The Intentions for Contraception and Condom Use (ICC) items were developed by Villarruel, Jemmott, and Jemmott (1999) to assess the perceived probability that adolescents would perform certain sexual behaviors. The items were also constructed for an intervention study on the Latino population and followed the guidelines given by Fishbein and Ajzen (1975), Ajzen (1985), and Bandura (1986) for constructing a questionnaire. The instrument had four items that measured intentions for condom use and contraceptive use. The items questioned how likely it was that an adolescent would decide to perform a desired behavior if they had sexual relations in the following three months. The responses were made up according to the scale: (1) very unlikely, (2) unlikely, (3) neither likely nor unlikely, (4) likely, and (5) very likely. The overall ICC scores were obtained by the calculation of their mean. Higher scores in the items indicated

higher probabilities of performing a certain sexual behavior. The items showed acceptable levels of internal reliability in a previous study. Villarruel, Jemmott, Jemmott, and Ronis (2004) found an internal coefficient of 0.79 in the questions about intentions toward condom use in a sample of 141 Spanish-speaking Latina adolescents. The content of the questions was also assessed through an adolescents' focus group and by nurses in the field. the following table presents the tools that were used by parents.

Table 2: Description of Parent Instruments

| Variable to measure | Abbreviations | Items | Cronbach's α |
| --- | --- | --- | --- |
| Self-efficacy for sex communication. | SESC | 5/ likert | .88 |
| Beliefs toward communication | BC | 10/ likert | .78 |

**Parents' Self-efficacy for Sex Communication**

Parents' self-efficacy regarding parent–adolescent communication was developed by the principal researcher in the original study. Guided by the theoretical bases for an Ecodevelopmental Framework and family research, the subsequent questionnaire was created. This development was based on similar questions in the adolescent questionnaire, but with adaptations for the targeted

behaviors in parents that relate to parent–child communication about sex. The items reflect parents' confidence regarding their capability to communicate about sex with their children. The Self-Efficacy for Sex Communication (SESC) scale comprised five items that assessed how difficult parents found communicating about sex. The possible responses were according to the scale: (1) very hard, (2) hard, (3) neither hard nor easy, (4) easy, and (5) very easy. Overall perceived self-efficacy was obtained by calculating the mean of the items' scores. Higher scores according to the scale indicated higher scores of self-efficacy regarding sex communication. The internal reliability coefficient for this tool in the present study was 0.88 (alpha coefficient).

**Parents' Beliefs toward Communication**

The scale on parent–child communication beliefs was adapted from the Jemmott, Jemmott, and Villarruel (2002) study. Its development was based on the same guidelines for the SESC, mentioned above. This tool measures parents' feelings about parent-child communication. The BC scale has 10 items with the following response options: (1) strongly disagree; (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. The global scores can be obtained by calculating the mean of the items scores, and higher scores in the scales indicate higher positive beliefs toward communication. The internal reliability for this tool was .78 (Cronbach alpha). The following table presents the tools that were used by both adolescents and parents.

Table 3: Description of Parent/Adolescent Instruments

| Variable to measure | Abbreviations | Items | Cronbach's α | |
|---|---|---|---|---|
| | | | Adolescent | Parent |
| Gender, age, grade, years of school, and marital status. | Demographics | 5/ numerical and categorical | N/A | N/A |
| Communication about sex | CS | 8/ likert | .95 | .94 |
| Comfort with sex communication. | CSC | 9/ likert | .94 | .90 |
| Familialism | FAM | 13/ likert | .72 | .79 |
| Religiosity | REL | 5/ likert | .62 | .72 |

Note: Both parents and adolescents completed the same instruments

**Demographic Information**

Demographic information was gathered using a questionnaire that included gender, age, years in school, and marital status. Gender was classified as male or female. Age was considered as the number of years on the day that the

survey was filled out. Years in school were the number of years that the individual had attended school from elementary school to the day the survey was filled out. The possible responses for marital status were: married, divorced, widower, free union, and single. This information was used to describe the sample.

### Parent–adolescent Communication about Sex

The Parental Sexual Risk Communication Scale III was developed by Hutchinson and Coney (1998) and was created to be used with adolescents. The purpose of the tool is to assess parent–teen sexual communication about sex (CS) with either the mother or the father and asked how much information the mother/father had shared with adolescents about: menstruation, reproduction, past dating, sexual experiences, sexual behaviors, contraceptive use, STDs/HIV, protection from STDs/HIV, condoms, abstinence, and peer and sexual pressure. The scale was an eight-item measure of parent–child sexual communication about sexual topics. An example of a question is: "When you were growing up, how much information did your mother/father share with you about how to sexually behave?" Other topics were: how to prevent pregnancies, sexually transmitted diseases, HIV/AIDS, sexually transmitted diseases and HIV/AIDS, and on condom use and peer pressure.

Respondents rated the amount of information that their mother/father shared with them as: (1) none, (2) a little, (3) some, (4) a lot, or (5) extensive.

Possible scores ranged from 8 to 40, and higher scores meant more communication about sex between parents and adolescents. The scale shows high levels of internal reliability ($\alpha > 0.90$ for both mothers and fathers). Other researchers who used the same scale reported 0.92, 0.94, and 0.95, and re-test reliability of r=0.80 (there is, however, no information available about time intervals for re-testing) (Hutchinson, 2002a; Hutchinson, 2002b, Hutchinson & Cooney, 1998). In a small study of 42 Mexican parents of adolescents between 14 to 19 years old, an alpha coefficient of 0.84 was reported by Benavides (2002).

**Parent-adolescent Comfort with Sex Communication**

The comfort with sex discussions measure (CSC) was developed by DiIorio, Kelley, and Hockenberry-Eaton (1999) to measure adolescents' and parents' comfort in discussing sexual topics. This was a nine-item scale that asked parents and adolescents to rate their comfort in discussing topics such as STDs/AIDS, using a condom, sexual intercourse, birth control, dating, sexual behavior, and perceived danger from sexual partners. An example of a question for adolescents is: "How comfortable do you feel when you talk to your father (mother) about how you should behave sexually?" An example of a question for parents is: "How comfortable do you feel when you talk to your child about how he/she should behave sexually?" Each question was rated on a scale of: (1) very uncomfortable, (2) somewhat uncomfortable, (3) somewhat comfortable, and (4)

very comfortable. A total score was obtained by calculating the total mean of the responses in each item.

**Familialism**

To measure familialism, an attitudinal tool (FAM) was used (Sabogal, Marin, Ortero-Sabogal, Marin, & Perez-Stable, 1987). Conceptually, the scale measures three components of familialism: familial obligations, perceived support from the family, and family as referents. This is a 13-item scale that asks adolescents and parents questions such as: “Can people count on help from their relatives to solve most problems?” The response options were: (1) strongly disagree; (2) disagree, (3) neither agree nor disagree, (4) agree, and (5) strongly agree. Previous studies had reported acceptable internal reliably coefficients and validity data. A study with Hispanics and non-Hispanic whites showed reliability coefficients for each component ranging from 0.64 to 0.76, the scores of which were significantly higher among Hispanics than non-Hispanics (Sabogal et al., 1987).

**Religiosity**

The religiosity questionnaire (REM) was developed to measure adolescents’ and parents’ religious beliefs (Jemmott, Jemmott, & Villarruel, 2002). This tool was used in a culturally based effective behavioral intervention to reduce HIV-risky behaviors among Latina adolescents (Villarruel, Jemmott, &

Jemmott, 1999). The scale consists of measurable 5 items. The response rates went from 1= totally disagree to 5= totally agree. Overall perceived religiosity was obtained by calculating the mean of the items' scores. Higher scores according to the scale indicated higher scores of religiosity. Those items showed acceptable levels of internal reliability in previous studies. Jemmott, Jemmott, and Villarruel, (2002) found an internal coefficient of 0.76 in the questions about religiosity in a sample of 199 Latino students. The content of the questions was revised in focus groups by participants and nurses in the field. In the case of this study, the parents' scale showed a Cronbach's alpha of 0.62 and the adolescents' scale a 0.72 Cronbach's alpha coefficient.

### DATA ANALYSIS

After the data were obtained from the principal researcher of the original study, all variables included in the analysis were reviewed to check for inconsistent, impossible, or missing values. Before the analysis, data was inspected for deviations in normality, outliers, and missing values. Transformations were performed on the scales as necessary. All the variables included in the analysis are continuous with the exception of demographic variables. The data will be analyzed using SPSS version 14 and Mplus version 4.2 for performing Structural Equation Modeling (SEM). All the analyses were conducted at an alpha level below 0.05. Frequencies and standard deviations were used to describe the sample.

Statistical plan for each research question:

1. What are parents' attributes (self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?
2. What are adolescents' attributes (self-efficacy for sexual behaviors, beliefs towards sex, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?

Descriptive statistics were used for all the variables in the model to summarize adolescents' and parents' attributes, communication about sex, and comfort with sex communication, and adolescents' intentions for contraception and condom use. Means, standard deviations, and minimum and maximum ranges were calculated for each variable.

3. What are the relationships between parents' attributes and adolescents' attributes?
4. What are the relationships between parents' attributes and their sexual communication?
5. What are the relationships between adolescents' attributes and their sexual communication?
6. What are the relationships between parents' attributes and adolescents' intentions for contraception and condom use?

7. What are the relationships between adolescents’ attributes and adolescents’ intentions for contraception and condom use?

8. What are the relationships between adolescents’ sexual communication and their intentions for contraception and condom use?

9. What are the relationships between parental sexual communication and adolescents’ intentions for contraception and condom use?

10. What are the relationships between parents’ and adolescents’ communication about sex?

11. What are the relationships between parents’ and adolescents’ comfort with sex communication?

A Pearson correlation was performed to find a relationship among the independent and the dependent variables: 1) parents’ attributes and adolescents’ attributes, 2) parents’/adolescents’ attributes and parents’/adolescents’ sexual communication, 3) parents’/adolescents’ attributes and adolescents’ intentions for contraception and condom use, and 4) parents’/adolescents’ sexual communication and adolescents’ intentions for contraception and condom use.

12. What are the attributes of adolescents and parents that have direct effects on adolescents’ intentions for contraception and condom use?

13. Does the parents’ sexual communication mediate the effect between parents’ and adolescents’ attributes and adolescents’ intentions for contraception and condom use?

14. Does the adolescents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?

To find the independent variables that have an effect on intentions for contraception and condom use, SEM (Arminger, Clogg, & Sobel, 1995) was used. This analysis included the modeling of interactions, nonlinearities, correlated independence, measurement error, correlated error terms, multiple latent independence, and one or more latent dependents with multiple indicators (Fan, Thompson, & Wang, 1999). SEM was a suitable analysis to model building approach (Bohmstedt & Borgatta, 1981) and the program used was Mplus (Muthén & Muthén, 2007). Two steps were used in the SEM (Anderson & Gerbing, 1988). The latent variables in the model included: parents' attributes, adolescents' attributes, parents' sexual communication, and adolescents' sexual communication. The observed variables for parents' attributes and sexual communication were: self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity. The observed variables for adolescents' attributes and sexual communication were self-efficacy for sexual behaviors, beliefs toward sex, familialism, and religiosity. The dependent variable in the model was the adolescents' intentions for contraception and condom use. Every variable in the model was conceptualized as latent and measured using multiple indicators. Indicators were items in a survey.

15. Are there gender differences in adolescents' attributes, sexual communication, and intentions for contraception and condom use?

16. Are there differences in parents' attributes and sexual communication by adolescents' gender?

To explore the difference by gender among the different variables for parents and adolescents MANOVA was used. This analysis is appropriate when comparing the mean differences between two groups. In the case of parent, the adolescents' female and male mean differences for parent's attributes and sexual communication were compared. In the adolescent case, the female and male mean differences for attributes, sexual communication, and intentions for contraception and condom use were analyzed.

### ETHICAL ISSUES

In the original study, the researcher obtained written approval from the School Director of the high schools. Institutional Review Board (IRB) approval from The University of Michigan and Universidad de Nuevo Leon was obtained for the original study. IRB approval from the University of Texas at Austin was obtained for this secondary analysis (IRB Protocol #2007-01-0037). The team conducting the original research described the study, the purpose of the project, and the importance of adolescents' participation. After clarifying all parents' uncertainties about the study, an invitation to participate on the project was offered. Prior to the analysis, the researcher verified that all the participants

included in this study had a consent form. During the course of the study, human rights, dignity, and protection of identity were ensured. All data obtained from the participant was confidential, with the names of the participants excluded from the questionnaires. Parental participation was voluntary, and all parents had the right to choose not to participate in the study if they wished. The participants were paid $10 upon completion of their survey, the amount of which was chosen to compensate them for their time and participation

# CHAPTER IV

## Results

This chapter presents the results of the data analysis conducted to answer the research questions. The findings focused on the demographic information from the sample of adolescents and parents and on the specific findings of each research question. An alpha level of .05 was set for all statistical analyses.

### DEMOGRAPHIC INFORMATION

The initial dataset included 829 adolescents and 791 parents. The final sample of 756 adolescents and parents resulted from the exclusion of 35 cases of parents with more than one adolescent completing the survey. Therefore, 73 adolescents who corresponded to those parents were eliminated from the dataset. The demographic information for the final samples of adolescents and parents (N=756) is presented in Table 4 and Table 5, respectively.

Ages in the adolescent sample ranged from 14 to 17 years ($M$ = 15.18, $SD$ = 0.66). The majority of the adolescents were 15 years of age (65.2%), with relatively few being 17 years old (3.8%). In Mexico, education includes two years of high school, and most of the adolescents in this sample were in their first year, which is equivalent to $10^{th}$ grade in the US education system. The predominant gender among the adolescents was female (55.6%).

Table 4: Demographic Information of the Adolescents' Sample (N=756)

| Variable | Frequency | Percent |
|---|---|---|
| Age (M= 15.18 , SD= .66) | | |
| 14 years | 77 | 10.2% |
| 15 years | 493 | 65.2% |
| 16 years | 157 | 20.8% |
| 17 years | 29 | 3.8% |
| Grade | | |
| 10$^{th}$. grade | 661 | 88% |
| 11$^{th}$. grade | 90 | 12% |
| Gender | | |
| Male | 336 | 44.4% |
| Female | 420 | 55.6% |

For the parents, only educational and marital status were included in the description of the sample. However, the educational level of the parents showed variation among the different categories, with most of the parents reporting that they had middle or some middle education (43.4%). In the case of marital status, most of the parents were married (86.9%).

Table 5: Demographic Information of the Parents' Sample (N=756)

| Variable | Frequency | Percent |
|---|---|---|
| Education | | |
| Incomplete elementary | 43 | 5.7% |
| Complete elementary | 104 | 13.8% |
| Incomplete middle | 154 | 20.5% |
| Complete middle | 172 | 22.9% |
| Complete technical/ secretarial | 117 | 15.6% |
| Complete college | 150 | 20% |
| Complete graduate studies | 11 | 1.5% |
| Marital status | | |
| Single | 21 | 2.8% |
| Married | 654 | 86.9% |
| Separated | 29 | 3.9% |
| Divorced | 35 | 4.6% |
| Widow(er) | 14 | 1.9% |

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## RESEARCH QUESTION ONE

What are parents' attributes (e.g. self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity) and sexual communication (i.e. communication about sex and comfort with sex communication)? This question addresses the description of variables regarding parents involved in the study. A summary of parents' attributes and parents' sexual communication is presented in Table 6. Parents' attributes were measured on a scale of 1 to 5, with "1" indicating *strongly disagree* and "5" indicating *strongly agree*.

The mean score reported for self-efficacy for sex communication was 3.71 ($SD$ = 0.86), which suggests that parents had generally high scores of self-efficacy for sex communication. Additionally, parents were asked about their beliefs toward communication, with the results $M$ = 3.95 and $SD$ = 0.60, suggesting that parents had positive feelings about parent–adolescent communication. The mean score reported for parents on familialism was 3.82 ($SD$ = 0.53). This suggests that parents in the sample showed high levels of familial obligations, family support, and family as a referent. Finally, parents' attributes regarding religiosity were studied. The mean score reported for this suggests that parents showed low levels of religiosity ($M$ = 2.04, $SD$ = 0.82).

Parental sexual communication included communication about sex and comfort with sex communication. Communication about sex was measured on a scale of 1 to 5, with "1" indicating *none* and "5" indicating *extensive*. The mean

reported for communication about sex suggests that most of the parents shared some communication about sex with their adolescent ($M$ = 3.06, $SD$ = 1.03). Comfort with sex communication was measured on a scale of 1 to 4, with "1" indicating *very uncomfortable* and "4" indicating *very comfortable.* The mean score reported on this scale was 2.75 ($SD$ = 1.13). This suggests that each parent in the sample had low levels of comfort when discussing sexual matters with their adolescent.

Table 6: Mean Scores of Parents' Attributes and Sexual Communication

| Variable | Mean | SD | Median | Min.-Max. |
|---|---|---|---|---|
| Attributes | | | | |
| Self-efficacy for sex communication | 3.71 | .86 | 3.8 | 1-5 |
| Beliefs toward communication | 3.95 | .60 | 4 | 1.9-5 |
| Familialism | 3.82 | .53 | 3.8 | 1.77-5 |
| Religiosity | 2.04 | .82 | 2 | 1-5 |
| Sexual Communication | | | | |
| Communication about sex | 3.06 | 1.03 | 3.13 | 1-5 |
| Comfort with sex communication | 2.75 | 1.13 | 3 | 1-4 |

### RESEARCH QUESTION TWO

What are adolescents' attributes (e.g. self-efficacy for sex behaviors, beliefs toward sex, familialism, and religiosity), sexual communication (i.e.

communication about sex and comfort with sex communication), and intentions for contraception and condom use? This question addresses the description of variables regarding adolescents involved in the study. A summary of adolescents' attributes, sexual communication, and intentions for contraception and condom use is presented in Table 7. Adolescents' attributes were measured on the same scales as for parental attributes mentioned above.

The mean score reported for self-efficacy regarding sexual behaviors was 3.82 (*SD* = 0.67), which suggests that adolescents had generally high scores on their perceptions of whether they had sufficient resources, skills, and confidence to perform protective sexual behaviors. Adolescents were also asked about their beliefs toward sexual behaviors, and the findings were *M* = 3.87 and *SD* = 0.45, suggesting that adolescents have positive beliefs about sexual behaviors. The mean score reported for adolescents on familialism was very similar to that of the parents at 3.84 (*SD* = 0.44), suggesting that adolescents in the sample showed high levels of familialism. The score regarding adolescents' religiosity was also similar to that for the parents. The mean score reported suggests that adolescents demonstrated low levels of religiosity. (*M* = 2.49, *SD* = 0.76). Although we can not say that there are statistical differences among the adolescents and parents means because there were not performed statistical analyses.

Variables on adolescents' sexual communication were measured on the same scale as for parental sexual communication. Findings on adolescents' communication about sex and comfort with sex communication were similar to

the parents' responses. The adolescents' mean reported for communication about sex was $M = 3.38$ and $SD = 0.68$. Similar results were found regarding comfort with sex communication, adolescents' scores were above the midpoint in comfort with sex communication ($M = 2.52$, $SD = 1.15$). Adolescents' intentions for contraception and condom use were measured according to the scale of "1" *very unlikely* to "5" *very likely*. The reported mean for the adolescent sample was 4.45 ($SD = 0.68$). This suggests that adolescents had high intentions to use contraception, including condoms.

Table 7: Mean Scores of Adolescent Measures

| Variable | Mean | SD | Median | Min.-Max. |
|---|---|---|---|---|
| Attributes | | | | |
| Self-efficacy for sex behaviors | 3.82 | .67 | 3.8 | 1-5 |
| Beliefs toward sex | 3.87 | .45 | 3.91 | 2-4.83 |
| Familialism | 3.84 | .44 | 3.85 | 2.15-5 |
| Religiosity | 2.49 | .76 | 2.6 | 1-5 |
| Sexual Communication | | | | |
| Communication about sex | 3.38 | .68 | 3.63 | 1-5 |
| Comfort with sex communication | 2.52 | 1.15 | 2.67 | 1-4 |
| Intentions for contraception and condom use | 4.45 | .68 | 4.75 | 1-5 |

**RESEARCH QUESTION THREE**

What are the relationships between parents' attributes and adolescents' attributes? The analysis of the resultant data to the third research question focused on the relationship between parents' and adolescents' attributes. All the relationships presented in this study were examined by using Pearson product–moment correlations, and the findings of this research question are presented in Table 8.

Parents' self-efficacy for sex communication and religiosity were not significantly correlated with any of the adolescents' attributes: self-efficacy for sexual behaviors ($r = .066$, $p > .05$), beliefs toward sex ($r = -.014$, $p > .05$), familialism ($r = .011$, $p > .05$), and religiosity ($r = -.054$, $p > .05$). Parental beliefs toward communication were positively associated with adolescents' self-efficacy for sex behaviors ($r = .109$, $p < 0.01$). Parents with higher scores on beliefs toward communication about sex had higher scores on parents' levels of self-efficacy for sex communication than those parents with low scores. However, parents' belief toward communication was not significantly correlated with adolescents' beliefs toward sex ($r = -.010$, $p > .05$), adolescents' familialism ($r = .011$, $p > .05$), and adolescents' religiosity ($r = -.052$, $p > .05$). In addition, parents' familialism and adolescents' familialism were positively correlated ($r = 0.14$, $p < 0.001$), but parents' familialism was not significantly related to adolescents' religiosity ($r = .042$, $p > .05$).

**Correlations among Parents' Attributes**

Even though question three did not ask about the relationships among parents' attributes, it was considered important to present those correlations as follow. Parents' self-efficacy for sex communication was positively correlated with their beliefs toward communication ($r$ = .420, $p$ < .001), their familialism ($r$ = .109, $p$ < .01), and negatively correlated with their religiosity scores ($r$ = –.093, $p$ < .05). This means that parents with high levels of self-efficacy for sex communication had positive beliefs toward communication, high familialism levels, but low religiosity levels. Parents' beliefs toward communication were positively correlated with their familialism ($r$ = .118, $p$ < .01) and negatively correlated with their religiosity ($r$ = –.326, $p$ < .001), meaning that parents with positive beliefs toward communication had high levels of familialism and low levels of religiosity. Parents' familialism was positively associated with religiosity ($r$ = .115, $p$ < .01), meaning that parents with high levels of familialism also had high levels of religiosity.

**Correlations among Adolescents' Attributes**

Question three did not ask about the relationships among adolescents' attributes, but it was considered important to present those relationships. Adolescents' self-efficacy about sexual behaviors was positively correlated with their beliefs toward sex ($r$ = .262, $p$ < .001) and their familialism ($r$ = .091, $p$ < .05). Adolescents with high levels of self-efficacy for sexual behaviors had

positive beliefs toward sex and high familialism levels. Adolescents' beliefs toward sex were also positively associated with familialism ($r = .152$, $p < .01$), suggesting that adolescents with positive beliefs toward sex had high levels of familialism. There were no other statistically significant relationships among adolescents' attributes. Adolescents' religiosity was not significantly correlated with their self-efficacy for sexual behaviors ($r = -.064$, $p > .05$), their beliefs toward sex ($r = .003$, $p > .05$), or their familialism ($r = .018$, $p > .05$).

Table 8: Relationships Between Parents' Attributes and Adolescents' Attributes

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Parent Attributes | | | | | | | | |
| 1. Self-efficacy for sex communication | 1 | .420*** | .109** | -.093* | .066 | -.014 | .011 | -.054 |
| 2. Beliefs toward communication | | 1 | .118** | -.326*** | .109** | -.010 | .011 | -.052 |
| 3. Familialism | | | 1 | .115** | .051 | -.012 | .135*** | .042 |
| 4. Religiosity | | | | 1 | -.054 | .051 | .052 | .014 |
| Adolescent Attributes | | | | | | | | |
| 5. Self-efficacy for sex behaviors | | | | | 1 | .262*** | .091* | -.064 |
| 6. Beliefs toward sex | | | | | | 1 | .152** | .003 |
| 7. Familialism | | | | | | | 1 | .018 |
| 8. Religiosity | | | | | | | | 1 |

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

## RESEARCH QUESTION FOUR

What are the relationships between parents' attributes and their sexual communication? To answer this research question, Pearson product–moment correlations were used, and the findings of the correlations are presented in Table 9.

Parents' communication about sex was positively correlated with self-efficacy for sex communication ($r = .531$, $p < .001$), beliefs toward communication ($r = .400$, $p < .001$), and familialism ($r = .151$, $p < .001$), and was negatively correlated with religiosity ($r = –.326$, $p < .001$). Parents who discussed sex with their adolescents had high self-efficacy for sex communication, positive beliefs toward communication, high familialism levels, and also low religiosity levels.

Parents' comfort regarding sex communication was positively correlated with self-efficacy for sex communication ($r = .535$, $p < .001$), beliefs toward communication ($r = .363$, $p < .001$), and was negatively correlated with religiosity ($r = –.094$, $p < .001$). Parents who felt more comfortable about discussing sexual matters had higher self-efficacy about sex communication, more positive beliefs toward communication, higher familialism levels, and lower religiosity levels than parents who felt less comfortable. However, comfort with sex communication was not significantly related to familialism ($r = .059$, $p > .05$).

Table 9: Relationships between Parents' Attributes and Sexual Communication

| Variables | Sexual Communication | |
|---|---|---|
| | COMSEX | COMFSC |
| Parent Attributes | | |
| Self-efficacy for sex communication | .531*** | .535*** |
| Beliefs toward communication | .400*** | .363*** |
| Familialism | .151*** | .059 |
| Religiosity | -.326*** | -.094* |

COMSEX=Communication about sex; COMFSC=Comfort with sex communication

* = $p < .05$; *** = $p < .001$

**RESEARCH QUESTION FIVE**

What are the relationships between adolescents' attributes and sexual communication? Correlations are presented in Table 10.

Adolescents' communication about sex was positively correlated with beliefs toward sex ($r = .074$, $p < .05$) and familialism ($r = .214$, $p < .001$). Adolescents with high levels of sex communication had positive beliefs toward sex and also high familialism levels. However, adolescents' communication about sex was not significantly related to self-efficacy for sexual behaviors ($r = .064$, $p > .05$) and religiosity ($r = -.071$, $p > .05$). In the case of adolescents' comfort with

sex communication, this was positively correlated with self-efficacy for sexual behaviors ($r = .110$, $p < .05$), familialism ($r = .144$, $p < .001$), and negatively correlated with religiosity ($r = -.094$, $p < .01$). Adolescents who felt more comfortable talking about sex with their parents had higher self-efficacy for sexual behaviors, higher familialism levels, and lower religiosity levels than those adolescents who felt less comfortable. Adolescents' comfort with sex communication was not significantly correlated with their beliefs toward sex ($r = .046$, $p > .05$).

Table 10: Relationships between Adolescents' Attributes and Sexual Communication

| Variables | Sexual Communication | |
|---|---|---|
| | COMSEX | COMFSC |
| Adolescent Attributes | | |
| Self-efficacy for sexual behaviors | .064 | .110* |
| Beliefs toward sex | .074* | .046 |
| Familialism | .214*** | .144*** |
| Religiosity | -.071 | -.094** |

COMSEX=Communication about sex; COMFSC=Comfort with sex communication

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

## RESEARCH QUESTIONS SIX AND SEVEN

Questions six and seven addressed the relationships between parents' and adolescents' attributes on adolescents' intentions for contraception and condom use. A summary of the correlations of the results of this are presented in Table 11. None of the parents' attributes were correlated with the adolescents' intentions for contraception and condom use. Adolescents' intentions for contraception and condom use were not significantly correlated with parents' self-efficacy for sex communication ($r = .005$, $p > .05$), beliefs toward communication ($r = .020$, $p > .05$), familialism ($r = -.022$, $p > .05$), or religiosity ($r = -.064$, $p > .05$).

In the case of adolescents, their intentions for contraception and condom use were highly positively associated with self-efficacy about sexual behaviors ($r = .41$, $p < .001$), beliefs toward sex ($r = .58$, $p < .001$), and also with familialism ($r = .11$, $p < .01$). Adolescents with high intentions for contraception and condom use had high levels of self-efficacy for sexual behaviors, had positive beliefs toward sex, and also had high familialism levels. However, adolescents' intentions for contraception and condom use were not significantly related to their religiosity ($r = -.064$, $p > .05$).

Table 11: Relationships between Adolescents' and Parents' Attributes and Adolescents' Intentions for Contraception and Condom Use

| Variable | Adolescents' intentions for contraception and condom use |
|---|---|
| Parent Attributes | |
| Self-efficacy for sex communication | .005 |
| Beliefs toward communication | .020 |
| Familialism | -.022 |
| Religiosity | -.064 |
| Adolescent Attributes | |
| Self-efficacy for sexual behaviors | .405*** |
| Beliefs toward sex | .577*** |
| Familialism | .109** |
| Religiosity | -.064 |

** = $p < .01$; *** = $p < .001$

## RESEARCH QUESTIONS EIGHT AND NINE

Question eight concentrated on the following research question: What are the relationships between adolescents' sexual communication and their intentions for contraception and condom use? Question nine investigated the relationships between a parents' sexual communication and their adolescents' intentions for

contraception and condom use. None of the variables of parents' sexual communication were correlated with adolescents' intentions for contraception and condom use. Adolescents' intentions for contraception and condom use were not significant correlated with parents' communication about sex ($r = -.029$, $p > .05$) and parents' comfort with sex communication ($r = -.009$, $p > .05$). However, adolescents' communication about sex and comfort with sex communication were positively associated with their intentions for contraception and condom use, with the coefficients for these being very low ($r = .084$, $p < .05$ and $r = .078$, $p < .05$ respectively).

Table 12: Relationships between Adolescents' and Parents' Sexual Communication and Adolescents' Intentions for Contraception and Condom Use

| Variable | Adolescents' intentions for contraception and condom use |
|---|---|
| Parent Sexual Communication | |
| Communication about sex | -.029 |
| Comfort with sex communication | -.009 |
| Adolescent Sexual Communication | |
| Communication about sex | .084* |
| Comfort with sex communication | .078* |

* = $p < .05$

## RESEARCH QUESTIONS TEN AND ELEVEN

These questions aimed to determine any relationships between the parents' and the adolescents' sexual communication variables (communication about sex and comfort with sex communication). Parents' and adolescents' communication about sex were positively correlated ($r = .32$, $p < .001$). In addition, parents' and adolescents' comfort with sex communication were also positively related ($r = .27$, $p < .001$). When parents had high levels of communication about sex and high levels of comfort with sex communication, adolescents also had high levels of communication about sex and high levels of comfort with sex communication.

Table 13: Relationships between Adolescents' and Parents' Sexual Communication

| Variable | Adolescent Sexual Communication | |
|---|---|---|
| | Communication about sex | Comfort with sex communication |
| Parent Sexual Communication | | |
| Communication about sex | .315*** | .259*** |
| Comfort with sex communication | .287*** | .271*** |

*** = $p < .001$

## RESEARCH QUESTIONS TWELVE, THIRTEEN, AND FOURTEEN

The purpose of the study that was to describe an interaction model of parental and adolescents' attributes and sexual communication influences on intentions for contraception and condom use in Mexican high school students between 14 and 17 years of age. These three research questions addressed the aim of the study, and they were 12) What are the attributes of adolescents and parents that have direct effects on adolescents' intentions for contraception and condom use? 13) Does the parents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use? and 14) Does the adolescents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?

### Structure Equation Modeling.

Structure Equation Modeling (SEM) was used to test the exploratory model proposed for the present study. The program used to evaluate the interrelationships between the variables was M-Plus version 4.2, which uses the covariance matrix by default. The approach followed was SEM model building. The path for the initial model is presented in Figure 2. There were 15 observed variables, with four different latent variables (factors) being hypothesized. In the figure shown, variables are represented in rectangles, and latent variables are represented as ovals. The results for this section are organized in the following

way: model specification, model identification, model estimation, model testing, and final model modification.

### *Model Specification*

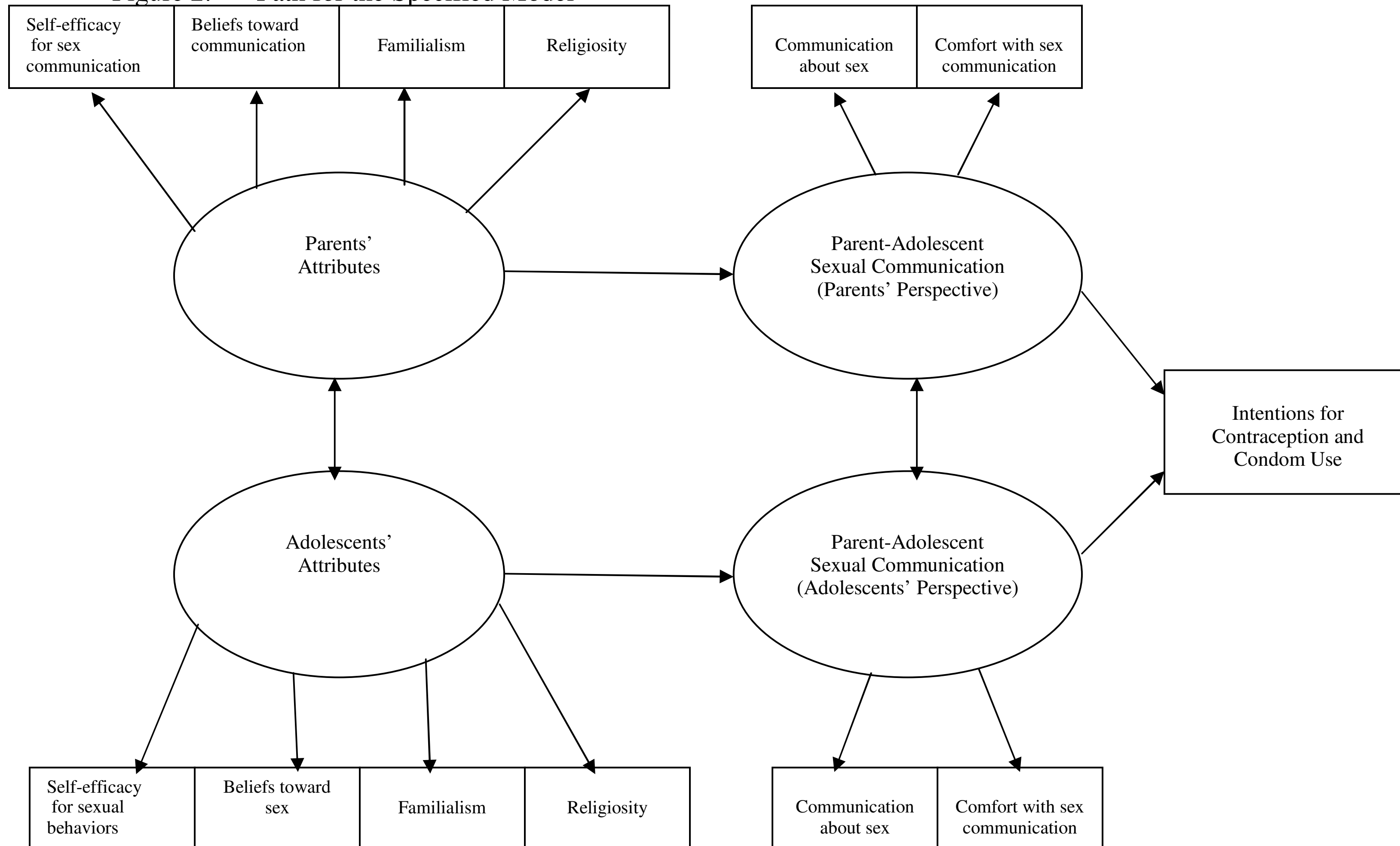
This section involves determining every relationship and parameter in the model that is of interest to the researcher. This is based on the Pearson product–moment correlation coefficients presented in tables 8 to 13. The observed variables of parents' and adolescents' familialism and religiosity were not highly correlated with adolescents' attributes, and thus, these observed variables were eliminated from the model. In addition, the observed variable of adolescents' intentions for contraception and condom use was highly correlated only with adolescents' self-efficacy for sexual behaviors and beliefs toward sex, and therefore, this observed variable was also eliminated from the model. Therefore, attributes of adolescents and parents that have direct effects on adolescents' intentions for contraception and condom use were unable to be tested. Moreover, the mediator effect of parents' and adolescents' sexual communication was also unable to be tested. However, findings from the SEM are presented.

### *Model Identification and Model Estimation*

Since the model in the sample correlation matrix contains 36 distinct variances and covariances among the six variables, the number of distinct values was $p(p + l)/2 = 8(8 + l)/2 = 36$. The measurement model specifies that we want to estimate 20 parameters, that is, eight factor loadings, eight corresponding

measurement errors, and the four correlations between the latent variables: parents' and adolescents' attributes, parents' attributes and parents' sexual communication, adolescents' attributes and adolescents' sexual communication, and parents' sexual communication and adolescents' sexual communication. The order of the conditions is ,therefore, met because we have more distinct values in the sample correlation matrix than free parameters in the model to be estimated, that is, the degrees of freedom = 36 – 20 = 16. The maximum likelihood estimation technique was selected for estimating the parameters in our measurement models and structural model, that is, our estimates of the population parameters from the sample data. This was chosen because the multivariate normality assumption was met, there are no missing data, no outliers, and there are continuous variable data. As observed variables are interval-scaled and multivariate normal, the chi-square test was deemed appropriate.

Figure 2: Path for the Specified Model



***Model Testing***

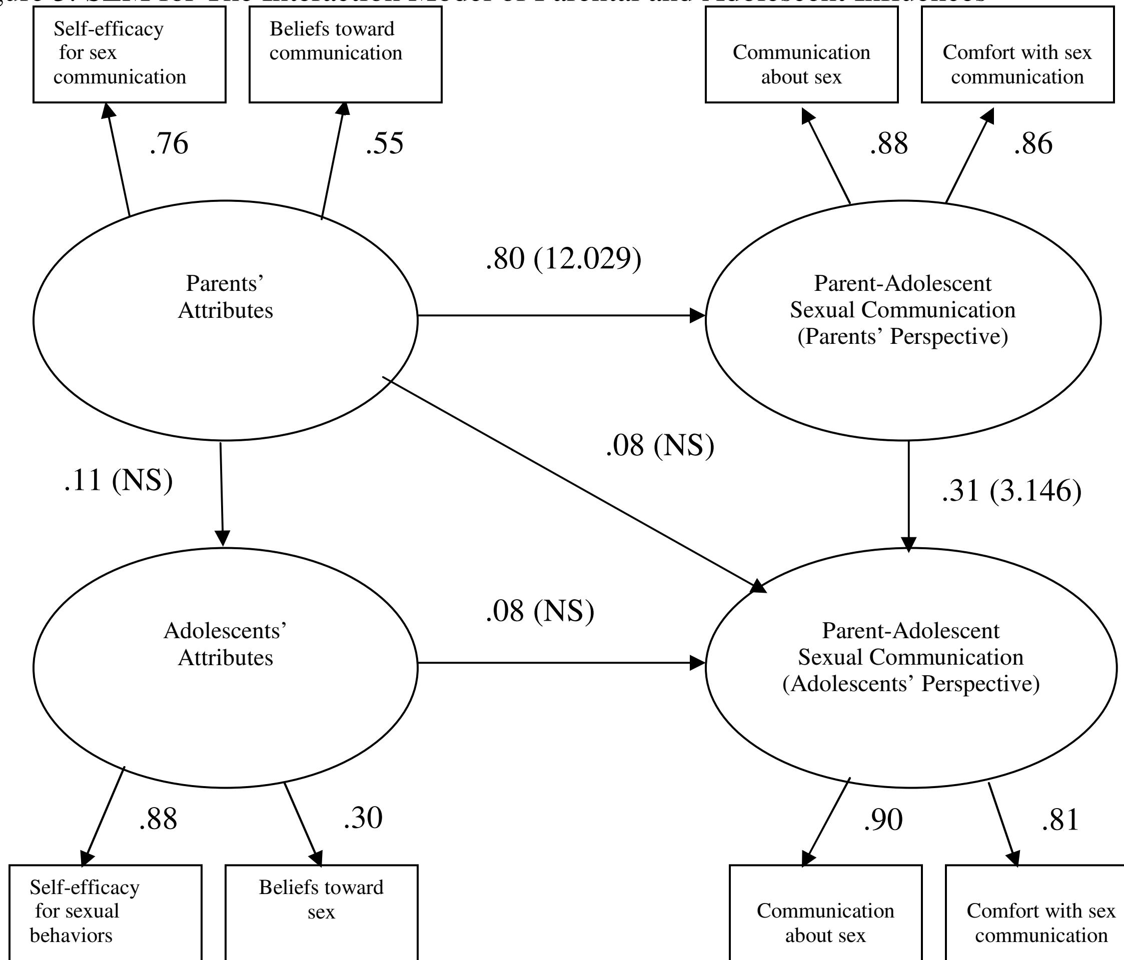
The analyses started with examining the original model (Figure 2). The original model that included 15 observed variables, with four different latent variables did not converge. Therefore, factor loadings, parameter estimates, and goodness of fit indices were not available. Additional analyses with out the variable intentions for contraception and condom use were done. The following model included four latent variables: parents' attributes (self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity), adolescents' attributes (self-efficacy for sexual behaviors, beliefs toward sex, familialism, and religiosity), parents' sexual communication (communication about sex and comfort with sex communication), and adolescents' sexual communication (communication about sex and comfort with sex communication). For this model the fit indices suggest that the sample data do not have an acceptable goodness of fit to the combined measurement model ($X^2_{(30)} = 92.215$, $p = 0.0000$, CFI = 0.97, TLI = 0.95, RMSEA = 0.05, SRMR = 0.04), and, therefore, model modification was required.

***Model Modification***

Alternative models were tested based on changes suggested by SEM modification indexes. The overall model fit was interpreted using fit indices such as CFI, TLI, SRMR, and RMSEA that resulted appropriate because they allowed

comparisons between the models. Looking more closely to the correlations and constructs and paths that retained theoretical basis, two alternative models with acceptable fits were derived. These new models had the same latent variables of the model mentioned above, with the exception of parents' and adolescents' familialism and religiosity that were eliminated from parents' and adolescents' attributes. Based on the theory, the model presented in Figure 3 did converge and factor loadings, parameter estimates, and goodness of fit indices were acceptable ($X^2_{(15)}$ =27.289, p = 0.0265, CFI = 0.99, TLI = 0.99, RMSEA = 0.03, SRMR = 0.02).

Figure 3. SEM for The Interaction Model of Parental and Adolescent Influences




$X^2_{(15)}$ =27.289 p = .0265 CFI=.99 TLI = .99 RMSEA = .03 SRMR = .02; NS = no significant

## RESEARCH QUESTIONS FIFTEEN AND SIXTEEN

Research questions 15 and 16 aimed to find any differences among the variables in the study associated with adolescent gender. Multivariate analysis of variance (MANOVA) on the continuous dependent variables to test the effects of gender, and the results are presented in tables 14 and 15. First, it was assumed that, for each group (each cell in the factor design matrix), the covariance matrix was similar. Box's M test was not significant; therefore, there was insufficient evidence to conclude that the covariance matrices differ (*Box's M* = 112.187; $p$ = 0.086). However, interpreting Hotelling's Trace test for two dependent samples provided sufficient evidence to conclude that gender has an effect on the variables ($F_{13} = 10.46$, $p < 0.001$).

MANOVA assumes that each dependent variable will have similar variances for all groups. Levene's test investigates the null hypothesis that the groups have equal variances. For these data, the homogeneity of the variances' assumption is met for all the variables, with the exception of parental comfort with sex communication and parental familialism. In the case of parents, the univariate effects of gender regarding beliefs toward communication, familialism, communication about sex, and comfort with sex communication are significant (see Table 14).

Table 14: Parents' Differences in Attributes and Sexual Communication

| Variable | Gender | Mean | Std. Dev. | F | Effect |
|---|---|---|---|---|---|
| Self-efficacy for sex | Male | 3.71 | .83 | .007 | .000 |
| communication | Female | 3.72 | .88 | | |
| Beliefs toward communication | Male | 3.91 | .58 | 4.41* | .006 |
| | Female | 3.99 | .63 | | |
| Familialism | Male | 3.81 | .49 | .18 | .000 |
| | Female | 3.83 | .55 | | |
| Religiosity | Male | 2.03 | .81 | .03 | .000 |
| | Female | 2.04 | .84 | | |
| Communication about sex | Male | 2.87 | 1.04 | 20.08*** | .027 |
| | Female | 3.22 | 1.01 | | |
| Comfort with sex communication | Male | 2.61 | 1.20 | 10.39** | .014 |
| | Female | 2.88 | 1.04 | | |

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

In the case of adolescents, effects of gender on self-efficacy about sexual behaviors, beliefs toward sex, familialism, and intentions for contraception and condom use are significant (see Table 15).

Table 15: Adolescents' Differences in Attributes, Sexual Communication, and Intentions for Contraception and Condom Use

| Variable | Gender | Mean | Std. Dev. | F | Effect |
|---|---|---|---|---|---|
| Self-efficacy for sexual behaviors | Male | 3.67 | .61 | 34.09*** | .045 |
| | Female | 3.95 | .66 | | |
| Beliefs toward sex | Male | 3.92 | .43 | 9.02** | .012 |
| | Female | 3.82 | .46 | | |
| Familialism | Male | 3.89 | .42 | 9.41** | .013 |
| | Female | 3.79 | .45 | | |
| Religiosity | Male | 2.64 | .76 | 21.26*** | .028 |
| | Female | 2.39 | .75 | | |
| Communication about sex | Male | 3.30 | 1.11 | 2.55 | .003 |
| | Female | 3.43 | 1.12 | | |
| Comfort with sex communication | Male | 2.44 | 1.11 | 2.46 | .003 |
| | Female | 2.57 | 1.18 | | |
| Intentions for contraception and condom use | Male | 4.38 | .65 | 7.51** | .010 |
| | Female | 4.52 | .70 | | |

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

## SUMMARY

This chapter has presented the findings of the present study. Data were analyzed using SPSS and M-Plus. Descriptive (frequencies, percentages, means, standard deviations, mode and minimum and maximum, Pearson correlations, structural equation modeling, and MANOVA) were used to answer the 16 research questions of this exploratory study.

Both groups had high scores for self-efficacy regarding sex communication, positive beliefs about parent–child communication in general, high scores for familialism, and low scores for religiosity. In the case of sex communication, the same pattern was followed. Both parents and adolescents reported high levels of communication about sex, but low levels of comfort when discussing sexual matters. Intentions for contraception and condom use were high in the sample of adolescents.

Most of the parental and adolescent attributes were not correlated. Only two associations were found: 1) parental beliefs toward communication were correlated with adolescents' self-efficacy for sexual behaviors and 2) parental familialism and adolescents' familialism were correlated. Both correlation coefficients mentioned above were positive but low. To find relationships between attributes and sex communication, these issues were addressed regarding parents and adolescents. All of the parents' attributes were correlated with communication about sex and comfort with sex communication, with the exception of familialism, which was not correlated with comfort with sex

communication. In the case of adolescents' attributes, communication about sex was not correlated with self-efficacy about sexual behaviors and religiosity, and comfort with sex communication was not correlated with beliefs toward sex.

To understand the relationship between the parents' and adolescents' attributes and sex communication and adolescents' intentions for contraception and condom use, these issues were addressed in the research questions. The results showed that adolescents' intentions for contraception and condom use only associated with the adolescents' variables of self-efficacy for sexual behaviors, beliefs toward sex, familialism, communication about sex and comfort with sex communication. The last two correlations were too low to be considered. In addition, all the parents' and adolescents' sexual communication variables were correlated.

The results served as a basis to answer the question related to the purpose of the study, which was to test a model of adolescent and parental attributes and sexual communication on adolescents' intentions for contraception and condom use. The initial model was developed based on the literature search and the theories. Because of the lack of relationships among some variables such as familialism, religiosity, and intentions for contraception and condom use, these had to be deleted from the model. Therefore, SEM analysis and theory support were used to select the best model. This model included parental attributes (self-efficacy for sex communication and beliefs toward communication), adolescents' attributes (self-efficacy for sexual behaviors and beliefs toward sex) parental

sexual communication (communication about sex and comfort with sex communication), and adolescents' sexual communication (communication about sex and comfort with sex communication).

Finally, this study aimed to investigate adolescents' gender differences in parental and adolescent variables. There were gender differences among parental variables such as beliefs toward communication, communication about sex, and comfort with sex communication. In the case of adolescents, all of the variables presented significant differences according to gender, with the exception of communication about sex and comfort with sex communication. The next chapter presents a summary of the study, a discussion, and an interpretation of the findings. A conclusion and implications from the study will also be presented.

# CHAPTER V

## Summary, Conclusions, and Recommendations

This chapter presents a summary of the study and its findings, compares the findings to previous studies, and discusses how the findings relate to theory. In addition, it will discuss the effects of the attributes of parents and adolescents on adolescents' intentions for contraception and condom use. Furthermore the chapter presents a discussion of the relationships between the variables of study, findings from the interaction model between parents and adolescents, and gender differences according to the adolescents' gender. Finally, conclusions with implications for nursing, recommendations for practice, and future research will be presented.

### SUMMARY OF THE STUDY

#### Purpose

HIV/AIDS in Mexican youth is a problem affecting society as a whole and there are several gaps in the literature related to the reality of AIDS in Mexico. In addition, parent–child interaction has not been considered for HIV/AIDS prevention in Mexican studies. Often, adolescents engage in sexually risky behaviors and their intentions on these behaviors implicitly rely on the

motivational factors such as intentions that influence the adolescents' sexual behaviors. Therefore, the purpose of this cross-sectional and exploratory study was to describe an interaction model of parental and adolescent attributes and sexual communication influences on intentions for contraception and condom use in Mexican youths between 14 and 17 years of age in high school.

Sixteen research questions were addressed in the study:

1. What are parents' attributes (self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?
2. What are adolescents' attributes (self-efficacy for sexual behaviors, beliefs towards sex, familialism, and religiosity) and sexual communication (communication about sex and comfort with sex communication)?
3. What are the relationships between parents' attributes and adolescents' attributes?
4. What are the relationships between parents' attributes and their sexual communication?
5. What are the relationships between adolescents' attributes and their sexual communication?
6. What are the relationships between parents' attributes and adolescents' intentions for contraception and condom use?

7. What are the relationships between adolescents' attributes and adolescents' intentions for contraception and condom use?
8. What are the relationships between adolescents' sexual communication and their intentions for contraception and condom use?
9. What are the relationships between parental sexual communication and adolescents' intentions for contraception and condom use?
10. What are the relationships between parents' and adolescents' communication about sex?
11. What are the relationships between parents' and adolescents' comfort with sex communication?
12. What are the attributes of adolescents and parents that have direct effects on adolescents' intentions for contraception and condom use?
13. Does the parents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?
14. Does the adolescents' sexual communication mediate the effect between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use?
15. Are there gender differences in adolescents' attributes, sexual communication, and intentions for contraception and condom use?
16. Are there differences in parents' attributes and sexual communication by adolescents' gender?

## Conceptual Framework

Important concepts from the Theory of Planned Behavior, the Social Cognitive, and the Ecodevelopmental Theory provided the contexts with which to guide this study. The Theory of Planned Behavior suggests that a person's behavior is determined by his/her intention to perform the behavior; thus, the best predictor of behavior is intention (Ajzen, 1991). This intention is determined by the person's beliefs and perceived behavioral control (self-efficacy). The Social Cognitive Theory posits self-efficacy as a central determinant of a behavior. Self-efficacy is a person's judgment of their capabilities to organize and execute courses of action required to attain designated types of performances (Bandura, 1986). The *mesosystem* and *macrosystem* layers from the Ecodevelopmental Theory provided the context with in which to explore aspects related to parent–adolescent sexual communication and cultural factors such as familialism and religiosity.

## Procedures

This study used secondary analysis of data from an existing experimental study with adolescents in an urban area in Mexico (Villarruel R01-NR04859 2001-2006). The study comprised a selected sample of 756 parents of adolescents between 14 and 17 years of age along with the adolescents themselves from four high schools in Monterrey, Nuevo Leon, Mexico (*effect size* = 0.03, *Power* = 0.91, $Critical\ F_{(12,751)}$ = 1.7651, *Lambda* = 22.92).

After the data were obtained from the principal researcher of the original study, all variables included in the analysis were reviewed to check for inconsistent or missing values. These measures consisted of a demographic sheet with seven scales for the adolescents and six scales for the parents. Statistical analyses were conducted using SPSS version 14 and Mplus version 4.2. Descriptive statistics (frequencies, percentages, means, standard deviations, mode and minimum and maximum), Pearson correlations, structural equation modeling, and MANOVA were used to answer the research questions. The analyses were conducted at an alpha level of significance below 0.05.

## DISCUSSION OF FINDINGS

A summary and discussion of the findings is presented in this section under the relevant research questions. The findings are discussed and compared to the findings from other studies.

### Demographic Characteristics

The adolescent participants ranged in age from 14 to 17 years ($M$ = 15.18), the majority whom were females (55.6%). The age range of this sample size is similar to other studies done in Mexico with adolescents; however, the mean age in most of these studies was above 16 years (Martinez et al., 2004; McCauley et al., 2004; Pineda et al., 2000; Villasenor et al, 2003). The fact that most of the adolescents were younger than those whose participated in other studies may be

related to the recruitment process. Recruitment was carried out in monthly parental meetings at the schools and attendance is higher for parents of students in the first year than those parents of students in the second year.

The participation of parents was a unique characteristic of this study because previous studies did not consider the dynamics of including the parent (Huerta-Franco, 1999; Lopez, 2001; Stewart et al., 2001). In particular, the topic of communication about sex has been investigated in only a few studies in Mexico with a correlational design (Gayet et al., 2002; Pick et al., 1995; Vernon et al., 2004). Those studies that included the communication about sex issue in their reports, considered only the adolescent in their sample and, therefore, the parents' perspective was excluded. Adding the parents, the study provided new information about the parents' perspective in Mexican population. In this study, parents' educational levels varied from some elementary education to a graduate degree and most were married.

## PARENTAL ATTRIBUTES

### *Self-efficacy for Sex Communication*

The mean for self-efficacy for sex communication was 3.71 (*SD* = 0.86). The scale was developed for the present study, so there are no related studies that used the same tool. However, other studies with a multi-ethnic parent sample (Hispanic and African American) used a similar scale for self-efficacy focused on communication about sexuality topics (*M* = 3.4, *SD* = 0.7) and responses ranged

from one, meaning “not at all prepared,” to four, signifying “very prepared” (O’Donnell, Stueve, Agronick, Wilson-Simmons, Duran, & Jeanbaptiste, 2005). Taking into account that the responses for the tool used in this study ranged form 1 to 5, mean scores in this study are lower than the study described above. Therefore, this finding may be different because of the use of different measures.

Self-efficacy for sex communication did not correlate with any of the adolescents’ attributes. One explanation for this may be that adolescents’ attributes were directed toward sexual behavior and parents’ attributes were directed toward communication. In other words two different kinds of self-efficacy and beliefs were measured between parents and adolescents. However, although there were no significant relationships found between parental self-efficacy for sex communication and adolescents’ attributes, parental self-efficacy for sex communication was correlated with the parental attributes mentioned below.

Parents with high levels of self-efficacy for sex communication had more positive beliefs toward communication ($r = .42$, $p < .001$) than parents with low levels of self-efficacy for sex communication. This relationship may be explained by Ajzen and Fishbein’s (1980) Theory of Planned Behavior, which holds that an individual’s actions are guided by their beliefs. In addition, as a general rule the more favorable the beliefs, the greater the perceived behavioral control (self-efficacy). Therefore, in the present study parents’ self-efficacy and beliefs are positively related to sexual communication. The Theory of Planned Behavior was

found to be useful in interpreting the parents' sexual communication as a behavior which is valuable in that this theory has been mostly used with adolescents.

### ***Beliefs toward Communication***

Parents had relatively high positive beliefs toward communication (*M* = 3.95, *range= 1.9 - 5*); this scale was also developed for the present study and it is the first time it has been used. Parents' beliefs have been studied before in Hispanics. Beliefs related to the positive results of communication such as HIV, STDs, and pregnancy prevention have been studied previously (DiIorio, Dudley, Leer, & Soet, 2000; Whitaker, Miller, May, & Levin, 1999). Other researchers have studied parents' conservative beliefs related to premarital sex (Kirby, Lepore, & Ryan, 2005). However although parents' beliefs have been studied from other perspectives there is no literature available about parents' beliefs toward communication. Therefore, these findings add new information to the research focused on parent-adolescent communication about sex.

In addition, parents' beliefs toward communication were positively correlated with familialism ($r = .12$, $p < .01$) and negatively correlated with religiosity ($r = -.33$, $p < .001$), meaning that parents with positive beliefs toward communication had high levels of familialism and low levels of religiosity. These findings can be explained by the interaction between the systems that the Ecodevelopmental Theory (Scazapocznick & Coatsworth, 1999) has stated. The macrosystems are society's broad and cultural patterns that shape the individual

development and affect the mesosytems that include parental monitoring and communication (Pantin, Schwartz, Sullivan, Prado, & Scazapocznick, 2004). In the case of this study, macrosystem cultural aspects such as familialism and religiosity influenced parents' beliefs toward communication.

### *Familialism*

The mean score reported by parents on familialism (familial obligations, family support, and family as a referent) was 3.82 (*range* = 1.77 - 5), which is similar to those scores reported in other studies with Latino adults (Lugo & Contreras, 2003; Marín, Sabogal, VanOss Marín, Otero-Sabogal, & Pérez-Stable, 1987). In this study, parents' familialism and adolescents' familialism were positively correlated ($r = .14$, $p < .001$). Both parents and adolescents answered the same questions about familialism. Although the correlation coefficient was low, this association demonstrated that familialism is a common cultural value for both parents and adolescents who participated in this study (Marín & VanOss, 1991). There are no published studies about the relationship between parents' and adolescents' familialism, but this finding may be related to the findings of Okagaki and Moore, (2000) in which parents' affective relationships were related to the common adolescents' beliefs and values from the family. The weak correlation between parents' familialism and adolescents' familialism may be related to the adolescents' disagreement about parents' authority relations and family obligations imposed by parents (Santisteban & Newman, 1998).

In addition, parents' familialism was associated with their communication about sex ($r = .15$, $p < .001$). Even though there are no published studies that relate parents' familialism with communication about sex, some researchers have reported that parent-adolescent communication is related to the feeling of closeness between parents' and adolescents (DiIorio, et al., 2000; Hutchinson & Conney, 1998). Therefore, this association may be related to the feeling of unity that is included in familialism (Sabogal, Marín, Otero-Sabogal, VanOss Marín, & Pérez-Stable, 1987). In other words, parents may perceive that communication about sex will make them closer to their adolescents, so they engage in communication more. Additionally, comfort with sex communication was not significantly correlated with familialism, which was contrary to the expected result. Parents in this study with high levels of familialism may consider that communication about sex is important. However, this does not mean that they feel comfortable communicating in the family context. This is similar to other studies with multiethnic samples of parents who reported that conversations can be uncomfortable for both parent and adolescents, but yet most parents attempt to communicate about sex (Baumeister, Flores, & VanOss Marín, 1995; Regnerus, 2005).

***Religiosity***

The mean score reported suggests that parents showed low levels of religiosity ($M = 2.04$, *range*=1-5). This religiosity scale has been used before with

Hispanic adolescents (Jemmott, Jemmott, & Villarruel, 2002), but it is the first time it has been used with Mexican parents. This finding of low levels of religiosity is contradictory to a study with Mexican families using a different measure that found high levels of religiosity (Rodriguez, Amuchastegui, Rivas, & Bronfman, 1995). There are two possible explanations about the low scores of religiosity in this sample of parents. One explanation may be related to the tool used in this study, which measures more about religious beliefs than practices. Another explanation may be that most people in Mexico define themselves as Catholics; however, most admit that they do not practice their religion (INEGI, 2005).

Parents' religiosity was not correlated with any of the adolescents' attributes. This finding has important implications for HIV/AIDS prevention in Mexican adolescents for the reason that some studies attribute the lack of condom use in adolescents to religion (Bronfman, Leyva, Negroni, & Rueda, 2002) and the finding in this study indicates that it is not the practice of religion, but the beliefs. This also means that parents are more open than the Catholic Church on sexuality and methods of prevention, where condom use is not allowed (Rosengard et. al., 2001). Taking into consideration that along with parents, religion is a primary socialization agent in adolescents (Wallace & Williams, 1997), there is an incongruence about the no significant relationship among parents' and adolescents' religiosity. Even when both parents and adolescents answered the same survey for religiosity, this may be explained because Mexican

communities tend to be conservative and rigid and focus on more traditional ways of life and the new trends point to a freedom of beliefs and religion (Pajewski & Enriquez 1996; Rizo et al., 2004). Parents and adolescents in this study may be experiencing those changes and there may be a conflict between the religious expectations and the spirituality needs (Vargas, 1998). Therefore, these findings provide new information about the phenomenon of religiosity and suggest that we need to explore the new trends in the Mexican society when studying Mexican families.

Finally, parents' religiosity was positively associated with their familialism ($r = .12$, $p < .01$), meaning that parents with high levels of religiosity had high levels of familialism. Although a different tool was used to measure the concept of religiosity, this finding is similar to those reported in other studies with multi-ethnic samples involving cultural values (Brook & Pahl, 2005). Parents consider familialism and religiosity to be part of their cultural values. This finding also supports what is proposed by the Ecodevelopmental Theory (Scazapocznick & Coatsworth, 1999), where the macrosystems (cultural aspects) affect the family interactions. The weak correlation coefficient may be explained by the new trends in Mexican families, where parents emphasize more freedom about adolescents' religious preferences and personal spirituality, which may create a conflict between the conservative beliefs of religion and its importance in the family context (Edgell, 2005; Salles & Tuiran, 1996). Therefore, findings from this study

show the importance of including cultural values when studying Mexican families.

## Adolescent attributes

### ***Self-efficacy for Sexual Behaviors***

The mean score reported for self-efficacy about sexual behaviors was 3.82 (*range* = 1-5), which is similar to the mean score reported in another study with Hispanic adolescents in the U.S. (Villarruel, Ronis, Jemmott, & Jemmott, 2004). This finding is also similar to studies with Mexican families on self-efficacy for sexual behaviors but using a different measure (Givaudan, Van de Vijver, & Poortinga, 2005; Martinez, 2004; McCauley, Pick, Givaudan, & Greene, 2004). As adolescents' self-efficacy for sexual behaviors increased, parents' levels of self-efficacy for communication also increased ($r = .11$, $p < .01$).

Although if the Pearson correlation coefficient was low, this parent–adolescent interaction may be explained by the Ecodevelopmental Theory (Scazapocznick & Coatsworth, 1999), which posits that there are multiple influences that affect adolescent development with respect to social contexts, these include: macrosystems, exosystems, mesosytems, and microsystems. In this case, mesosytem influences that are the interactions between important members of the different contexts in which the adolescents participate directly, are represented (Pantin, Schwartz, Sullivan, Prado, & Scazapocznick, 2004). In other

words, the mesosystem contains the interaction between parent and adolescent and it encompasses the relationships and interactions an adolescent has with his/her immediate structures, such as parents (Berk, 2003). Therefore, in this study parents' self-efficacy for sex communication (mesosystem) represents the interaction mentioned above with adolescents' self-efficacy for sexual behaviors, therefore, the Ecodevelopmental Theory is supported in this study.

Self-efficacy for sexual behaviors was positively correlated with beliefs toward sex ($r = .26$, $p < .001$). This means that adolescents with high levels of self-efficacy for sexual behaviors had more positive beliefs toward sex than those adolescents with low levels of self-efficacy for sexual behaviors. This finding is similar to the relationships found between control beliefs (self-efficacy) and beliefs about condom use reported in a study with Hispanic adolescents in the U.S. (Villarruel, Ronis, Jemmott, & Jemmott, 2004). This finding is also congruent with the reported relationships in other studies with Mexican families about self-efficacy for sexual behaviors using a different measure (Martinez, 2004, Martinez, Blumberg, et al., 2004; Martinez, Melbourne, et al., 2004). Givaudan, Van de Vijver, and Poortinga (2005) reported that Mexican adolescents' beliefs of whether their significant others should or should not perform certain behaviors (normative beliefs) was positively correlated with the adolescents' beliefs in their abilities to cope with the risks of a sexual encounter (self-efficacy). These findings support the Theory of Planned Behavior (Ajzen, 1991) and the Social Cognitive Theory (Bandura, 1986), where behavioral control

or self-efficacy is associated with the beliefs unconsciously accepted as true (Albarracin, Johnson, Fishbein, & Muellerleile, 2001). Therefore, these findings are congruent with previous studies and the conceptual framework.

### ***Beliefs toward Sex***

Adolescents were also asked about their beliefs toward sex (*M* = 3.87, *range* = 2-4.8), and the mean score suggests that adolescents in this sample had positive beliefs toward sex. This finding is similar to the mean score reported in Villarruel, et al.,s' (2004) study with Hispanic adolescents in the U.S. In the case of this study, beliefs toward sex were in relation to prevention and parental approval of sexual intercourse and condom and contraception use. These types of beliefs are called behavioral and normative beliefs in the Theory of Planned Behavior (Ajzen, 1991). Beliefs toward sex with Mexican adolescents has been studied from different perspectives. Other researchers have studied beliefs in terms of 1) myths and stereotypes, 2) AIDS as a homosexual disease, 3) people living with HIV/AIDS, and 4) adolescents' perceptions of vulnerability (Lopez & Moral de la Rosa, 2001; Stewart et al., 2001). The different conceptualizations and measurements developed may be because the studies using the Theory of Planned Behavior use the methods described by Ajzen (2002) related to the development of a tool. Therefore, definitions may vary according to theoretical frameworks.

Similar to parents' beliefs toward communication, adolescent beliefs toward sex were positively correlated with adolescents' familialism ($r = .15$, $p < .01$), meaning that adolescents with positive beliefs toward sex had high levels of familialism. These findings can be also explained by the interaction between the systems that the Ecodevelopmental Theory (Scazapocznick & Coatsworth, 1999) posits. There are multiple influences that affect adolescent development according to important social contexts. In this case the macrosytem influences intervene and these are broad and philosophical ideals that define a particular culture such as cultural and societal values (Pantin, Schwartz, Sullivan, Prado, & Scazapocznick, 2004). In other words the macrosystem contains familialism as a cultural value that interacts with the adolescents' beliefs toward sex. Therefore, the finding presented above supports the macrosystem interactions proposed by the Ecodevelopmental Theory.

***Familialism***

The mean score reported for adolescents on familialism ($M$= 3.84, *range* = 2.2-5) was very similar to the mean score for parents. This suggests that adolescents in the sample demonstrated high levels of familialism. Adolescents' familialism was positively correlated with self-efficacy for sexual behaviors ($r = 0.091$, $p < 0.05$). This suggests that adolescents who show high levels of familialism had more self-efficacy about sexual behaviors than those adolescents with low familialism scores. This is consistent with Villarruel, Jemmott, and

Jemmott, (2005) who demonstrated the importance of Latino cultural beliefs such as familialism thought to be particularly strong predictors in the adolescents' control beliefs (self-efficacy) regarding performing a sexual behavior such as condom use.

Moreover, the relationship among adolescents' self-efficacy for sexual behaviors and their familialism is congruent with the findings mentioned by Scazapocznick and Coatsworth (1999) in the Ecodevelopmental Theory in which cultural context (macrosystem) had an effect on the adolescent. Macrosystem influences intervene and are defined as broad and philosophical ideals that define a particular culture such as cultural and societal values (Pantin et al., 2004). In other words, the macrosystem contains the familialism as a cultural value that interacts with the adolescents' self-efficacy for sexual behaviors. Therefore, these findings are similar to those reported in the literature and support the Ecodevelopmental Theory.

***Religiosity***

The scores in adolescents' religiosity were also similar to that of the parents. The mean score reported suggests that adolescents showed low levels of religious beliefs ($M$ = 2.49, *range* = 1-5). In this study, adolescents' religiosity was not correlated with any of the parental and adolescent attributes, which is contradictory to research that reported religiosity as being associated with more conservative attitudes and beliefs about sex before marriage in multiethnic groups

(Bearman & Bruckner, 2001; Ku, Sonenstein, & Pleck, 1993; Werner-Wilson, 1998). In addition, religiosity was not associated with adolescents' intentions for contraception and condom use. This finding is also contradictory to those reported in the literature where religiosity was associated with delaying the initiation of sexual intercourse and with reporting fewer sexual partners in U.S. samples (Kirby, 1999; Mott, Fondell, Hu, Kowaleski-Jones, & Menaghan, 1996; Rostosky, Wilcox, Wright, & Randall, 2004). These findings may be related to the tool utilized, which measures religious beliefs and does not measure the various aspects of religiosity such as religious activity and dedication (Hill & Hood, 1999). Although studies show that most Mexican adolescents respect their traditions, the Catholic Church, and other churches (INEGI, 2005; Luengo Gonzalez, 2004), adolescents in this study may be affiliated with a religion, but may not practice it.

**Parents' Sexual Communication**

The mean score reported for communication about sex is above the mid point suggesting that most of the parents share some amount of information about sex with their adolescent ($M$ = 3.06, *range* = 1-5). Parents with high levels of self-efficacy for sex communication have high levels of communication about sex ($r$ = .53, $p < .001$), which is similar to that reported in other studies with multiethnic groups that used different measures where the parents' positive perceptions as sex educators were associated with the quantity and quality of communication about

sex (Rosental & Feldman, 2000). Parents with high levels of self-efficacy about sex communication felt more comfortable discussing sex ($r = .54$, $p < .001$). Although researchers have noted the relationship between parents' self-efficacy and communication about sex, few have reported its association with comfort with sex communication (Eastman, Corona, & Schuster, 2006; O'Donnell et al., 2005). Thus, these findings present new information about this phenomenon of parents' communication about sex. However, it will be helpful to future explore parent-adolescent communication about sex using a Communication Theory to see if the findings are similar or not.

Parents' beliefs toward communication also correlated with parents' communication about sex ($r = 0.36$, $p < 0.001$). This means that beliefs may be an important influence for parent–child communication about sex, which is similar to the results of other research that presents strong evidence about the relationship between beliefs and parental communication about sex in multiethnic samples (Carroll et al., 1999; Hutchinson & Coney, 1998; Rosental & Feldman, 2000). Moreover, the evidence shows that greater communication may have a positive impact if parents' beliefs are more liberal and if they recognize their adolescent children's sexual activities (Kirby, 1999). Findings from Romo et al. (2001) are congruent with the findings in this study. Romo et al. reported that Hispanic mothers who talked more about sexuality believed that their children were exposed to HIV and drugs. Moreover, parents with positive beliefs toward communication had high levels of comfort with discussing sex ($r = .36$, $p < .001$).

Even though other studies showed similar associations between parents' beliefs and communication about sex, comfort with sex communication had not been explored in relation to beliefs about such communication. Together, these findings underscore the importance of parents feeling comfortable about discussing sex.

Parents' communication about sex was positively correlated with familialism ($r = .15$, $p < .001$) and negatively correlated with religiosity ($r = -.33$, $p < .001$). This means that parents with higher levels of sex communication had high familialism levels and lower religiosity levels. In addition, parents' comfort with sex communication was negatively correlated with religiosity, but with a low coefficient ($r = -.094$, $p < .05$). This is congruent with the study by Pantin et al. (2004) about how Hispanic parents' beliefs relate to values of respect and obedience and may affect parent–adolescent communication about sex and the adolescents' and parents' comfort with sex communication. Thus, the current study found a significant correlation between parents' communication about sex and comfort with sex communication, which is congruent with studies with Hispanic parents that reported that it is more likely that parents discuss sex when they feel more comfortable talking about sex (Miller and Whitaker, 2001; Perrino et al., 2000). However, while it is clear that values such as familialism can affect parents' sex communication, there is little information about the influence of religiosity.

**Adolescents' Sexual Communication**

The mean score among adolescents for communication about sex was 3.38 (*range*= 1-5) and the adolescents' mean score reported for comfort with sex communication was 2.52 (*range*= 1-4), which is similar to the mean scores reported by parents. Parents' mean score of communication about sex was a little higher than the adolescent mean score, but the parents' means score on comfort with sex communication was slightly lower than the adolescent mean score. However, no conclusions can be made about these differences because no statistical analysis was performed to explore the score differences. In a study with Mexican parents that used a different measure for communication about sex showed that parents have lower expectations for communication about sex because they think that adolescents should also receive information from their teachers (Pineda, Ramos, Frias, & Cantu, 2000). Moreover, researchers mentioned that they seek a parents' advice when they have concerns about sexually transmitted diseases, AIDS, or sex, however, the adolescents' first choice for communication about sex are the teachers (Pineda et al., 2000).

Adolescents' communication about sex was positively correlated with beliefs toward sex ($r = .07$, $p < .05$) and familialism ($r = .21$, $p < .001$). This is congruent with the model by Benavides, Bonazzo, and Torres (2006) about how personal beliefs and cultural characteristics affect parent–adolescent communication. This finding also supports the Ecodevelopmental Theory, where parent–adolescents communication about sex is a part of the mesosytem and

interacts with the macrosystem (cultural context: religiosity and familialism). Once more, religiosity was not found to influence adolescents' communication about sex. This finding is contrary to the expected, so the lack of relationship among adolescents' communication about sex and their religiosity may explain that religion was not as important for Mexican adolescents as previous studies suggest (Givaudan, Van de Vijver, & Poortinga, 2005). The religiosity scale may be more useful in examining only religious beliefs than the other aspects of religiosity.

In the case of adolescents' comfort with sex communication, this was positively correlated with their self-efficacy for sexual behaviors ($r = .11$, $p < 0.05$), familialism ($r = .14$, $p < .001$), and negatively correlated with religiosity ($r = -0.09$, $p < 0.01$). This suggests that adolescents who are more comfortable talking about sex had higher self-efficacy for sexual behaviors, higher familialism levels, and lower religiosity levels than those adolescent with low level of comfort for sex communication. There is little known about the effects of comfort with sex communication on these variables, so these findings present new information about the phenomenon of parent–adolescent communication about sex and the role of comfort with sex communication in HIV/AIDS prevention in Mexican adolescents.

Parents' and adolescents' levels of communication about sex were positively correlated ($r = .32$, $p < .001$). In addition, parents' and adolescents' levels of comfort with sex communication were also positively related ($r = .27$, $p$

< .001). This means that when parents have high levels of parental communication about sex and high levels of comfort with sex communication, adolescents also have high levels of sex communication and comfort with sex communication. These results are congruent with several studies done in U.S. about parent–adolescent communication about sex and comfort with sex communication (Burgess, Dziegielewski, & Green, 2005; Heisler, 2005; Jaccard, Dittus, & Gordon, 1998). These findings support the proposed interaction between parent and adolescent sexual communication (communication about sex and comfort with sex communication).

**Intentions for Contraception and Condom Use**

The reported mean of intention for contraception and condom use in the adolescent sample was 4.45 (*range* = 1-5). This suggests that adolescents were likely to use contraception, including condoms. This finding is similar to the mean score reported in Villarruel, et al., (2004) study on Latino adolescents in the United States. This mean score is also similar to that found in another study with Mexican adolescents that used a different measure. The mean score of intentions for that study was above the midpoint of the response in the scale (Givaudan, Van de Vijver, & Poortinga, 2005). No parental attributes were correlated with the adolescents' intentions for contraception and condom use. This finding may be related to the scales that measured two different concepts because question for

parental attributes were oriented toward communication and questions for adolescents' intentions were oriented toward contraception and condom use.

In the case of adolescents' attributes, intentions for contraception and condom use were strongly and positively associated with adolescents' self-efficacy for sexual behaviors ($r = .41$, $p < .001$), their beliefs toward sex ($r = .58$, $p < .001$), and moderately associated with their familialism ($r = .11$, $p < .01$). These findings suggest that those adolescents with high levels of self-efficacy for sexual behaviors, positive beliefs toward sex, and high familialism levels had high intentions to use contraception, including condoms. These findings are derived from the Theory of Planned Behavior and Theory of Reasoned Action (Ajzen, 1991), which posits that the person's intentions to perform a behavior are influenced by the person's beliefs about the specific behavior. In addition, the Social Cognitive Theory (Bandura, 1986) assumes that the behavior is determined by the expectations of one's ability to perform the behavior, which is conceptualized as self-efficacy. Thus, there is enough support to suggest that adolescents' intentions for contraception and condom use are associated with adolescents' beliefs toward sex and adolescents' self-efficacy for sexual behaviors. The influence of familialism has been previously discussed using the Ecodevelopmental Theory.

Similar to parental attributes, none of the parent sexual communication variables were correlated with adolescents' intentions for contraception and condom use. However, although adolescents' communication about sex and

comfort with sex communication were positively associated with their intentions for contraception and condom use, the coefficients were low ($r = .08$, $p < .05$ and $r = .08$, $p < .05$, respectively). Although there is strong qualitative and quantitative evidence to suggest that parent–adolescent communication about sex and comfort with sex communication play an important role in Mexican adolescents' sexual health such as, abstinence, fewer sexual partners, and more contraceptive use (DiClemente et al., 2001; Gayet et al., 2002; Miller, Kotchick, Forehand, & Ham, 1998; Stern, Fuentes, Lozano, & Reynoso, 2003; Stewart et al.; Tapia-Aguirre et al., 2004; Vernon & Dura, 2004; Villarruel et al., 2003; Whitaker, Miller, May, & Levin, 1999), in this study, these variables were not associated with adolescents' intentions for contraception and condom use. These findings may suggest that parents' sexual communication promote only safe sex behaviors in adolescents but does not affect adolescents' intentions for contraception and condom use.

**Findings from the Interaction Model of Parents and Adolescents**

One of the characteristics of the model is that it depicts parent–adolescent interactions as having an effect on adolescents' intentions for contraception and condom use. Parents' attributes included self-efficacy for sex communication, beliefs toward communication, familialism, and religiosity. Adolescents' attributes included self-efficacy for sexual behaviors, beliefs toward sex, familialism, and religiosity. Parent and adolescent sexual communication included

communication about sex and comfort with sex communication. Finally, the dependent variable in the model was intentions for contraception and condom use. Therefore, the purpose of the study was to test the model above. Research questions 12, 13, and 14 addressed the effects of parents' attributes and adolescents' attributes on adolescents' intentions for contraception and condom use. However, the correlations between the variables showed that adolescents' intentions were not a good indicator to be included in the model. This may be explained because the measure used for intentions had three items asking about condom use and one item asking about contraception use. Recommendations to use structural equation modeling suggest that there should be at least three indicators for each latent variable (Arbuckle, 2003) and in the case of the intentions for contraception and condom use that was not possible. Therefore a better outcome measure may be adolescent's intentions for sexual behaviors in an instrument that include three subscales: contraception use, condom use, and sexual behavior.

The path for the initial model had 15 observed variables, with four different latent variables (factors) being hypothesized. The model fit indices suggest that the sample data were not an acceptable fit to the combined measurement model ($X^2_{(30)} = 92.215$, $p = 0.0000$, $CFI = 0.97$, $TLI = 0.95$, $RMSEA = 0.05$, $SRMR = 0.04$). Based on the Pearson product–moment correlation coefficients, the observed variables of parents' and adolescents' familialism and religiosity were also excluded from the structural equation modeling analyses.

Two alternative models that have acceptable fits were obtained, but based on the theoretical background, one was selected ($X^2_{(15)}$ = 27.289, $p$ = .0265, $CFI$ = .99, $TLI$ = .99, $RMSEA$ = .03, $SRMR$ = .02).

In this model, parents' attributes (self-efficacy for sex communication and beliefs toward sex) showed strong a relationship ($r$ = 0.80) with parents' sex communication levels (communication about sex and comfort with sex communication). An additional moderately strong correlation between adolescents' sex communication and parents' sex communication was found ($r$ = .31). Why parents' and adolescents' familialism and religiosity did not correlate with parents' and adolescents' attributes is unclear, so futures studies may explore this issue. Although it may be related to the use of the familialism and religiosity scales, which may not be a good cultural indicator for Mexicans. Those scales have been used previously with Hispanics however, this was the first time that the familialism and religiosity tool were used in Mexican samples and may need further adaptations.

Initially in the model parents' and adolescents' sexual communication (communication about sex and comfort with sex communication) were considered as mediators. Due to the elimination of adolescents' intentions for contraception and condom use, analysis of the final model were unable to consider the mediator effect of sexual communication between parents' and adolescents' attributes and adolescents' intentions for contraception and condom use. It is also possible that parents' and adolescents' sexual communication may have been acting as a

moderator rather than mediator as proposed in the model, but no analysis was performed to support this. Additional explanations about the lack of correlation between adolescents' intentions for contraception use and other variables in the model are explained by the theory of planned behavior which posits that people's beliefs are related to their intentions. Therefore this finding is congruent with the Theory of Planned Behavior. By eliminating intentions for contraception and condom use from the model, the effects of adolescents' attributes were not explored. Therefore, findings from the model add new information in relation to the phenomenon of parent-adolescent sexual communication and explain the direct effects of parents' attributes on parents' sexual communication and the direct effect of parents' sexual communication on adolescents' sexual communication.

**Findings related to gender**

There was sufficient evidence to conclude that gender has an effect on the variables in this study ($F_{13} = 10.46$, $p < 0.001$). Gender accounted for around 16% of the variability on the mean averages of the adolescents' and parents' variables. In the case of parents, univariate effects regarding adolescent gender were significant for: beliefs toward communication, familialism, communication about sex, and comfort with sex communication. The means for all the above variables were significantly higher for parents with females adolescents than for those parents with male adolescents. These findings may be explained by the fact that,

in previous studies with Mexican adolescents, a higher percentage of females compared with males perceived parent–adolescent communication as being more clear and direct (Huerta-Franco, 1999). In addition, most of the parent participants in this study were mothers and researchers have reported that Mexican adolescent females prefer to talk with their mothers, whereas males have a preference to talk with their fathers (Gayet, Rosas, Maguis, & Uribe, 2002).

The following gender differences were found among adolescents in the sample. The mean for self-efficacy about sexual behaviors was significantly higher for females than males, which is similar to that reported by other researchers where more than half of the Mexican female participants had significantly higher levels of self-efficacy than males with respect to sexual behaviors (Lopez, 1998; Martinez, Blumberg et al., 2004; Marinez & Melbourne et al., 2004). The mean for beliefs about sex was significantly higher for males than females. This finding is contradictory to that reported in other studies with Mexican adolescents, which used a different scale to measure beliefs toward sex. In that study males were more likely to agree somewhat or completely with the view that condoms make sex less exciting, romantic, pleasurable, and make them appear too experienced (Martinez, Melbourne, et al., 2004). In general, previous studies with Mexican adolescents demonstrated that males held more negative beliefs about condoms compared with females (Gayet et al., 2003; Martinez, Melbourne et al., 2004). There is not a clear explanation about why beliefs toward sex were higher in males than females. However, it is possible that in north

Mexico the cultural values related to gender are changing because of the influence of US culture. The adolescents in this study were primarily from this northern geographical area. Therefore, future studies in the center or southern part of Mexico may explore these gender differences further.

The mean for familialism was significantly higher for males than females and there is no published literature that discuses this topic in Mexico. It is possible that males may prefer to maintain aspects of familialism because of where they are located in the family structure in a patriarchal society. Thus, this finding provides new information about cultural characteristics related to adolescent gender. The mean for religiosity was also significantly higher for males, which is contradictory to the evidence in other studies in U.S. that provided evidence about higher scores of religiosity in females (Rostosky, Regnerus, & Wright, 2003). Although there is not a clear explanation about why male adolescents in this study score higher than females, it may be related to the new feminist movements that are changing the belief in Mexican females adolescents about virginity as a condition to marry and the use of contraceptives and condom use (Franco, 1990). It is also possible that males may see religion as a tool to maintain traditional values and to maintain the power structure of the family.

Finally, the mean for intentions for contraception and condom use was significantly higher for female adolescents than males. This finding is contradictory to other studies with Mexican adolescents that used different scales

to measure intentions for sexual behaviors. Previous investigators have reported that there is a higher proportion of boys who have intentions to use condoms during their first sexual intercourse in comparison with girls (Gayet et al., 2003; Tapia-Aguirre et al., 2004; Villaseñor-Sierra et al., 2003). This may be explained by other studies that found that girls who had not used a condom during their first experience of sexual intercourse were later found to have a higher percentage of condom use compared to males (Gayet et al., 2003; Martinez, 2003). In this study adolescents were asked during a three month period about their intentions for contraception and condom use that may have provided female adolescents an opportunity to think more about future consequences than males, which may point to future research about gender differences in time orientation.

## METHODOLOGICAL ISSUES AND LIMITATIONS

The findings in this study are limited by various factors. As this is a cross-sectional study, data over time were missing, and thus, no 'cause and effect' can be determined. Findings are not generalizable beyond a single geographical urban area in Mexico. In addition, findings may not be generalizable to younger (middle school) or older adolescents (university level) and their parents. Volunteer or participation bias may exist because of the sensitive nature of the study. Mexican communities tend to be conservative and rigid and focus on more traditional ways of life; many attitudes and beliefs are shaped by culture and societal norms. Thus, taboos about sexuality were recognized as important factors that may provide

difficulties regarding parental approval for adolescents' participation in this study. Additionally, all data were self-reports, therefore, this may have caused an over or under estimation in the measures.

A secondary analysis of the data in this study had several advantages but some limitations were encountered during the course of the study. These data were collected for another purpose (to test the efficacy of an intervention regarding parents and adolescents in Mexico) and, therefore, the principal researcher in the present study had limited control over the data-collection process or of selected variables. Moreover, this study was limited by the specific variables, scales, and individuals selected in the original study. Gaining familiarity with the data was an issue in this study, although this was resolved with the help of complete data documentation in a codebook that listed the variables in the data file.

The proposed model included familialism and religiosity to see the effect of cultural variables on adolescents' intentions for contraception and condom use. These two variables were not included in the final model, but we can not conclude that they do not have an effect. Culture is very important in Mexican society and an explanation of this lack of relationships may be that those are acting as mediators or moderator, without having a direct effect on the adolescents' intentions for contraception and condom use. Additional explanation may be that both tools had been previously used with Latino adolescents; however, their use with Mexican populations may necessitate further adaptations.

## CONCLUSIONS

Although the proposed model in this study explained only the role of parents' attributes and adolescents' sexual communication on parents' sexual communication, several conclusions can be drawn. There was no statistical analysis to conclude that adolescents had higher levels of familialism, religiosity, and communication about sex than parents, they felt less comfortable talking about sex. The only two parental and adolescent attributes that showed significant relationships were between 1) parents' beliefs toward communication and adolescents' self-efficacy for sex behaviors and 2) parents' familialism and adolescents' familialism.

Conclusions about parents' communication about sex are that parents with high levels of self-efficacy about sex communication and beliefs on such communication showed high levels of communication about sex and comfort with talking about sex. Parents with high levels of familialism discussed sex more and those with high levels of religiosity were involved in fewer discussions. For adolescents we can conclude the following about sexual communication and its relation to adolescents' attributes. Beliefs toward sex had almost no association with communication about sex, because the Pearson product–moment coefficient was very low, which is similar to that between religiosity and comfort with sex communication. Thus, this suggests that adolescents with high levels of familialism talk more about sex and felt more comfortable doing so. Moreover, if parents had high levels of communication about sex and high levels of comfort

with such communication, adolescents talk more often about sex and feel comfortable doing so.

None of the parental attributes or sexual communication variables were correlated with the adolescents' intentions for contraception and condom use. Almost all the adolescent attributes were correlated with his/her intentions for contraception and condom use, with the exception of religiosity. Although communication about sex and comfort with sex communication were associated, the correlation coefficients were too low to be considered. Therefore, the only plausible conclusion is that adolescents with high levels of self-efficacy for sexual behaviors, beliefs toward sex, and familialism had high intentions for contraception and condom use. This is congruent with the proposed by the Theory of Planned Behavior.

There was also some mean difference according to adolescent gender. Parents' beliefs about communication, familialism, communication about sex, and comfort with sex communication were higher for those parents with a female adolescent than the parents with a male adolescent. In the case of adolescents, self-efficacy for sexual behaviors and intentions for contraception and condom use were higher for females than males. The mean scores for beliefs toward sex, familialism, and religiosity were higher for boys than girls. Conclusions from testing the model are that parents' attributes (self-efficacy for sex communication and beliefs toward sex) and adolescents' sexual communication (communication about sex and comfort with communication) had direct effects on parents' sexual

communication (communication about sex and comfort with communication). This occurred even when parents' and adolescents' interactions were only partially observed when testing the model. As mentioned before, there were several interactions found in terms of relationships between variables. There are still several gaps in the literature related to the reality of HIV/AIDS in Mexico in relation to cultural attributes, adolescents' intentions, and sexual behaviors.

The conceptual framework used in this study was appropriate. The Theory of Planned Behavior helped to understand the findings relating to adolescents' attributes (self-efficacy for sexual behaviors and beliefs toward sex) and intentions for contraception and condom use. The Social Cognitive Theory in conjunction with the Theory of Planned Behavior explained and supported the findings relating to self-efficacy. And lastly, the Ecodevelopmental Theory provided the context to guide this study. Its mesosystem construct provided support to include parental interactions with their adolescents (parent-adolescent sexual communication) and its macrosystem supplied the cultural aspects of familialism and religiosity.

## IMPLICATIONS AND RECOMMENDATIONS

Based on the findings and conclusions in this study, there are several implications and recommendations for nursing practice and research. Nurses should focus on preventing and decreasing risk factors and on promoting protective factors. Risk factors may be low self-efficacy for sexual behaviors,

negative beliefs toward sex, and cultural aspects such as machismo. There is, however, still more work that needs to be done in relation to the identification of risk factors. It is important to recognize these risk factors when creating programs to promote adolescent sexual health in order to endorse protective factors. Findings from this study may suggest that communication about sex and familialism may be effective protectors for adolescents' intentions for contraception and condom use. Nursing efforts should be directed toward persuading government and societal institutions to engage themselves more in adolescents' sexual health. Moreover, this study was done in schools and underserved adolescents may be those who do not go to school. Therefore may be different findings may be encountered with adolescents with different characteristics such as different socioeconomic status, family composition or different ages.

There were differences according to the adolescents' gender in this study. In Mexico, the problem of inequality is a big issue: women are portrayed as submissive and hold less social power than men. It is essential to provide girls with opportunities to talk about their feelings around sex and the negotiation of protection in a sexual relationship in the development of new programs. Involving families in this process may help to change this sexist mentality toward females. Therefore, effective programs of parent–adolescent sexual communication should be developed that address gender roles in society. Some differences were found between the parents' and the adolescents' scores in the scales and it suggests that

future research should analyze these differences. Knowing the differences between parents' perceptions and adolescents' perceptions may help to aid understanding about the importance of cultural values on issues such as familialism and religiosity. Effective interventions may include what is only significant for the group of parents and what is significant for the group of adolescents. In addition, variables that should be gender specific may need future exploration.

Based on the Ecodevelopmental Theory, there is an interaction process that occurs between parents and adolescents. Future research should, therefore, focus on those parental attributes relating to adolescents' intentions for sexual behaviors. Findings from this study suggest that intentions are not affected by parent–adolescent sexual communication. There are still several gaps in the literature relating to the reality of HIV/AIDS in Mexico in relation to cultural aspects, adolescents' sexual intentions, and sexual behaviors. Despite the global importance of HIV/AIDS prevention in Mexican adolescents, few studies have been conducted by nurses in this population. Therefore, the results of this study enhance nursing research by providing a solid conceptual foundation for further studies relating to HIV/AIDS prevention in adolescents in underdeveloped countries. Hence, nurses are in a prime position to conduct research focusing on improving sexual health in adolescents because they provide a holistic view to the issue. In addition nurses may develop curriculums that include the component of parent-adolescent sexual communication.

### SUMMARY

This chapter has presented a summary and discussion of the study and the findings of a cross-sectional and exploratory study that involved the secondary analysis of data. The effects of parents' and adolescents' attributes and sexual communication on adolescents' intentions for contraception and condom use were discussed. This chapter also presented a discussion of the relationships between the variables of the study and their differences according to adolescent gender. Finally, conclusions were made, with implications for nursing and recommendations for practice and future research.

# Appendices

## APPENDIX A

**Adolescent Questionaires**
(*English Translation)*

**I. Auto eficacia/ Control sobre conductas (Fácil o Difícil)**
***Self-efficacy/ Perceived behavioral Control (Easy or Hard)***

1. ¿Qué tan fácil o difícil se te haría hacer que tu pareja no tenga relaciones sexuales, aunque ella/el quisiera?
*How easy or hard would it be for you to get your partner not to have sex, even if she/he wanted to?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

2. ¿Qué tan fácil o difícil se te haría lograr que tu pareja use un método anticonceptivo, aunque ella/el no quiera?
*How easy or hard would it be to get your partner to use a method of contraception, even if she/he didn't want to?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

3. ¿Qué tan fácil o difícil se te sería usar condones cuando tengas relaciones sexuales?
*How easy or hard would it be to use condoms when you have sex?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

4. ¿Qué tan fácil o difícil se te haría lograr que tu y tu pareja usen un condón, aunque ella/el no quiera?
*How easy or hard would it be to get your partner to use a condom even if she/he didn't want to?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil *very hard* | Difícil *hard* | Ni difícil, Ni fácil *neither hard nor easy* | Fácil *easy* | Muy Fácil *very easy* |

5. Estoy seguro/a de que puedo usar un condón si tengo relaciones sexuales.
*I am sure that I can use a condom if I have sex.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

## II. Creencias de Conducta y de Normas
## *Behavioral/ normative beliefs*

1. ¿Tu madre aprobaría o desaprobaría si tuvieras relaciones sexuales en los próximos 3 meses?
*Would your mother approve or disapprove of you having sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

2. ¿Tu padre aprobaría o desaprobaría si tuvieras relaciones sexuales en los próximos 3 meses?
*Would your father approve or disapprove of you having sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

3. ¿Tu madre aprobaría o desaprobaría que tu y tu pareja usaran algún método anticonceptivo si tienen relaciones sexuales en los próximos 3 meses?
*Would your mother approve or disapprove of you and your partner using some contraceptive method if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

4. ¿Tu padre aprobaría o desaprobaría que tu y tu pareja usaran algún método anticonceptivo si tienen relaciones sexuales en los próximos 3 meses?
*Would your father approve or disapprove of you and your partner using some contraceptive method if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

5. ¿Tu madre aprobaría o desaprobaría que usaras un condón si tienes relaciones sexuales en los próximos 3 meses?
*Would your mother approve or disapprove of you using a condom if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

6. ¿Tu padre aprobaría o desaprobaría que usaras un condón si tienes relaciones sexuales en los próximos 3 meses?
*Would your father approve or disapprove of you using a condom if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Desaprobaría mucho *strongly disagree* | Desaprobaría *disagree* | Ni aprobaría ni desaprobaría *neither agree nor disagree* | Aprobaría *agree* | Aprobaría mucho *strongly agree* |

7. Si no uso algún método anticonceptivo cuando tengo relaciones sexuales es probable que me embarace (embarace a una muchacha) durante mi adolescencia.
*If I do not use some contraceptive method when I have sexual relations it is likely get pregnant (a girl will get pregnant) during my adolescence.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

8. Los condones ayudan prevenir las Enfermedades de Transmisión Sexual.
*Condoms help prevent STDs.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

9. Los condones ayudan a prevenir los embarazos.
C*ondoms help to prevent pregnancies.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

10. Los condones ayudan a prevenir el SIDA.
*Condoms help to prevent AIDS.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

11. Si tengo relaciones sexuales, es probable que me contagie de SIDA.
*If I have sex, I'm likely to get AIDS.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

12. Si tengo relaciones sexuales durante mi juventud, tengo menos probabilidad de lograr la carrera que deseo.
*If I have sex during my teen years, then I am less likely to have the career that I am hoping for.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

**III. Intenciones**
***Intentions***

1. ¿Qué tan probable es que tu y tu pareja decidan usar algún método anticonceptivo si tienen relaciones sexuales en los próximos 3 meses?
*How likely is it that you and your partner will decide to use some contraceptive method if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy improbable *very unlikely* | Improbable *unlikely* | Ni probable ni improbable *neither likely nor unlikely* | Probable *likely* | Muy probable *very likely* |

2. ¿Qué tan probable es que decidas usar un condón si tienes relaciones sexuales en los próximos 3 meses?
*How likely is it that you will decide to use a condom if you have sexual relations in the next 3 months?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy improbable *very unlikely* | Improbable *unlikely* | Ni probable ni improbable *neither likely nor unlikely* | Probable *likely* | Muy probable *very likely* |

3. Trataré que mi pareja use condones si tenemos relaciones sexuales en los próximos 3 meses.
*I will try to get my partner to use condoms if we have sex in the next 3 months.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

4. Planifico usar condones si tengo relaciones sexuales en los próximos 3 meses.
*I plan to use condoms if I have sex in the next 3 months.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

## APENDIX B

### Parent Questionaires

(*English Translation)*

### I. Auto eficacia para la comunicación acerca de sexo (Fácil o Difícil)
***Self-efficacy regarding sex communication (Easy or Hard)***

1. ¿Qué tan fácil o difícil sería para Usted hablar con su hijo acerca de sexo?
*How easy or difficult would it be for you to talk with your child about sex?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

2. ¿Qué tan fácil o difícil sería para Usted iniciar una conversación con su hijo(a) sobre su conducta sexual?
*How easy or difficult will it be for you to start a conversation with you son/daughter about sexual behavior?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

3. ¿Qué tan fácil o difícil será para Usted decirle a su hijo(a) que se abstenga de tener relaciones sexuales?
*How easy or difficult will it be for you to tell your son/daughter to abstain from sex?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

4. ¿Qué tan fácil o difícil será para Usted hablar con su hijo(a) que use métodos anticonceptivos y/o condones si tiene relaciones sexuales?
*How easy or difficult will it be to tell your son/daughter to use contraceptive methods and/or condoms is they have sex?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil | Difícil | Ni difícil, Ni fácil | Fácil | Muy Fácil |
| *very hard* | *hard* | *neither hard nor easy* | *easy* | *very easy* |

5. ¿Qué tan fácil o difícil sería para Usted convencer a su hijo(a) de usara algún método anticonceptivo o un condón durante la relación sexual?
*How easy or difficult would it be for you to convince your son/daughter to use a contraceptive method during sex?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy difícil<br>*very hard* | Difícil<br>*hard* | Ni difícil, Ni fácil<br>*neither hard nor easy* | Fácil<br>*easy* | Muy Fácil<br>*very easy* |

**II. Creencias acerca de la comunicación sobre sexualidad**
***Parent-child communication beliefs***

1. Puedo hablar con mi hijo(a) sobre mis creencias, sin sentirme reprimido(a) o avergonzado(a).
*I can talk with my son/daughter about my beliefs without feeling rebuked or embarrassed.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo<br>*strongly disagree* | En Desacuerdo<br>*disagree* | Ni de acuerdo, ni en desacuerdo<br>*neither agree nor disagree* | De Acuerdo<br>*agree* | Completamente de acuerdo<br>*strongly agree* |

2. Mi hijo(a) no es bueno para escuchar.
*My son/daughter isn't a good listener.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo<br>*strongly disagree* | En Desacuerdo<br>*disagree* | Ni de acuerdo, ni en desacuerdo<br>*neither agree nor disagree* | De Acuerdo<br>*agree* | Completamente de acuerdo<br>*strongly agree* |

3. Me siento muy satisfecho(a) de la manera en que mi hijo(a) y yo conversamos.
*I feel very satified with the way my son/daughter and I converse.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo<br>*strongly disagree* | En Desacuerdo<br>*disagree* | Ni de acuerdo, ni en desacuerdo<br>*neither agree nor disagree* | De Acuerdo<br>*agree* | Completamente de acuerdo<br>*strongly agree* |

4. Puedo demonstrarle cariño abiertamente a mi hijo(a).
*I can openly demosntrate affection toward my son/daughter.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

5. Mi hijo(a) sabe como me siento sin preguntarme.
*My son/daughter knows how I feel without asking me.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

6. Cuando pregunto, no obtengo respuestas honestas de mi hijo(a).
*When I ask, I don't get honest answers from my son/daughter.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

7. Mi hijo(a) trata de entender mis puntos de vista.
*My son/daughter tries to understand my point of view.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

8. Encuentro difícil discutir problemas con mi hijo(a).
*I find it difficult to discuss problems with mhy son/daughter.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

9. Es difícil para mí, expresarle a mi hijo(a) mis verdaderos sentimientos.
*Its difficult for me to express my true feelings to my son/daughter.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

10. Si estuvieraen problemas podría decirle a mi hijo(a).
*If I had a problem I could tell my son/daughter.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

## APPENDIX C

**Adolescent/ Parent Questionaires**
(*English Translation)*

**I. Información General**
***Demographics***

1. ¿Cuántos años tienes? _____ años
*How old are you?_______ years*

2. Marca con una cruz tu sexo
___ femenino ___masculino
*What is your sex?*
*___ female ____ male*

3(adolescent). ¿Cuál fue el último grado que cursaste (si ya no estás en la escuela) o qué estás cursando (si estás en la escuela)?
*What is the last grade you studied (if you are not in school) or what are you studying (if you are in school)?*
___Primer semester *(first semester)*
___Segundo semester *(second semester)*
___Tercer semester *(third semester)*
___Cuarto semester *(fourth semester)*

3 (parent). Nivel más alto de estudios alcanzados
*Higest level of studies reached*

1. Primaria incompleta *(did not complete elementary school)*
2. Primaria completa *(completed elementary school)*
3. Secundaria incompleta *(did not complete middle school)*
4. Secundaria completa *(completed middle school)*
5. Estudios técnicos o secretariales incompletos *(did not complete technical Or secretarial school [vocational school])*
6. Estudios técnicos o secretariales completos *(completed technical Or secretarial school [vocational school])*
7. Preparatoria incompleta *(did not complete preparatory [high] school)*
8. Preparatoria completa *(completed preparatory [high] school)*
9. Profesional incompleta *(did not complete professional school [college])*
10. Profesional completa *(completed professional school [college])*
11. Post-grado incompleta *(did not complete graduate studies)*
12. Post-grado completa *(completed graduate studies)*

4 (parent). Estado Marital
*Marital Status*
1. Soltero/a (*single)*
2. Casado/a (*married)*
3. Separado/a *(separated)*
4. Divorciado/a *(divorced)*
5. Viudo/a *(widow/widower)*

**II. Comunicación acerca de sexualidad… [parent adaptation]**
**Parent sexual risk communication**

1. ¿Qué tanta información te ha dado tu padre (madre)… [le has dado a tu hijo/a] sobre como evitar el embarazo?
*How much information has your father (mother) shared with you… [have you shared with your son/daughter] about how to avoid pregnancy?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

2. ¿Qué tanta información te ha dado tu padre (madre)… [le has dado a tu hijo/a] sobre las enfermedades de transmisión sexual?
*How much information has your father (mother) shared with you… [have you shared with your son/daughter] about sexually transmitted infections?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

3. ¿Qué tanta información te ha dado tu padre (madre)… [le has dado a tu hijo/a] sobre VIH/SIDA?
*How much information has your father (mother) shared with you… [have you shared with your son/daughter] about HIV/AIDS?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

4. ¿Qué tanta información te ha dado tu padre (madre)… [le has dado a tu hijo/a] sobre como protegerte para que no te contaigies de enfermedades venéreas/de trasmisión sexual o SIDA?
*How much information has your father (mother) shared with you… [have you shared with your son/daughter] to protect you from getting contaigous diseases/sexual transmitted diseases or AIDS?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

5. ¿Qué tanta información específica sobre el uso del condón te ha dado tu padre (madre)… [le has dado a tu hijo/a]?
*How much specific information about the use of condoms has your father (mother) shared with you… [have you shared with your son/daughter]?*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

6. ¿Qué tanta información te ha dado tu padre (madre)… [le has dado a tu hijo/a] sobre esperar hasta que seas mayor para tener relaciones sexuales?
*How much information have your parents told you… [have you shared with your son/daughter] about wait to get older to have sex?*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

7. ¿Qué tanta información te han dicho tus padres… [le has dado a tu hijo/a] sobre la presión sobre tener sexo de tus amigos y de con quien sales novio (a)?
*How much information have your parents told you… [have you shared with your son/daughter] about the pressure of having sex from your friends and when you go out with your boyfriend (girlfriend)?*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

8. ¿Qué tanta información te han dicho tus padres… [le has dado a tu hijo/a] sobre de cómo resistir la presión de tus amigos y de la persona con quien sales novio (a)?
*How much information have your parents given you… [have you shared with your son/daughter] about resisting the pressure from your friends and the person with whom you go out boyfriend (girlfriend)?*

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Ninguna | Poca | Alguna | Bastante | Mucha |
| *none* | *a little* | *Some* | *Enough* | *a lot* |

**III. Comodidad para hablar de sexo…[parent adaptation]**
***Confort with communication about sex***

1. ¿Qué tan cómodo te sientes cuando hablas sobre temas sexuales con tu padre (madre)…[hija/o]?
*How comfortable do you feel about talking about sexual themes with your father (mother)…[child]?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

2. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? piensa como deberías comportate sexualmente?
*How comfortable do you feel when you talk to your father (mother) …[child] about how you should behave sexually?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

3. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre cómo prevenir el embarazo?
*How comfortable do you feel when you talk to your father (mother…[child]) about how to prevent pregnancy?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very confortable* | Nunca lo hemos discutido we*'ve never discussed it* |

4. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre enfermedades venéreas/ de transmisión sexual?
*How comfortable do you feel when you talk to your father (mother) …[child] about venereal infections/ of sexual transmission?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

5. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre HIV/SIDA?
*How comfortable do you feel when you talk to your father (mother) …[child] about HIV/AIDS?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

6. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre como protegerte para no contraer enfermedades de transmisión sexual o SIDA?
*How comfortable do you feel when you talk to your father (mother) …[child] about how to protect yourself from not contracting sexually transmitted infections or AIDS?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

7. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? específicamente sobre el condón?
*How comfortable do you feel when you talk to your father (mother) …[child] specifically about the condom?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

8. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre no tener relaciones sexuales, o de tenerlas hasta que seas mayor?
*How comfortable do you feel when you talk to your father (mother) …[child] specifically about not having sex till you get older?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

9. ¿Qué tan cómodo te sientes cuando hablas con tu padre (madre) …[hija/o]? sobre la presión sexual que ejercen tus amigos y la persona con la que sales novio(a)?
*How comfortable do you feel when you talk to your father (mother) …[child] about the sexual pressure you experience from your friends and the person with whom you go out boyfriend (girlfriend)?*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Muy incómodo *very uncomfortable* | Algo incómodo *somewhat uncomfortable* | Algo cómodo *somewhat comfortable* | Muy cómodo *very comfortable* | Nunca lo hemos discutido we*'ve never discussed it* |

**IV. Familialismo**
***Familialism***

1. Uno puede contar con la ayuda de familiares para resolver la mayoria de los problemas
*People can count on help from their relatives to solve most problems*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

2. Uno debe dar dinero para ayudar a sus hermanos menores
*People should give money to help their younger brothers and sisters*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

3. Si tuviera dinero se lo daría para ayudar a un familiar para ayudarle si lo necesitara
*If I had the money, I would help by giving it to a relative if he or she needed it*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

4. Uno debe tener la esperanza de vivir el tiempo suficiente para poder ver a sus nietos crecer
*People should have the hope of living long enough to see their grandchildren grow up*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

5. Los padres de edad avanzada deben de vivir con su familia
*Parents who are getting old should live with their families*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

6. Uno debe hacer grandes sacrificios para garantizar una buena educación para sus hijos
*People should make necessary sacrifices so that their children will get a good education*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

7. Una persona debe compartir su hogar con tíos, tías, o primos hermanos si ellos lo necesitan
*People should share their home with uncles, aunts, or first cousins if they are in need*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

8. Mucho de lo que hace la gente, debe ser para complacer a sus padres
*A lot of what people do should be done to please their parents*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

9. La familia debe consultar con sus familiares cercanos (tíos, tías) con respecto a decisiones importantes
*The family should talk to close relatives (uncles, aunts) about important decisions*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

10. Uno debería tener vergüenza de las cosas malas que hacen sus hermanos
*People should be embarrassed about the bad things their brothers or sisters do*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

11. Cuando uno tiene problemas, puede contar con la ayuda de sus familiares para resolver la mayoria de los problemas
*People can count on help from their relatives to solve most problems*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

12. Los hijos deben vivir en la casa de sus padres hasta que se casen
*Children should live in their parents' house until they get married*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

13. Una de las metas más importantes de la vida es tener hijos
*One of the most important goals in life is to have children*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

**V. Religión**
***Religiosity***

1. Siento que las situaciones difíciles son castigos de Dios por mis pecados y falta de fe.
*I feel that hard situations are punishment from God for my sins and lack of faith.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

2. Me pregunto si Dios me habrá abandonado.
*I ask myself if God will leave me.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

3. Trato de buscar explicaiones a las situaciones y decido qué hacer sin necesidad de pedir ayuda de Dios.
*I try to look for explanations for situations and decide what to do without necessarily asking for aid from God.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

4. Me pregunto si Dios realmente existe.
*I ask  myself if God really exists.*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

5. Le expreso mi enojo a Dios por dejar que cosas malas ocurran.
*I express my anger with God what leaving bad things occur*

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Completamente en desacuerdo *strongly disagree* | En Desacuerdo *disagree* | Ni de acuerdo, ni en desacuerdo *neither agree nor disagree* | De Acuerdo *agree* | Completamente de acuerdo *strongly agree* |

APPENDIX D

**Consentimiento Informado de Padre/Madre o Tutor**

**Título: Proyecto de Promoción de la Salud en Jóvenes Mexicanos**

**Investigadores**

Antonia M. Villarruel,
Associate Professor
University of MI

Esther C. Gallegos, PhD
Profesor
Universidad Autónoma de
Nuevo León

PROPÓSITO. A mi hijo (a) y a mi se nos ha invitado a participar en esta investigación, debido a que mi hijo (a) tiene entre 14 y 17 años. El propósito de la investigación es entender mejor la conducta de los jóvenes, lo que puede ayudar a evitar riesgos a la salud como enfermedades del corazón, cáncer, diabetes, uso de alcohol y drogas, embarazos de adolescentes y enfermedades de transmisión sexual, principalmente el SIDA. Lo mas importante que busca el proyecto es ayudar a la juventud y a los mismos padres, para que a su vez ayuden a sus hijos para que no practiquen conductas de riesgo a su salud.

QUE IMPLICA EL ESTUDIO? Entendemos que tanto mi hijo como yo, tenemos que asistir a 2 sesiones educativas por dos sábados consecutivos, e incorporarnos a un grupo de trabajo, al que he sido asignados al azar. Las primeras dos sesión se llevarán a cabo en dos sábados consecutivos, de 8:30 a 16:00 hrs. En **la Preparatoria <u>(Nombre de la Escuela)</u>** de la UANL. Las sesiones serán implementadas separadamente para los padres y los hijos. El programa para los jóvenes incluirá una variedad de experiencias de aprendizaje, incluyendo discusiones en pequeños grupos, películas, juegos, ejercicios, y role- playing, diseñados para enseñarles sobre diferentes problemas de salud y como evitarlos. El programa puede incluir información sobre nutrición, control de peso, buenos hábitos alimenticios, ejercicio y condición física, comunicación y habilidad para toma de decisiones, embarazo en adolescentes, incluyendo aprendizaje sobre los órganos reproductores, control de la natalidad, enfermedades de transmisión sexual, especialmente SIDA, y demostración del uso apropiado del condón. El programa para padres incluirá contenidos y actividades similares, pero además aprenderán formas de ayuda a sus hijos a permanecer saludables.

Mi hijo y yo entendemos que el o ella llenarán cuestionarios sobre conocimiento, sentimientos, actitudes, y conductas respecto a los temas tratados; esta actividad

se realizará antes de las sesiones educativas y a los 3, 6 y 12 meses después de ellas, para ver cuanto se benefició el joven del programa. Entiendo que también yo, como padre, completaré cuestionarios similares antes del programa, a los 6 y a los 12 meses.

CONFIDENCIALIDAD. Mi hijo y yo entendemos que algunos de los cuestionarios incluyen preguntas personales sobre actividades sexuales que algunas personas llevan a cabo, sobre uso de drogas o alcohol, control de la natalidad, embarazos y enfermedades de transmisión sexual. Entendemos que todas las respuestas se guardarán en privado y estricta confidencialidad.

Por exigencias de la ley, si sabemos que usted o su hijo están involucrados en actividades ilícitas o si su hijo es maltratado, habrá necesidad de reportarlo.

A nadie se le informará como contestamos las preguntas. Ninguna información sobre cómo contesté las preguntas será compartida con mi hijo; ni tampoco yo sabré como mi hijo las contestó. Ni mi nombre o información que identifique a mi hijo/hija o a mi misma, será incluida en reportes o publicaciones. Nuestros nombres no estarán en los cuestionarios; en su lugar tendremos un número como código. Los datos de identificación de mi hija/hijo y de mi mismo(a) serán guardados bajo llave, en un espacio seguro, disponible sólo para el equipo de investigación. Una vez concluido el estudio, todos los cuestionarios e información serán destruidos.

COMPENSACIÓN. Entiendo que tanto mi hijo/a como yo recibiremos un pago por participar. Habrá dos sesiones de 8 horas de duración en de dos semanas consecutivas. Mi hijo y yo recibiremos $ 140.00 ($US 15.00) cuando completemos las 16 horas de sesión. Mi hijo recibirá $ 95.00 ($US 10 .00) adicionales a los 3, 6 y 12 meses de seguimiento, y yo recibiré $ 95.00 ($US 10.00) adicionales a los 6 meses. Así, mi hijo recibirá $ 425.00 ($US 45.00) y yo, $ 237.00 ($US 35.00) por asistir a las 2 sesiones y completar los cuestionario de seguimiento. Esto implica 22 horas del tiempo de mi hijo/a y 20 horas del mío propio.

RIESGOS. No existen riesgos conocidos por participar en este estudio. Sin embargo tanto mi hijo/a como yo entendemos que existen cosas buenas y no tan buenas por participar en este proyecto. Los aspectos no tan buenos son, a)tener que llenar los cuestionarios, b) algunas de las preguntas serán personales, y c) puedo querer averiguar como mi hija/hijo contesta las preguntas, pero no podré debido a que las respuestas son confidenciales.

BENEFICIOS. Las cosas buenas incluyen, a) aprender acerca de los riesgos a la salud, incluyendo causas mayores de muerte prematura, b) mi hija/hijo pueden

aprender maneras de cuidarse a sí mismos a sí mismos, c) puedo aprender la manera de apoyar y proteger a mi hijo(a), d) puedo aprender formas de comunicarme mejor con mi hijo/hija, e) mi hijo/hija les ayudarán a ustedes a entender mejor las conductas de los jóvenes, de manera que usted y otros puedan ayudar a la juventud a evitar los riesgos a la salud salud, como contagiarse de SIDA, presión arterial alta, cáncer, o enfermedad cardiaca, f) mi hijo/hija pueden divertirse mientras participan, ya que otros jóvenes lo han encontrado divertido, g) obtendremos un pago de 15 dólares si completamos las dos sesiones y 10 dólares cada vez que llene los cuestionarios de seguimiento, y h) no incurrimos en ningún gasto por participar en el estudio.

LESIÓNES FÍSICAS. El riesgo de lesión física en los procedimientos de esta investigación, es mínimo. Si ocurriera un lesión física como resultado de procedimientos en la investigación, la Universidad Autónoma de Nuevo León, proveerá los primeros auxilios con tratamiento médico. Sin embargo la Universidad no proveerá compensación a una persona lesionada mientras participa como sujeto de la investigación.

DISPONIBILIDAD DE NUEVA INFORMACIÓN: Entiendo que se me dará a conocer cualquier información nueva e importante que pueda relacionarse a mi deseo, o al de mi hijo/a, de continuar en este estudio.

INFORMACIÓN FUTURA: Entiendo que si tengo preguntas adicionales acerca de la investigación, o sufro alguna lesión que yo crea que está relacionado al estudio, tengo el derecho, así como mi hijo/hija, de llamar al teléfono a la Directora del Proyecto, Dra. Esther Gallegos al teléfono 83 48 8943.

RENUNCIA/RETIRO. Mi hijo/hija y yo entendemos que participamos voluntariamente en este proyecto y que podemos retirar nuestro permiso y elegir abandonar el estudio en cualquier momento. Si decidimos no participar o retirarnos de este estudio, ello no afectará los servicios que recibiremos en cualquier institución relacionada con el proyecto.

CONCLUSIÓN: He leído y entendido la forma de consentimiento. Se me dio la oportunidad para hacer preguntas y he recibido respuestas a mi satisfacción. Estoy de acuerdo en participar en este estudio de investigación y también permitir a mi hijo/hija participar. Una vez que firme, entiendo que una copia de este documento será guardada junto con sus archivos de investigación y yo recibiré una copia del mismo.

Nombre de mi hijo/hija_______________________________________________

Nombre del padre/madre o tutor:_____________________________________

Firma  del padre/madre o tutor:________________________________________

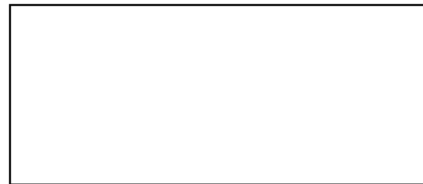
Dirección, Calle y número: ___________________________________________

Colonia:  ___________________________________________________________

Cuidad y Estado: ____________________________________________________

Número Telefónico: ______________  Teléfono para emergencia: ____________

Huella Digital del Padre/Madre o Tutor :



---------------------------------------------------------------------------------------------------

Su Hijo/hija completará lo siguiente:
Estoy de acuerdo en participar en el proyecto

Nombre del hijo/hija: _______________________________________________
Sexo: ___________

Edad: _______

Firma del Hijo/Hija: _______________________________          Fecha :----------

Firma del Investigador: ____________________________          Fecha: _______

¡Muchas Gracias!

**Parent/Guardian Consent Form**

**Title of Project**: Mexican Youth Health Promotion Project

**Investigators:**

Antonia M. Villarruel PhD, Associate Professor, University of MI

Carol Loveland-Cherry, PhD, Professor, University of MI

Esther Gallegos, PhD, Professor, Universidad Autonoma de Nuevo Leon

**Purpose:** My child and I understand that we are being asked to participate in a research study. We are being asked to participate in this study because he or she is between the ages of 14 to 17 years. One purpose of the Mexican Youth Health Promotion Project is to understand youths' behaviors that may avoid or create risks of health problems such as heart disease, cancer, stroke, diabetes, alcohol and drug abuse, teenage pregnancy, and sexually transmitted diseases, especially the acquired immune deficiency syndrome (AIDS). Most important, the project seeks to identify ways to prevent youth, including ways to help parents help their children, from behaving in ways that create these risks.

**What is involved in the study?**: My child and I understand that we are being asked to attend 2 sessions over a 2 week period. The first session will be a program from ________________on ___________________________. The program will be held at ____________________located at __________________. There will be separate programs for parents and children. The program for children will involve a variety of learning experiences, including small group discussions, films/videos, games, exercises, and role-playing designed to teach children about different health problems and how they can be avoided. This may include information about good nutrition, weight control, good health habits, exercise and physical fitness, communication and decision-making skills, teenage pregnancy, including learning about male and female reproductive organs, birth control, sexually transmitted diseases, especially AIDS, and demonstrations of the proper use of condoms on anatomical models. The program for parents will involve similar content and activities. In addition, parents will learn ways to better help their children stay healthy.

My child and I understand that he or she will complete questionnaires about his or her knowledge, feelings, attitudes, and behavior regarding these matters immediately before the program, immediately after the program, and 3, 6 and 12 months later to see how much he or she benefits from the program. As a parent, I

understand that I will complete similar questionnaires before the program, after the program, and at 6 months.

**Confidentiality**: My child and I understand that some of the questionnaires ask personal and explicit questions about different sexual activities that some people do, any use of drugs, alcohol, and birth control, and previous pregnancy and sexually transmitted disease. We understand that all of answers will be kept private and strictly confidential. As required by law. if we learn about information that you or your child are involved in illegal activities or child abuse, we will need to report it. No one will be told how we answered the questions. No information about how I answered questions will be shared with my child; no information about how my child answered questions will be shared with me. No names or identifying information about my son/daughter or myself will be included in any report or publication. Our names will not be on the questionnaires; instead we will both be given a code number. Identifying information about son/daughter and myself will be kept in a locked and secure space, available only to certain research staff. Upon completion of the study, all questionnaires and identifying information will be destroyed.

**Compensation**: My child and I understand that we will be paid for participating. There are 2 -8 hour sessions over 2 weeks. My child and I will receive $15 each when we have completed the entire 16-hour session. My child will receive an additional $10 at 3, 6 and 12 month follow-ups: I will receive an additional $10 for 6 month follow-ups. Thus my child will receive a total sum of $45 and I will receive $25 for attending both sessions and completing all of the follow-up questionnaires. The total time for the educational sessions and to complete the follow-up questionnaires for my son/daughter will be 22 hours ($2.05/hr) spread over a one-year period. The total time involved for me will be about 18 hours $25 ($1.40/hr) spread over a 6-month period.

**Risks**: There are no known risks to participating in this study. However, my child and I understand that there are good and bad points about being in this project. The bad ones are that 1) we will have to fill out some questionnaires; 2) some of the questions will be explicit and personal; and 3) I may wonder how my son/daughter answered the questions, but will not be able to find out those answers because his or her answers are confidential.

**Benefits**: The good ones are 1) we may learn more about serious health risks, including major causes of premature death; 2) my son/daughter may learn ways to protect himself or herself from these problems; 3) I may learn ways to help protect my child from these problems; 4) I may learn ways to talk with my son/daughter; 5) my son/daughter will help you learn more about youths’

behaviors so that you and others can help youth avoid health risks such as getting AIDS, high blood pressure, cancer, or heart disease; 6) my son/daughter may think the project is fun since other youths have enjoyed it; and 7) we will be paid $15 each if we complete both sessions and $10 each time we complete follow-up questionnaires; 8) there are no costs incurred by me/my child for participating in this study.

**Physical injury**: The risk of physical injury from the research procedures in this study is minimal. In the unlikely event of physical injury resulting from research procedures, the University will provide first-aid medical treatment. However, the University does not provide compensation to a person who is injured while participating as a subject in research.

**Availability of new information:** I understand that I will be told about any important new information that may relate to my willingness to have me or my child continue participation in this study.

**Further information**: I understand that if I have additional questions about the research, my/my child's rights, or any injury I feel is related to the study, I can call __________________ Project Director or Dr. Esther Gallegos at ______________________ .

**Disclaimer/Withdrawal**: My child and I understand that we would be volunteering to participate in this project and that I may withdraw my permission and we can choose to withdraw at any time. If we chose not to participate or decide to withdraw from this study it will not affect the services we will receive in any agency associated with this project.

**Conclusion:** I have read and understand the consent form. I have been given the opportunity to ask questions and have had them answered to my satisfaction. I agree to participate in this research study and to also have my son/daughter participate. Upon signing below, I understand that one copy of this document will be kept together with your research records on this study and I will be given a copy to keep.

Child's name:_________________________________________________________

Parent/Guardian's name: _______________________________________________

Parent/Guardian's signature: ___________________________________

Date: ________________

Street address:___________________________________________________

City: ___________________________ State: __________ Zip code: ________

Phone number: (____)__________ Emergency phone number: (____)_________

-----------------------------------------------------------------------------------------
Your child should complete the following:

I agree to be in this project.

Child's name: ___________________________________________ Sex ____
Age ____
(Please print)

Child's signature: _________________________________________

Date: ________________

Investigator's Signature:
________________________________________________________

Date: ________________

Thank you!

APPENDIX E

**Forma de Asentimiento para actuar como tema en un estudio de investigación**

Investigadores Principales
Antonia M. Villarruel PhD, RN, FAAN
Esther Gallegos PhD

**Título: Proyecto de Promoción de la Salud en Jóvenes Mexicanos**

Propósito
Tú y uno de tus papas han sido invitados a participar en un estudio de investigación. El propósito de este proyecto es para encontrar maneras para evitar que jóvenes obtengan enfermedades del corazón, diabetes, cáncer, uso del alcohol y drogas, embarazos de adolescentes, y enfermedades de trasmisión sexual, principalmente el SIDA.

Una Descripción del Estudio

Estás invitado a atender 5 sesiones dentro de 12 meses. Las primeras dos sesiones son el _____ y el _______, a las 8:30 AM, hasta las 4 PM. El programa tendrá juegos, películas, ejercicios, y platicas sobre problemas en la salud. Otros jóvenes han participado en este proyecto y han dicho que les gustaron mucho las actividades, aprendieron mucho, y que lo recomendarían a sus amigos. Las tres sesiones serán 3, 6, y 12 meses después del las primeras dos sesiones y duraran 2 ha 2.5 horas. Tus papas vendrán a sesiones similares al mismo tiempo también. Tu nombre no estará en los cuestionarios; en vez, te daremos un numero de código.

Compensación
Te pagaran por participar en el estudio. Recibirás $15 si completas las dos sesiones y $10, por cada cuestionario que completas. Esto implica que recibirás un total de $45 por atender todas las sesiones.

Riesgos
No existen riesgos en este proyecto. Unas cosas malas son a.) Tienes que llenar unos cuestionarios b.) Algunas de las preguntas que tienes que contestar son personales.

Beneficios
Las cosas buenas incluyen a.) Aprender acerca de los riesgos a la salud, incluyendo causas mayores de muerte prematura, b.) Puedes aprender a como protegerte de estos problemas, c.) Nos ayudarás a entender mejor las conductas de los jóvenes, para que los maestros, enfermeros, y doctores puedan ayudar a otros evitar los riesgos de la salud como no contagiarse del SIDA, prevenir a tener problemas del corazón, o el cáncer, d.) Te divertirás ya que otros se han divertido, e.) Obtendrás un pago.

Confidencialidad
Toda la información en este estudio será guardada en privado y estará bajo estricta confidencialidad. Ni mis papas, maestros, ni nadie podrán saber como respondí las preguntas. No seré identificado con mi nombre.

Renuncia/Retiro
Participaras voluntariamente en este proyecto. No lo tienes que hacer si tú no quieres y puedes parar de participar en cualquier momento.

Asentimiento Voluntario
He leído esta forma, o me la han leído a mí. Todas las preguntas que tuve sobre este estudio y mi participación fueron contestadas. Estoy de acuerdo en participar en este estudio de investigación.

| ____________________ | ______________________ | _______ |
|---|---|---|
| Nombre de Participante | Firma de Participante | Fecha |

Documentación del Asentimiento del Joven
Certifico que el estudio y el procedimiento se le ha sido explicado a ___________________________ en condición que él o ella haya entendido y él o ella libremente dieron consentimiento de que participarán en el estudio.

| ________________________ | _______________________ | _________ |
|---|---|---|
| Nombre de Testigo | Firma de Testigo | Fecha |
| ________________________ | ______________________ | _________ |
| Nombre de Investigador | Firma de Investigador | Fecha |

¡Muchas Gracias!

**Assent Form to Act as a Subject in a Research Study**

Principal Investigator:<br>Antonia M. Villarruel PhD, RN, FAAN<br>Esther Gallegos PhD

Title: Mexican Youth Health Promotion Study
Date:

Purpose
You and one of your parents are being asked to be in a research study. The purpose of the project is to find ways to prevent teenagers from having health problems such as diabetes, cancer, heart disease, alcohol and drug abuse, teenage pregnancy, and sexually transmitted diseases, especially the acquired immune deficiency syndrome (AIDS).

Detailed Description of the Study
You are being asked to come to five (5) sessions over a 12-month period. The first two sessions are on _______ and ___________. The hours are from 8:30 AM to 4:00 PM. The program will involve games, films, exercises, and group discussions on health topics. Other teenagers have participated in our programs and reported that they liked the activities, learned a lot, and would recommend it to their friends. The other six sessions will be held 3, 6, and 12, months later and will each last about 2 to 2.5 hours. Your parent will come to a similar session at the same time. They will be in a group just for parents.
At all five sessions, you will fill out questionnaires. Some of the questionnaires ask personal questions about different sexual activities that some people do, any use of drugs, alcohol, and birth control, and previous pregnancy and sexually transmitted disease. Your answers to the questions will be kept private and strictly confidential. No one will be told how you answered the questions. Your name will not be on the questionnaires; instead, you will be given a code number.

Compensation
You will be paid for being in this study. You will get $15 if you complete the first two sessions and $10 for each follow-up questionnaire you complete. Thus, you would receive a total of $45 for attending all sessions.

Risks
There are good and bad points about being in this project. The bad points are that 1) you will have to fill out some questionnaires; 2) some of the questions you will be asked will be personal.

Benefits
The good points are that 1) you may learn more about serious health risks, including major causes that cause early death; 2) you may learn ways to protect myself from these problems; 3) you will help us learn more about teenagers' behaviors so that teachers, nurses, and doctors can help others avoid health risks such as getting sexually transmitted diseases, AIDS, cancer, or heart disease; 4) you may think the project is fun since other youths have enjoyed it; and 5) you will earn money.

Confidentiality
All of the information collected in this study will be kept private and strictly confidential. Neither your parents, teachers, or anyone else will know how you answered questions. You will not be identified by name.

Withdrawal
You would be volunteering to be in this project. You do not have to do it if you do not want to and you can stop being in this project at any time.

**Voluntary Assent**

I have read this form, or it has been read to me. Any questions I have about this study and my participation have been answered. I agree to be in this research study.

My parents/guardians know that I am being asked to be in this study.

| Name of Participant | Signature of Participant | Date |
|---|---|---|

Child Assent Documentation
I certify that the study and the procedures involved have been explained to ____________________________ in terms that he or she could understand and he or she freely assented to participate in this study.

| Name of Witness | Signature of Witness | Date |
|---|---|---|

| Name of Investigator | Signature of Investigator | Date |
|---|---|---|

Thank you!

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# Vita

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