¡TENEMOS QUE HABLAR! (WE NEED TO TALK!): THE CONTRACEPTIVE USE OF MEXICAN AMERICAN YOUNG WOMEN

A DISSERTATION

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BY

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To the Dean of the Graduate School:
I am submitting herewith a dissertation written by Luis Enrique Espinoza entitled, "*¡Tenemos Que Hablar!* (We Need To Talk!): The Contraceptive Use of Mexican American Young Women." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Sociology.

James L. Williams, PhD, Major Professor

We have read this dissertation and recommend its acceptance:

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Department Chair

Accepted:

Dean of the Graduate School

DEDICATION

I want to dedicate this dissertation to several important people in my life.

First and foremost I want to dedicate this dissertation to my parents, Norma Lee Espinoza and Enrique Espinoza, Jr. for being my greatest supporters and for their endless love through my journey to get this PhD.

To my maternal grandmother, Eloisa Sanchez Delgado, thank you for being the strong matriarch of this family and being my Number #1 grandma. I love you more than I can put into words. You have forever left a legacy on future generations of this family.

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ABSTRACT

LUIS ENRIQUE ESPINOZA

¡TENEMOS QUE HABLAR! (WE NEED TO TALK!): THE CONTRACEPTIVE USE OF MEXICAN AMERICAN YOUNG WOMEN

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Research into the lives of Mexican American women's contraceptive use is limited. The purpose of this dissertation was to examine the social determinants of contraceptive use at last sexual encounter for Mexican American young women. Women aged 18-24 were the focus as they are at an increased risk for sexually transmitted infections (i.e., chlamydia, HIV/AIDS) due to risky sexual behaviors. This study utilized an integrated theoretical framework based on the social epidemiological perspective and the symbolic interactionist models of DeLamater and Christopher. The National Survey of Family Growth (NSFG) 2002, 2006-2010, and 2011-2013 female respondent datasets were utilized. Logistic regression is the main method for data analysis. The results establish there is a significant effect of talking to one's parents about sex on predicting contraceptive use at last sexual encounter. However, the type of sex education (i.e., abstinence-only or comprehensive) has no effect on contraceptive use at last sexual encounter. Moreover, Mexican American young women who grew up with a higher

family income are more likely to use contraceptives in their last sexual encounter than those with a lower family income. Additionally, Mexican American young women who have multiple sexual partners are more likely to use contraceptives in their last sexual encounter than those women who only had one sexual partner. This study contributes to a better understanding of the social determinants that impact contraceptive use among this population. The findings from this dissertation can influence policy makers by demonstrating the need to produce culturally competent programs and policies that reduce unplanned pregnancies and STIs and produce proper sex education.

Keywords: Mexican American young women, contraceptive use, last sexual encounter, social epidemiological perspective, specific contraceptive method

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CHAPTER I

INTRODUCTION

"No woman can call herself free until she can choose consciously whether she will or will not be a mother." - Margaret Sanger

Contraceptive use among young women is of interest to social and public health researchers since it is a fundamental determinant for pregnancy rates, abortion rates, and sexually transmitted infections (STIs) (Humes, Jones, and Ramírez 2011). Moreover, Hispanic young women are at an increased risk for not using contraceptives during a sexual encounter which puts them at a greater chance for STIs (Centers for Disease Control and Prevention 2009; Humes et al. 2011; Manlove et al. 2014; Regnerus and Uecker 2010; U.S. Census Bureau 2009). In addition to this increased risk, it is known that Hispanics are less likely to use contraceptives than their non-Hispanic white counterparts, but more likely than their non-Hispanic black counterparts (Garcés-Palacio, Altarac, and Scarinci 2008).

In the United States the largest Hispanic subgroup are Mexican Americans (Motel and Patten 2012). Mexican American women collectively report higher rates of unplanned pregnancies than all other minorities (U.S. Census Bureau 2009). However, Mexican American young women (aged 15-22) are more likely to use contraceptives than all other Hispanic groups (Puerto Rican, Cubans, South Americans and Central Americans) (Durant et al. 1990; Roncancio, Ward, and Bernson 2012). Although sexual

education's primary role is to reduce teen birth rates and STI rates, it can also be used by all women to make informed decisions regarding their own sexuality (Plante 2014).

There are few studies that examine parental-child sex communication for Hispanic minorities (Jacobson and Crockett 2000; Rodgers 1999). In addition to this, there are no studies that focus particularly on contraceptive use at last sexual encounter among sexually active Mexican American young women. Studies that examine sexual activity emphasize those individuals in friends with benefits (FWB) relationships (Lyons et al. 2014; Williams and Adams 2013).

Numerous reproductive health disparity studies focus on Hispanics at the panethnicity level, but limited studies have focused on specific subgroups such as Mexican Americans (Brown et al. 2003; Espey, Cosgrove, and Ogburn 2007; Kost, Henshaw, and Carlin 2010; Zsembik and Fennell 2005). Mexican Americans are defined as "Hispanics who were born in Mexico or U.S. born Hispanics who can trace their ancestry to Mexico." (Pew Research Center 2011:2). However, sexuality studies that study Mexican Americans focus on adult women (aged 25-45) who are currently married and having children (Casad et al. 2012; McQuillan et al. 2008). These studies demonstrate the need to examine younger Mexican American women's health issues separately from their older adult counterparts.

According to Gonzalez-Barrera and Lopez (2013) in 2012, an estimated 33.7 million Mexican Americans resided in the US. Over 22 million were born in the US while 11.4 million immigrants were born in Mexico and became naturalized. Further,

reports indicate that the Mexican American population is expected to rise to 29 percent of the US population by 2050 (Terrazas 2010).

RESEARCH PROBLEM

The purpose of this dissertation is to examine the social determinants of contraceptive use at last sexual encounter among Mexican American young women. This is important because limited research has looked at continued contraceptive use and last contraceptive use (Magnusson, Masho, and Lapane 2012; Roncancio et al. 2012; Shaffi, Stovel, and Holmes 2007). This present study differs from previous work on social determinants of contraceptive use in that it focuses specifically on Mexican American young women. These young women (aged 15-24) are the focus of this dissertation since they are at greater threat for sexually transmitted infections (STIs) including chlamydia and HIV/AIDS (Rosenthal et al. 2014; Wilton, Palmer, and Maramba 2014) and because of their risk for pregnancy and pregnancy complications (Plante 2014).

There has been some debate in literature regarding how different Mexican Americans are from other Hispanic groups. A study by Durant and associates (1990) established Mexican American young women (aged 15-24) are more likely to use contraceptives than their Puerto Rican, Cuban, and other Hispanic counterparts. Their findings were supported by Gilliam and colleagues (2011) who found that Mexican American young women (aged 21-25) are more likely to use contraceptives when they have open communication with their parents in their youth than other Latinas (South American and Central Americans) (Appendix A for definition of Latina). This work will

also look at the role Mexican American parents play in their daughters' contraceptive use since literature has shown there is a disconnect between what is practiced by the daughters versus what is reported (Bravo et al. 2014).

This will be accomplished by utilizing the National Survey of Family Growth (NSFG) 2002, 2006-2010, and 2011-2013 female respondent datasets. These female respondent datasets were selected because currently there are no current sexuality studies that emphasize particularly on Mexican Americans. In addition, these datasets are considered to be of much higher quality than previous cycles of the 1970s, 1980s and 1990s NSFG. As each cycle ended and another was started there was always less missing and/or inconsistent data (U.S. Department of Health and Human Services 2014).

Why Mexican Americans?

The growing rate of pregnancy among Hispanic minorities underlies the importance of studying contraceptive use. Additionally, Mexican American young women (aged 16 to 25) are having 25 percent more children than non-Mexican American young women (Pew Research Center 2011). Mexican Americans are the largest minority ethnic subgroup among Hispanics (Terrazas 2010). The Mexican American population comprises a younger generation as compared to other racial and ethnic groups. They have a median age of 25 years as compared to 41 years for whites, 35 years for Asians, 32 for blacks, and 30 for non-Mexican-origin Hispanics (Pew Research Center 2011). In this regard, a higher proportion of Mexican American women are of childbearing age. Although Mexican Americans are the largest minority group in the United States (Motel

and Patten 2012), research and programs for pregnancy prevention and sexual risk reduction have significantly lagged behind. There are currently no culturally competent programs that look at the social determinants that are affecting Mexican American contraceptive use (Zayas and Witt 2010). This indicates a major need for research to study sexual activity and what role their parents play in reducing unplanned pregnancies.

SIGNIFICANCE OF THE STUDY

This dissertation is the first comprehensive research project on contraceptive use at last sexual encounter among Mexican American young women. By understanding the social determinants that influence contraceptive use among Mexican American young women at last sexual encounter researchers will be able to create programs that reduce pregnancy rates. Shtarkshall, Santelli, and Hirsh (2007) discovered that youth who had a close relationship with their parents were at an increased chance of delaying sexual activity because they had open communication that resulted in the 'sex talk' (sex communication). Wright, Randall, and Arroyo's (2013) work supported this research when primarily studying fathers and daughters who discuss sex and found that open communication can reduce sexual activity greatly even with women in their early 20s. This finding supports O'Sullivan, Meyer-Bahlburg, and Watkins (2001), who discovered Mexican American mothers are the parent most involved in teaching about sex no matter the gender of the child.

In addition, Mexican American mothers are the parent whom daughters turn to when having problems in their relationships as adults to improve sexual issues in their

marriage (Harris 2005; Plante 2014). The literature that exists on contraceptive use only focuses on contraceptive use at first sex (Martinez, Copen, and Abma 2011; Mueller, Gavin, and Kulkarni 2008), with a limited focus on contraceptive use at last sex (Durant et al. 1990; Roncancio et al. 2012). It has been suggested by Roncancio et al. (2012) that the studies that focus on first contraceptive use are in fact ignoring continued use. Mnyanda (2013) determined there is inconsistent data between the fact that female adolescents may not consistently use contraception and that the first encounter may or may not be predictive of whether a girl continues to use contraception as an adult woman. Schear's (2013) research backs this inconsistency between actual contraceptive use and predictive use in later use among Mexican young women who waited to have sex until marriage. Moreover, Magnusson et al. (2012) determined that age of first intercourse is strongly associated with unreliable continued contraceptive use. Furthermore, individuals who have a sexual encounter at a younger age are risk prone for STIs and other sexual complications as adults. This risk occurs because early intercourse has been associated with decreased contraceptive use due to lack of health education (Upson et al. 2010).

DISSERTATION OVERVIEW

Chapter Two provides an overview of the current literature on contraceptive use among Mexican American young women. Chapter Three proposes an integrated theoretical framework from existing frameworks and provides the hypotheses to be tested. Chapter Four describes the data, variables, measures and methodology. Chapter

Five presents the results. The final chapter presents the discussion and conclusion which includes the future research.

CHAPTER II

REVIEW OF LITERATURE

The first section discusses current research on contraceptive use. It is followed by the discussion parental-child sex communication, research on effectiveness of sex education, policy implications.

CURRENT RESEARCH ON CONTRACEPTIVE USE

A number of social determinants have been shown to predict contraceptive use among young women. These determinants include: age at sexual initiation, parent-child communication, religious affiliation, type of sexual education, income, family dynamic, and sexual activity status (Magnusson et al. 2012; Shaffi et al. 2007). Frost, Singh, and Finer (2007) and Upson et al. (2010) demonstrated that younger women of color were about two times less likely to use contraceptives during sexual encounters than their white counterparts when they started having sex. Finer, Jerman, and Kavanaugh (2012) also found that younger women were less likely to use contraceptives due in part to their sexual and relationship partners; however, an older age is negatively linked with contraceptive use (Patel, Gillespie, and Foxman 2003), perhaps because they are using hormonal contraceptives (Kaunitz 2008).

Mexican American mothers (McKee and Karasz 2006) and other mothers (Davis, Evans, and Kamyab 2013) have said that contraceptive communication is a natural

progression in the parent-child communication with their daughters because they are the ones to give them the menstruation talk. Due to this openness, these young women are more comfortable asking their mothers other sexual questions as their needs arise under the heteronormative expectations of Mexican culture (Garcia 2009). There is however, no landmark event in a young man's life that indicates the immediate need to discuss contraceptives. Parents often think their children are receiving the correct formal sex education at school and assume they don't have to 'check-in' to make sure the information they received was accurate (Plante 2014). Leavell and colleagues (2012) indicated that Latino fathers have the 'sex talk' with their daughters as a conscious effort to control their daughters' sexual behavior and scare them into abstinence.

Research has speculated that Latinas, in particular Mexican Americans, have sex as a means for pushing for marriage and starting a family at a young age because culturally a girl must remain pure until marriage (Russell and Lee 2004); this is also enforced by religious expectations (Russell and Lee 2004; Reynoso, Felice, and Shragg 1993). A large percentage of Mexican Americans are married in their early 20s (45 percent) (Fields and Casper 2001). Some research on contraceptive use indicates that the impact of religious affiliation is mediated by family dynamics (i.e., single parent, two parents) (Day and Acock 2013; Kim-Spoon, Longo, and McCullough 2012). Jones, Mosher, and Daniels (2012) found that Hispanic adolescent girls and young women do not use contraceptives in sexual relationships because of their mother's religious beliefs of waiting till marriage to have sex. Russell and Lee (2004) attribute this occurence to the

religious teaching of the Catholic church. Mexican Americans are Catholic in higher percentages (61 percent) than other Hispanic groups (47 percent) (Donoso 2014).

Contraceptive use has been shown to be tied to fertility rates for women during their reproductive period (ages 15-44) as well as their household income. Particularly, among Mexican American women's contraceptive use, religious affiliation has been found to be associated with fertility rates (White and Potter 2013). Family income among Hispanic women is a strong indicator of future contraceptive use for daughters because it indicates if the household has expendable money (Zayas and Witt 2010). Mexican American women who grow up in large families with multiple siblings are more likely to have fewer children when there is a low family household income (Perry-Jenkins, Newkirk, and Ghunney 2013). As a result, number of children born for a mother is a strong indicator for the same thing for their daughters when household income is taken into account. Poverty and human capital can affect the ability of adults to supervise their children. This has been extended toward other minorities and may be one of the reasons Latino minorities utilize minimal family planning services (DeLuca, Garboden, and Rosenblatt 2013; Denny-Garamendi et al. 2007).

Among all adolescents, being raised in an intact family has been linked with increased contraceptive use as an adult (Hayford and Guzzo 2013). Having an intact family, specifically having both biological parents, has been shown to produce a dynamic of open communication, including parent-child sex communication (Hicks, McRee, and Eisenberg 2013; Manlove, Ryan, and Franzetta 2003; Osuchowski-Sanchez 2011).

Grossman, Charmaraman, and Erkut (2013) determined that single-parent households have a tendency of not giving the 'sex talk' other than pushing abstinence. This study supports the work of Kotchick et al. (1999) who found single mothers modeled sexual activity that taught their daughters to be selective in their sexual encounters. This does not mean mothers did not talk to their daughters about sex, just that modeling was a stronger predictor for delayed sexual activity. One limitation of this study was some of the daughters claimed to use contraceptives; however, it was very clear they were not being forthcoming with their responses due to anxiety. Another issue was that the researchers imposed a directional flow of mothers being the only individual to influence sexual activity of their daughters. They did not take into account the education of the mothers.

A study by Gilliam et al. (2007) determined that a Mexican American daughter's educational expectations are a strong predictor for continued contraceptive use. This occurred even when they did not receive strong negative parental messages to refrain from sexual activity. However, the daughters' own sense of personal control was the strongest determinant of contraceptive use. East, Reyes, and Horn (2007) found Latina adolescents whose mothers were a teen parent were at an increased risk for being a teen parent as well even if they used contraceptives during sexual activity. This is not surprising as it is a well-known fact that if you are the daughter of a teen mother you will be a teen mother yourself (East et al. 2007; Plante 2014; Romo, Nadeem, and Kouyoumdjian 2010). This fact is engrained into Mexican Americans through their

culture (Durand and Massey 2006). One likely explanation is that many adolescents do not know how to accurately use contraceptives or were not given formal sex education (Kirby 2001; Simon 2011). This lack of knowledge can be extended toward Mexican American young women who are not provided accurate sexual health education (Shedlin et al. 2013).

What is known is that a parental unit's marital status at child's birth is highly associated with delay of their sexual activity (Miller, Forehand, and Kotchick 1999). There is some literature that indicates that parental marital status at birth may in fact decrease contraceptive use among Mexican American young women because of fathers not wanting to educate their daughters because "*Es mi hija. Ella no vas a ser eso*." (She is my daughter. She will never do that.) (Brindis, Pagliaro, and Davis 2000; Ford, Sohn, and Lepkowski 2001; Kirby 2001; Ku, Sonenstein, and Pleck 1994). This is in contrast to literature that shows that single parents give their daughters the sex communication talk about contraceptives to make sure the past is not repeated with them (Jaccard and Dittus 2012).

No research was situated on the social determinants of Mexican American young women's actual decision to use contraceptives. Understanding the impact of these determinants can be used to improve health education programs, services and policies aimed at promoting safe sexual intercourse. Shaffi et al. (2007) indicated that contraceptive use at first sex predicts subsequent protective behaviors, however this does not indicate to what extent this is maintained. Ball's (2007) work on adolescents

discovered they may feel confident using condoms, yet are not necessarily using them during subsequent sexual encounters as adults. Furthermore, Ball found that young women no matter their age (less than 25 years old) were less likely to use condoms when they had one partner over several partners (Ball 2007). This extended toward Mexican American young women who were more likely to use condoms when cultural ecological factors (such as familial expectations) were taken into account than non-Mexican Hispanics (Harper et al. 2009).

Mexican American young women who were in a committed relationship with their first partner have been found to use contraceptives with later partners (Cooper and Orcut 2000; Manning, Longmore, and Giodano 2000; Sheeran, Abraham, and Orbell 1999). This attitude allowed them to engage in safe sexual practices in their future encounters. This also motivated these women to engage in a friend with benefits (FWB) relationship using contraceptives with later partners because there was no commitment (Williams and Adams 2013). East and colleagues (2011) found that sexual activity was mediated by communication among sexual partners comfort level and that often it was the male partner to initiate contraceptive use in heterosexual couples.

PARENTAL-CHILD SEX COMMUNICATION

Many social determinants have been shown to affect the likelihood that young women will have a sexual encounter. One such determinant is parental sex communication (also called parent-child sex communication or ‘sex talk’ in the literature). Among Mexican Americans an increase in parental sex communication has

been found to lead to a delay in sexual activity among young women (age 12-21), however it is not seen in older women (over 30) (Jacobson and Crockett 2000; Rodgers 1999). Limited sex-communication studies include adolescents and young adults (Aspy et al. 2007; Kanter, Afifi, and Robbins 2012; Martino et al. 2008). Sex communication can be difficult for parents and uncomfortable for both the parents and child. Researchers are interested in the 'sex talk' because previous literature has shown it can delay and reduce risky sexual behaviors among young women from 13-25 (Guilamo-Ramos et al. 2008; Guilamo-Ramos et al. 2007; Lehr et al. 2000). Further, parental sex communication for young women may be more beneficial for women since they are actually receiving more damaging messages than males as adolescents (Fay and Yanoff 2000). The effect of differing communication among the sexes is influential and a primary reason why young men will talk to their peers and young women talk to their mother (or mother figure), girlfriends and father (or father figure) (Kang 2012).

There is extensive literature addressing the father-child and mother-child sex communication difference with children, yet there is limited research focusing on the sex of the child receiving 'sex talk' messages. McKee and colleagues (2007) found that since mother's gender role beliefs often tend to be egalitarian, there was an increased likelihood of her having the parental sex communication with her children no matter their sex. Previous research has indicated that mothers and daughters are the likeliest family members to participate in sex communication (Kim and Ward 2007; Tobey et al. 2011; Wilson and Koo 2010). In other words, mothers are most likely to give the 'sex talk' and

their daughters are the more likely recipient of the talk in comparison to their sons. Parents may feel more comfortable talking to their daughters because they are teaching them how to be 'smart' (Wilson and Koo 2010). Research has indicated that parents are the main social agents responsible for teaching sexuality to their children (Christopher 2001). Overall, many parents say they want to be the main source of sexual health education for their children, yet they are not doing so in large numbers (Guilamo-Ramos et al. 2012). A study by Gilliam and colleagues (2007) found that many Mexican American young women (aged 13-25) did not receive any sex communication from their mothers until they frankly asked for more information.

RESEARCH ON EFFECTIVENESS OF SEX EDUCATION

When studying contraceptive use in sexuality research it is important to review what research has been done on sex education because literature has indicated there is a strong association between sex education and contraceptive use (Guilamo-Ramos et al. 2012). Among sex education there are two types that have been studied in literature, abstinence-only and comprehensive sex education. Dailard (2001; 2002) studied the historical implications of abstinence-only sex education programs. Abstinence-only sex education curriculum gained a following after the passing of the Adolescent Family Life Act in the early 1980s under President Reagan. Funding for this type of education increased into the 1990s despite studies that indicated that this exact education was ineffective in delaying any sexual activity and there had been a shift in advocacy from health professionals that were leaning toward comprehensive sex education (Lindberg,

Santelli, and Singh 2006). During this time the public, teachers, and students were asking for sex education that included proper use of contraceptives. A study by the Guttmacher Institute revealed about 90 percent of parents wanted their children to receive comprehensive sex education (Constantine, Jerman, and Huang 2007).

The objective of abstinence only programs is to delay sexual activity until marriage without teaching directly about contraceptives, while comprehensive sex education includes abstinence only and contraceptive instruction (Chin et al. 2012). When contraceptives are mentioned in abstinence education it is more to discuss their lack of effectiveness in reducing pregnancy and STI rates (Sipe et al. 2012). The research on success of sex education programs focuses primarily on behavioral effects programs produce in reducing sexual intercourse, contraceptive use, reducing STIs, reducing pregnancies or rates of HIV. Substantial research has studied the success of comprehensive sex education programs in improving contraceptive use at first sex (Kirby 2001; Kirby 2008; Manlove et al. 2003; The National Council to Prevent Teen Pregnancy 2009). However, these findings have mixed interpretations. Moreover, inferences are difficult to draw because no one program was implemented through the same manner or had the same components. Kirby (2001) found that when looking at approximately 30 comprehensive programs, over half did not have an impact on reducing sexual activity. The major criticism of comprehensive sex education programs by religious affiliated activists and politicians is comprehensive programs are actually teaching adolescents to have sex because many of these programs give away condoms. This assumption is

unfounded as research suggests that these particular programs are most successful in delaying sexual intercourse because it allows individuals to make an informed decision about sex regarding contraceptive use (Kirby 2001; Simon 2011).

When examining abstinence-only programs there have been fewer empirical results because there have been far fewer program evaluations taking place. It has been suggested that politicians believe abstinence only programs work because comprehensive programs have mixed results. In addition, those abstinence programs that have been evaluated have not had strong study designs (Kirby 2001). Ultimately, in both types of sex education research has found that some abstinence programs work and some comprehensive programs are successes (Chin et al. 2012; Simon 2011). This indicates that success rates exist for both types of programs, however, there is no way to determine across programs why one program works and another does not. The National Survey of Family Growth Cycle 7 (2006-2010) has shown that comprehensive sex education is far better at reducing teen pregnancy and birth rates than abstinence-only sex programs (Mosher and Jones 2010).

The major limitation with regard to current sex education programs is that drawing conclusions is impossible due to vast differences among the programs. Additionally, there is no standard method to evaluate each program. Research on contraceptive use and sex education has come a long-way from its humble beginnings; however, gaps are still present. Research has evolved solely from considering the following: 1. the unidimensional issues of whether sexual activity has taken place at first

use; 2. whether adolescents are getting pregnant; and 3. what is the rate of STI contraction (Whitaker, Miller, and Clark 2000). Current research emphasizes the impact of these programs on contraceptive use and nonuse.

POLICY IMPLICATIONS

Vast improvements have been made to reduce teen pregnancy and sexual activity among teens of the past decades. Nonetheless, approximately one-third of teen girls will become pregnant by 20, even though STI rates have declined (Stewart and Kaye 2012). When looking at particular STIs such as chlamydia, Hispanics are up to 5 times more likely to contract the infection than non-Hispanic white teenage girls (Kearney and Levine 2012). Policy makers have looked toward sexual education curricula to see what role they have played in contraceptive use among American adolescents. The major problem lies in what content is necessary to reduce sexual activity and teen pregnancy rates. Until 2010 abstinence-only programs received the most funding. This occurred because of the strong social conservative trends that forced policy makers to support this approach to sex education (Kantor et al. 2008).

Things took a turn for the better when President Obama eliminated about 67 percent of abstinence-only program funding for comprehensive sexual education (Sexuality Information and Education Council of the United States N.d.). Two funding programs Obama created for comprehensive sex education were: The President's Teen Pregnancy Prevention Initiative (TPPI) and the Personal Responsibility Education Program (PREP). The TPPI was implemented in 2011 and PREP in 2011. The major

objective of TPPI is to provide appropriate and accurate sex education to reduce pregnancy rates among teens by improving contraceptive use. This program provides funds to test evidence-based models that are in place to prevent and reduce teen pregnancy. The PREP differs in that it is for all young people to reduce the risks associated with teen pregnancy (i.e., STIs).

An added problem policy makers have found is that some states are not in fact enforcing state mandated comprehensive sex education. Such is the case in California, where on May 4, 2015 a judge ruled against an abstinence-only sex education program from Clovis Unified School District. The judge determined that the district violated state law by not providing adequate medically accurate sexual health education. This violated California's Comprehensive Sexual Health and HIV/AIDS Prevention Act that was enacted into law in 2003 (*American Academy of Pediatrics v. Clovis Unified School District* 2015).

RACIAL-ETHNIC DISPARITIES AND ACCULTURATION

Acculturation is the process of acquiring cultural values from the dominant society (Harvey, Henderson, and Casillas 2006). This process acknowledges that individuals adapt to a host country's culture. The level of acculturation a people has depends on how long they have been in the new country not solely in years, but also on how many generations they have been living there. Higher acculturated people in the US speak English, were born in the US or became naturalized, and tend to have a higher education (Harvey et al. 2006).

Acculturation goes hand in hand with health utilization among minorities. The problem however lies in the fact that acculturation does not take a linear course but a multi-dimensional route (Horevitz and Organista 2012). The research in acculturation and health use is not consistent, as Nandi et al. (2008) showed that lower acculturation does not have a significant effect on health access for Hispanics. This is in contrast to Bustamante et al. (2010) who found knowing the language of the host country, English in their particular case, was a significant element for health utilization. The health utilization in particular was seeking emergency room services and everyday medical care. Their work supports that of Solis et al. (1990) which established that communication in English was a major predictor of health service utilization regarding preventative health measures for minorities. Furthermore, LeClere, Jensen, and Biddlecom (1994) found that when patients speak English it allows them an increased likelihood of using the formal healthcare system in place of the informal system (i.e., folk healing, alternative medicine).

Contraceptive use has been found to be tied to fertility rates for women during their reproductive period. The number of children a Hispanic woman has is a strong indicator for future contraceptive use among their daughters (Zayas and Witt 2010). Primarily, Mexican American women who grow up in large families with multiple siblings are more likely to have fewer children (Perry-Jenkins et al. 2013). Among the Latin community religiosity of youth decreases their sexual risk behavior. As religiosity

increases the likelihood of sexual activity among adolescents decreases across all racial-ethnic groups (Edwards et al. 2008; Miller and Gur 2002; Regnerus 2007).

SUMMARY

Many of the existing studies overlook continued contraceptive use among women, especially young Mexican Americans. Such studies touch on parental sex communication; however, these studies are superficial in nature. This study seeks to address this issue and put emphasis on policy recommendations for programs and interventions in place. This literature review demonstrates that a study of social determinants of contraceptive use using a social epidemiological perspective and a nationally representative sample can answer our questions of interest.

CHAPTER III

THEORETICAL FRAMEWORK AND HYPOTHESES

The social epidemiological perspective and two symbolic interactionist models are used to guide this current research. This chapter provides an overview of the perspective and two models as well as how they will be used integrated to explain contraceptive use among Mexican American young women. This chapter concludes with a description of hypotheses.

EXISTING THEORETICAL FRAMEWORKS

The theoretical framework for this dissertation is integrated from the social epidemiological perspective and the models of DeLamater (1987) and Christopher (2001). Based on the lack of theoretical driven research in the sexuality field, sociologists such as Delamater (1987) and Christopher (2001) have attempted to apply models toward sexuality; however, no models have been extended toward contraceptive use. A majority of studies predicting contraceptive use are in fact atheoretical (Bader et al. 2014; Callahan et al. 2015; Turchik and Gidycz 2012) and as a result, this has increased the insistence to develop more theory-driven studies in sexuality research (Head and Noar 2014). A key assumption of the social epidemiological perspective is that social determinants result in individuals participating in certain health patterns (i.e., not using

contraceptives at last sex) (Berkman and Kawachi 2014). Social interactions are considered significant through this perspective since these interactions regulate its members' sexuality and/or sexual choices (Berkman and Kawachi 2014; Cwikel 2006; Krieger 2001).

I had planned to use the theory of planned behavior (TPB), but a number of researchers had noted limitations of the TPB to provide sufficient prediction in actual contraceptive use (Kiene et al. 2014; O'Keefe 2002). Social and public institutions such as family and religion influence sexuality as well as what is spread to future generations. Most research on human sexuality is focused on white middle-class males and uses developmental theories or biopsychology models. There has been a shift toward utilizing social theory because of social structures, the environment and socialization. Moreover, there is a need to for empirical studies to expand the knowledge of the role of parents, peers, communities and major institutions of society play in shaping sexual behaviors (Romo et al. 2010).

Social Epidemiological Perspective

The goal of the social epidemiological perspective is to conceptualize, define and assess the relationship between the social environment and a community's health. It builds upon epidemiological concepts and integrates the social science approach to understand the causes of social conditions, problems or diseases (Berkman and Kawachi 2014; Cwikel 2006). The underlying goal of the social epidemiological perspective is to incorporate social-level determinants of risk in studying individual risk factors (Cohen,

Wilson, and Aiello 2007). From a social epidemiological perspective, health outcomes are a product of biological and social processes and mechanisms (Cohen et al. 2007). As a product, this perspective allows for the development of interventions, policies and institutions that impact health. Moreover social epidemiology takes into account risk factors that affect health conditions that maintain or enhance health (Cwikel 2006).

Social Control of Human Sexuality

The social controls of sexual expression are intertwined in social institutions such as family and religion. Other institutions include medicine and education. There are two components of an institution that influence sexual expression. The first is how the institution views sexual ideology and the other is the structure of the particular social institution. Regarding an institution's structure it is based on authority of the institution, the degree to which members of society are dependent on the institution and the stability of the institution. It is through these institutional controls that individuals have exercised control which determines how they will behave in particular scenarios. This is where parents and peers become vital socialization agents for people. It is important to note that individuals all have an amount of sexual desire which motivates them to seek out sexual behavior. It is through these interactions that individuals learn about sexuality (DeLamater 1989:33; Figure 1).

The useful elements of DeLamater's model are the different levels of examination of social control of sexuality. Specifically, this dissertation focuses on the subcultural, interpersonal and individual levels of social control of sexuality (Figure 1). This

dissertation does not focus on the macro level as we are not focusing on social institutions, but on aspects of socialization. The subcultural level is where I examine the importance of group boundaries such as type of sex education. The interpersonal level is where we are able to examine the socialization agents such as parents and religion. The individual level is where sexual desire and sexual scenarios can be studied. We did not examine sexual scripts here as it was too broad regarding sexual behavior; this is a limitation of this model as it includes all sexual behavior and I was only examining contraceptive use at last sexual encounter.

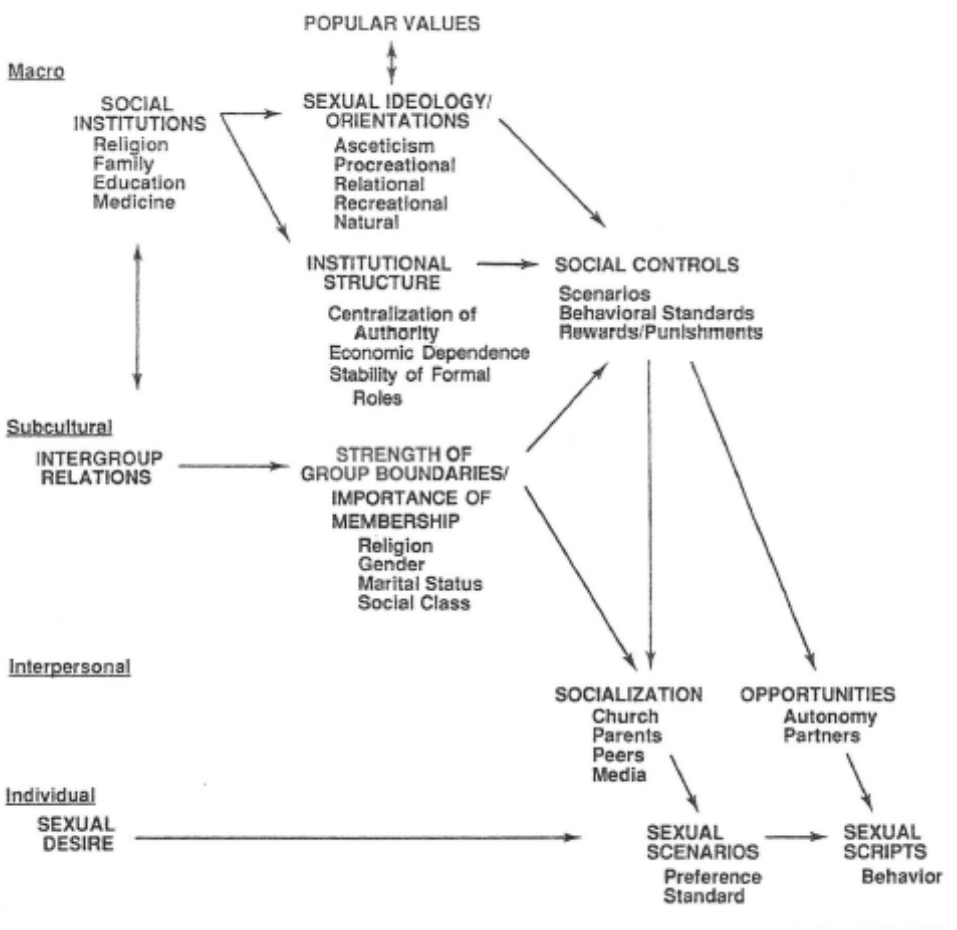

Figure 1. DeLamater's The Institutional and Interpersonal Control of Sexuality Model

Older Adolescent and Young Adult Sexuality

As individuals age parental influence declines because individuals need to establish their independence from parents while maintaining this emotional closeness between parents and child. As a result of this, peers provide the support needed for individuals to venture out into adult roles. It is also at this stage that dating becomes more

important as it allows adolescents and young adults to practice their relationship skills that will be important to developing closer relationships for a later marriage. Dating is influential on sexual role enactment as relationships evolve. It is the quality of parental-child relationships that influence whether parents influence sexual role behavior of older adolescents and young adults (DeLamater and MacCorquodale 1979).

Christopher (2001) is the first to present a parent-child relationship model to describe sexual socialization among adolescents and young adults (113; Figure 2). It is through parental support that individuals learn about sexuality. Parental support leads to emotional closeness that produces emotional support. Emotional support allows parents to let go and let their child increase in independence. It is also this parental support that influences the parent-child relationship in terms of sexuality because if children had a solid relationship with their parents they are more likely to share more regarding sexual experiences in the present. One problem is that children often think about how their parents may judge their sexual role enactment and that is a problem in identifying with parents. Parental control attempts are not a part of this model because parental influence decreases as adolescents grow up and assert their own control separate from their parents.

The elements of Christopher's model that are beneficial are the presence of the parent-child relationship that produces sex communication (Figure 2). We are unable to directly measure the parental support and vice versa the support that leads to parent-child relationship because we do not have questions asking the respondents what type of relationship they have with their parents. We are able to indirectly measure it as we know

if daughters talked to their parents about sex and determine whether this lead to them using contraceptives. However, it does not examine the parent attitudes, values, and norms as the respondents were not asked what their parents believed, nor do we know what type of past parent-child relationship existed.

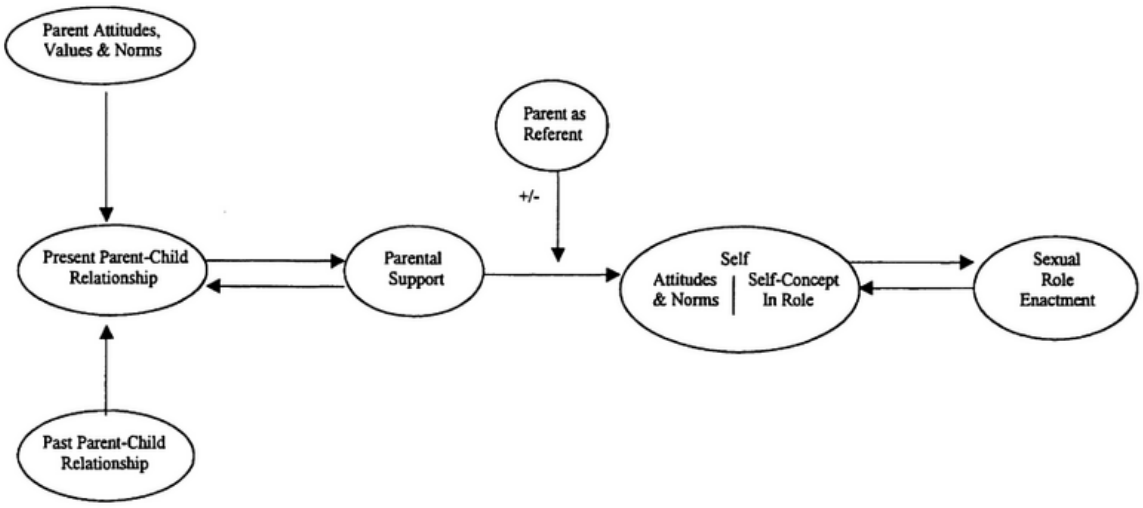

Figure 2. Christopher's Parental Sexual Socialization of Older Adolescents and Young Adults Model

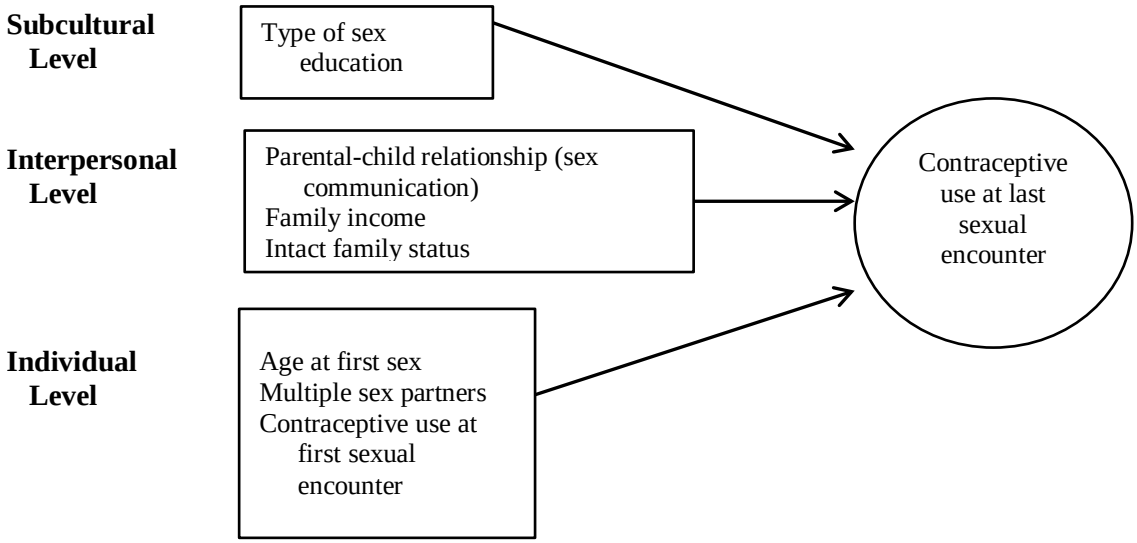

Figure 3. Integrated Theoretical Framework for Contraceptive Use at Last Sexual Encounter among Mexican American Young Women

INTEGRATED THEORETICAL FRAMEWORK

This integrated theoretical framework can contribute to the growing Latina/o sexual health literature focusing on the significance of Mexican sexual health in the US. The social epidemiological perspective allowed me to examine the social determinants that result in individuals using contraceptives at last sexual encounter. Using aspects of DeLamater's (1987; 1989) model allowed me to examine the subcultural level, interpersonal level and individual level of contraceptive use at last sexual encounter for young women. The subcultural level focuses primarily on the type of sex education. The interpersonal level here is focused on parental-child relationship (sex communication), family income, and intact family status. The individual level is emphasized by age at first

sex, having multiple sex partners and contraceptive use at first sexual encounter (Figure 3).

By using the parent-child relationship construct of Christopher's (2001) model I am able to examine the sexual socialization of adolescents and young adults (Figure 3). As mentioned earlier, Christopher was the first person to examine the sexual socialization this age group. He found sexual socialization was the same among this age group; however, no researcher has integrated his findings toward contraceptive use (Figure 3). Christopher (2001) asserted that peers, family members, and social media are the major societal agents that influence an adolescent's and young adult's sexual knowledge. Here we consider parental influence, in addition to the influence of formal sexual education.

When referring to the literature on parent-child sexual communication, the terms sex education and sex communication are often used interchangeably (Fisher 2004). It is assumed if parents have had the 'sex talk' with their children that they have given formal sex education; however, sex communication does not comprise sex education. This occurs because sex education takes place in a vertical fashion from the person who has the information to the one who does not. On the other hand, sex communication can be initiated by parent or child (Warren 2006). This dissertation provides an additional contribution to sexuality research as it examines sex communication and sex education as two separate concepts.

HYPOTHESES

The hypotheses this dissertation examined are based on the primary dependent variable.

H1: Controlling for other factors, Mexican American young women who talk to their parents about sex are more likely to have used contraceptives in their last sexual encounter than Mexican American young women who did not talk to their parents about sex.

When reviewing contraceptive use research regarding Latinos or Hispanics there is no clear explanation of how Mexican Americans and other Hispanic groups differ (White and Potter 2013). Furthermore, this work seeks to examine if Mexican Americans who talk to their parents about sex are actually more likely to use contraceptives during their last sexual encounter because previous parent-sex communication literature has found that Mexican Americans are more likely to use contraceptives at first use when receiving the 'sex talk' in comparison to other Hispanic groups. This has not been extended toward last contraceptive use for Mexican Americans.

H2: Controlling for other factors, Mexican American young women who received comprehensive sexual education are more likely to use contraceptives in their last sexual encounter than Mexican American young women who did not receive comprehensive sexual education.

Previous research on contraceptive use at first sex has found that having accurate comprehensive sex education for Mexican Americans is most effective at reducing

unplanned pregnancy rates (Adams and Williams 2011; Audelo 2010), however no research has determined if this is true for Mexican Americans at last sexual encounter.

H3: Controlling for other factors, Mexican American young women who have their first sexual encounter at an older age are more likely to use contraceptives in their last sexual encounter than Mexican American young women who had their first sexual encounter at a younger age.

Literature has indicated that younger Mexican American women are less likely to use contraceptives when early sexual initiation has happened. These women are also less likely to use contraceptives than all other racial-ethnic groups (Charlton et al. 2013). Littlejohn (2012) found that younger women do not use contraceptives due to the accompanied dissatisfaction that comes with the male using a condom and to the trust that she believes she is in a committed relationship (Williams and Adams 2013).

H4: Controlling for other factors, Mexican American young women who grew up with a higher family income are more likely to use contraceptives in their last sexual encounter than Mexican American young women who have a lower family income.

Poverty affects individuals, families, neighborhoods, and even communities. This is a key motive for why public health researchers and social scientists study family income. Satterthwaite (2014) found that a person's health is seen in their 'life chances' particularly when considering family's income. Moreover, when studying Mexican Americans, a family's income is often pooled and yet the family lives from paycheck to

paycheck (Tesei 2015). Family income has been found to be a strong predictor for why Mexican Americans cannot afford contraceptives (Cubbin et al. 2005).

H5: Controlling for other factors, Mexican American young women who grew up in an intact family with biological/adoptive parents are more likely to use contraceptives in their last sexual encounter than Mexican American young women who did not grow up in an intact family with biological/adoptive parents.

Parent-child relationships have been shown to be better among intact families, and produce an ideal environment that allows for parents to openly talk to their children about sex than single-parent households (Hicks et al. 2013; Osuchowski-Sanchez 2011). Single-parent families do not openly share with their children regarding sex other than telling their children not to follow their example (Grossman et al. 2013). When looking at minorities, Hispanics have been found to not use contraceptives when they lived in a broken home (Dudley et al. 2012; Smock and Greenland 2010).

H6: Controlling for other factors, Mexican American young women who have had multiple sexual partners are more likely to use contraceptives in their last sexual encounter than Mexican American young women who had one sexual partner.

Based on their religious upbringing over half of Mexican Americans are Catholic (61 percent) while other non-Mexican Hispanics are becoming more Protestant (Pentecostals or charismatic Protestants) (21 percent) and leaving Catholicism (Pew Research Center 2014). As a result, many Mexican Americans do not practice contraceptive usage compared to other Hispanics that are not being inhibited by their

religious beliefs (Ellison and McFarland 2013). Additionally, sexuality health research has shown that individuals who only have one sexual partner are less likely to use contraceptives due to increased trust (Hicks et al. 2013).

H7: Controlling for other factors, Mexican American young women who used contraceptives at their first sexual encounter are more likely to use contraceptives in their last sexual encounter than Mexican American young women who did not use contraceptives at their first sexual encounter.

According to Teitelman, Ratcliffe, and Cedarman (2008), among Latina youth, mothers' directly talking to their daughters about waiting to have sex was linked to their daughters remaining abstinent or using condoms if sexually active. Also, they found that those who used contraceptives during their first encounter were more likely to use them with subsequent encounters. This work was supported by Fullerton and colleagues (2013) who found young women (aged 17-22) were more likely to use contraceptives when they planned it compared to when it was a spontaneous occurrence.

Specific Contraceptive Method and First Sex Hypotheses

A supplementary element to this study was to determine if the same social determinants impact the specific contraceptive method among Mexican American women who used contraceptives at last sexual encounter. To the best of my knowledge, there has been no literature that has studied this among Hispanic women, let alone Mexican Americans. This element was added as the hypotheses for contraceptive use at last sexual encounter directly apply to the specific contraceptive method.

An added component to this study was to examine the same social determinants on contraceptive use at first sexual encounter. All of the literature of contraceptive use includes first sexual encounter, but there was none that examined this among Mexican Americans. This was done as the hypotheses for contraceptive use at last sexual encounter also apply to the first sexual encounter, except for contraceptive use at first sexual encounter. Contraceptive use at first sexual encounter cannot be included in this analysis as both an independent and dependent variable at the same time. The social determinants these hypotheses are examining are talking to one's parents about sex, the type of sex education, age at first sex, family income, intact family status, and multiple sex partners.

CHAPTER IV

DATA AND METHODS

Chapter Four includes information about the data, sample, limitations, and variable measurements employed to test the hypotheses presented in Chapter Three. This chapter also discusses methods of data analysis.

DATA

Data Source and Collection

The NSFG dataset is a continuous survey that contains interviews of national non-institutionalized men and women aged 15-44 who live in households in the United States. The survey is administered by the National Center for Health Statistics (NCHS) with participation and funding from the Department of Health and Human Services (DHHS). This dataset is designed to provide approximations of contraceptive use, sexual activity, and family planning. The unit of analysis for this dataset is persons.

Lepkowski et al. (2006; 2010) previously described the survey methodology that was used by the NSFG. In summary, the sample was selected using 121 Primary Sampling Units (PSUs) that were located in almost all states and included the largest metropolitan areas of the US. From each PSU, secondary units called segments were selected. These segments included neighborhoods and adjacent blocks. From each segment the addresses were listed and a sample was selected from each segment. Once the sample was contacted a screener interview was attempted at the address. If more than

one eligible person was living at the address one of the residents was randomly selected for the interview.

The overall response rate for the female respondents for the 2002 dataset was 80 percent (U.S. Department of Health and Human Services 2004). The overall response rate for the female respondents for the 2006-2010 dataset is 78 percent (U.S. Department of Health and Human Services 2011). The overall response rate for the female respondents for the 2011-2013 dataset was 73.4 percent (U.S. Department of Health and Human Services 2014). The NSFG public use data files have no personal identifiers ensuring participant confidentiality. The Institutional Review Board at Texas Woman's University approved this study as exempt as this was a secondary data analysis dissertation (Appendix D).

Sample

This dissertation utilizes the NSFG 2002, 2006-2010, and 2011-2013 female respondent datasets. The sample for this dissertation is limited to all Mexican American young women aged 15-24 years old. I excluded those who reported never having sexual intercourse with a male, those who have ever been married, and those currently pregnant or trying to become pregnant. As a result, we can deduce that no one who remained in the sample who used contraceptives was doing so for family planning means.

The final sample represents all Mexican American young women who have never been married and have ever had sexual intercourse with a male (Appendix A for definitions). These analyses were run on respondents that have valid responses to all

variables for each dependent variable. The final unweighted sample is N=339 for contraceptive use at last sexual encounter; N=273 for specific contraceptive method; and N=453 for contraceptive use at first sexual encounter. Surveys were conducted in person and were voluntary and confidential.

VARIABLES AND MEASURES

Dependent Variables

The primary dependent variable is based on the recoded variable for contraceptive method used at last sex (sexual intercourse/encounter) in past 3 months (MTHUSE3). It is coded as yes, no and never used a method. It was dummy coded to yes =1 and no =0.

The secondary dependent variable is based on the birth control method used at last sex (METH3M1). Those respondents who used contraceptives at last sex were asked what the primary contraceptive method they used was. The question had more than 20 response categories. The variable was recoded to reflect 1 =birth control pill; 2 =condom; 3 =withdrawal or rhythm; 4 =other contraceptive measures. Dummy variables were created for each category where the desired category was designated as =1 and all other categories as =0.

The tertiary dependent variable is based on if respondents used a contraceptive method at first sex (USEFSTSX). It is coded as yes, no, refused, and don't know. It was dummy coded yes =1 and no =0. Not ascertained responses were coded as missing. This variable was used as an independent variable when the primary dependent variable was examined.

Independent Variables

The following independent variables were used in the analysis.

1. Talk to parents about sex (TALKPAR1). Respondents were asked what sex education topics they discussed with their parents. This variable was chosen because over 80 percent of respondents talked to their parents about more than one topic. The variable had 7 categories in 2006-2010 and 2011-2013, but only 6 categories in 2002. The variable was recoded in 2002 to reflect the same coding as the other years. The variable was dummy coded as yes =1 and no =0. I included it in order to determine whether parents who talk to their daughters about sex had a statistically marginal effect on the likelihood of having used contraceptives at last sexual encounter.
2. Type of sex education (Based on combining SEDNO and SEDBC). Type of specific sex education was measured by two questions in the NSFG. The first question asked if respondents had received any formal sex education at school, church, a community center, or other place before the age of 18 about how to say no to sex (SEDNO). A follow-up question asked if they had received education regarding methods of birth control (SEDBC). Respondents who answered yes to both questions were classified as receiving comprehensive sex education. Respondents who only answered yes to the first question were classified as receiving abstinence-only sex education. Respondents who said no to both

question were categorized as having received no sex education. Respondents who refused or didn't answer either sex education question were recoded to missing.

3. Age at first sex (AGEFSTSX). Respondents were asked the age when they first had sexual intercourse with a man.
4. Family income (TOTINCR). Respondents were asked to specify their total family income. Responses were recoded into an ordinal scale that had 14 categories that ranged from under $5000/year to $100000 or more/year. However in the 2013 dataset category 15 was changed to reflect the same coding as the 2002 dataset, and 2006-2010 dataset with 14 categories.
5. Intact family status (Based on combining INTCTFAM and PARAGE14). Respondents were asked if their childhood family was intact (INTCTFAM). It was dichotomously coded as yes, which indicated having two biological or adoptive parents, and no. PARAGE14 was a recoded variable that is based on the intact status of a respondent's family at age 14. Responses are biological/adoptive parents (except for in 2006-2010 where it was coded as biological parents), biological mother and stepfather, and any other parental situation. If respondents answered yes to INTCTFAM then they grew up in an intact family with biological or adoptive parents. If respondents answered no to INTCTFAM and designated PARAGE14 as being raised by biological mother and stepfather then she was raised by her biological mother and stepfather. Respondents who answered no to question INTCTFAM and answered question PARAGE14 as

having any other parental situation were raised in ‘any other parental situation’. A dummy variable was created for each category (biological or adoptive parents; biological mother and stepfather; and other parental situation) where the desired category was designated as =1 and all other categories as =0.

6. Current sex partner status (LIFEPRT). Respondents were asked the number of sex partners they have had in their lifetime. A dummy variable was created for having multiple sex partners (2 or more sex partners over their lifetime) =1 and having 1 sex partner was designated as =0.

Control Variables

1. Mother had first child as teenager (AGEMOMB1). Respondents were asked how old their mother was when she had her first live child. A dummy variable was created for having a teenage mother that was determined based on the original responses. A dummy variable was created where less than 18 and 18-19 years old =1 while all other categories are designated =0.
2. Parents married at child’s birth (PARMARR). Respondents were asked if their parents were married when they were born. Responses include yes, no, and don’t know. It is dummy coded as yes =1 and no =0. “I don’t know” was designated as missing.
3. Religious affiliation (RELIGION). Researchers created a recoded variable based on a respondent’s current religious affiliation (RELCURR). RELCURR is coded as No Religion; Catholic; Baptist/Southern Baptist; Methodist, Lutheran,

Presbyterian, Episcopal; Fundamentalist Protestant; Other Protestant denomination; Protestant - No specific denomination; Other religion, Refused; and "I don't know." Final categories for RELIGION are: No Religion, Catholic, Protestant, and Other Religions. Refused and "I don't know" were coded as missing. A dummy variable was created for each category where the desired category will be designated as =1 and all other categories as =0.

4. Consistent health insurance status (COVER12). Respondents were asked if they lacked health insurance in the last year. It was coded as: yes, no, refused, and "I don't know." It was reverse coded as no =1 (have consistent health insurance) and yes =0 (do not have consistent health insurance). Refused and "I don't know" were coded as missing.
5. Mother's education (EDUCMOM). This is a recoded variable the researchers created that is coded as: Less than high school, High school graduate/GED, Some college including 2 year degrees, and Bachelor's degree or higher. Dummy variables were created for each category where the desired category was coded as =1 and all other categories designated =0. For logistic regression less than high school category was reversed coded so have a high school diploma/GED or higher =1 and less than high school =0.

Year was not added as a control variable in the analyses as there was no significance differences (2002, 2006-2010, and 2011-2013 respectively) on contraceptive use at last sexual encounter.

LIMITATIONS OF THE DATA

One major limitation of the NSFG is respondents were not surveyed in 2004 and 2005. Another limitation is that the NSFG does not survey youth age 10-14. I would have liked having younger Mexican American girls as some do become sexually active at ages younger than 15 and it would have been interesting to see the impact that the parental 'sex talk' had on these sexually active teens, not just Mexican American young women aged 15-24 years old. This limits the ability to generalize the findings to Mexican American young women as a whole. An additional limitation is that the survey is based on a respondent's recollection. This introduces the possibility of recall bias. Some of the respondents may be answering questions based on how they think the researcher wants them answered producing social desirability bias.

An importance limitation to acknowledge is the sample size for this dissertation may be considered modest and may impact the statistical significance and implications of the findings. This is possible as we may not be able to distinguish whether the findings impact teens more so than young women. Further, we may not be able to assess if the sex talk and type of sex education are quite different for teenagers versus adults.

Furthermore, since some of the questions from the NSFG cover contraceptive use and sexual experiences, some Mexican American young women may be more reluctant to answer truthfully for fear of embarrassment. Not all the questions I would have liked were available. It would have been interesting to see which parent did the 'sex talk.' There was no question that asked respondents how likely they were to use contraceptives

and what made the respondent use contraceptives. Moreover, I would have liked if there had been questions regarding a participant's attitude toward formal sex education, and contraceptive use, if contraceptives were used and what made these Mexican American young women use them (i.e., partner suggestion).

DATA ANALYSIS

In order to address the hypotheses posed in this dissertation, the following statistical techniques were utilized. Descriptive statistics such as percentage, mean, standard deviation, median, and range were used to describe the characteristics of the sample, to check for violations of the assumptions underlying certain statistical techniques used, and to describe the contraceptive use of Mexican American young women.

The main method of analysis is logistic regression. Logistic regression is most appropriate because the primary dependent variable is dichotomous. Stratified weighted analysis was used to account for the complex survey design of the NSFG using SAS 9.3. The procedure utilized in SAS was SURVEYLOGISTIC. The strata (SEST) cluster (SECU_R [2002], SECU [2006-2010; 2011-2013]) and weight (FINALWGT [2002], WGTQ1Q16 [2006-2010], and WGT2011_2013 [2011-2013]) were utilized for all weighted analyses. Complex sampling procedures was done to provide more precision for small strata as well as to sample a group of individuals defined by a cluster (i.e., counties, tracts, neighborhood, and block). In complex sampling procedures weighting was done to compensate for those respondents who were excluded from the data analysis since these

respondents have missing values. Further, weighting was utilized to restore representation of the sample in the population and prevent bias.

For each of the dependent variables, nested models were tested. The first model included each independent variable of interest. The second model added the dummy variables for mother being a teenage parent, whether a girl's parents were married at their birth, and mother's education status. The third model added the control dummy variables for religious affiliations (Protestant, Other religions, and No religion; reference =Catholic) and having consistent health insurance. Covariates were retained in their respective model if they are significantly associated with the outcome and/or if the inclusion changes the estimates for the independent variable being tested. The same series of models was estimated for contraceptive use at first sex. SPSS 21.0 was used to obtain all pseudo R^2 values using the complex samples add-on module. The value of pseudo R^2 indicates how much variation in the dependent variable was explained by all independent variables in that particular model.

Polytomous regression was done to examine the specific contraceptive method in SAS 9.3 using the strata (SEST) cluster (SECU_R [2002], SECU [2006-2010; 2011-2013]) and weight (FINALWGT [2002], WGTQ1Q16 [2006-2010], and WGT2011_2013 [2011-2013]) variables along with link=glogit in SURVEYLOGISITIC procedure. Logistic regression was also used for the tertiary dependent variable as it was a dichotomous variable. The same SAS procedure was utilized as what was used for the primary dependent variable.

SUMMARY

The data for this dissertation is from the NSFG nationally representative noninstitutionalized sample of person 15-44 in the US from 2002, 2006-2010, and 2011-2013 female respondent datasets. Mexican American young women aged 15-24 who have never been married and have had sex have been selected as the sample of this study. The primary dependent variable is a contraceptive use at last sexual encounter. This study sought to examine the social determinants of contraceptive use at last sexual encounter of Mexican American young women. A number of predictors were used as control variables: mother had first child as teenager; parents married at child's birth; religious affiliation; consistent health insurance status; and mother's education status. In order to answer the hypotheses posed in this dissertation, logistic regression for complex samples was utilized as the main method of analysis.

CHAPTER V

RESULTS

This chapter presents the results of the data analysis on all three dependent variables: contraceptive use at last sexual encounter, specific contraceptive method, and contraceptive use at first sexual encounter.

DESCRIPTIVE STATISTICS AND BASIC DEMOGRAPHICS

Contraceptive Use at Last Sexual Encounter

Table 1 presents the descriptive statistics (percentages, standard deviation, and/or median and range) for contraceptives at last sexual encounter. Table 1 presents the demographic characteristics of the Mexican American young women in this sample. The sample only includes women who had sex during the last three months and are not currently married. Over 80 percent of the respondents used contraceptives at the last sexual encounter. As shown in Table 1, 62.2 percent of Mexican American young women talked to their parents about sex. Over 70 percent of these young women received comprehensive sexual education followed by abstinence-only sex education (17.4 percent). The median age of a respondent at first sex was 16 years old.

The median score for family income (=7) indicates that half of the respondents had a family income above $20,000-24,999 and half of them were below (Table 1). Over half (57.5 percent) grew up in a household with either biological parents or adoptive

parents, followed by some other parental situation (31.0 percent), or a biological mother and stepfather (11.5 percent). The majority of the sample had multiple sex partners (67.0 percent). About 70 percent of the respondents used contraceptives at their first sexual encounter (Table 1).

Table 1. Descriptive Statistics of Variables Used for Contraceptive Use at Last Sexual Encounter, 2002, 2006-2013 NSFG

Predictors	Percent	SD	N	Total N Weighted
Dependent Variable				
Contraceptives Use at Last Sexual Encounter	100% (80.5%*)	0.40	339	1,896,042
Independent Variables				
Talk to Parents about Sex	100% (62.2%*)	0.49	339	1,896,042
Type of Sex Education				
No Sex Education	9.7%	0.30	339	1,896,042
Abstinence-Only Sex Education	17.4%	0.38	339	1,896,042
Comprehensive Sex Education	72.9%	0.45	339	1,896,042
Age at First Sex	16a	18b	339	1,896,042
Family Income (14-point scale)	7a	13b	339	1,896,042
Intact Family Status				
Both Biological/Adoptive Parents	57.5%	0.50	339	1,896,042
Biological Mom and Step Dad	11.5_%	0.32	339	1,896,042
Other Parental Situation	31.0%	0.46	339	1,896,042

Multiple Sexual Partners	100% (67.0%*)	0.47	339	1,896,042
Contraceptives Use at First Sexual Encounter	100% (69.3%*)	0.46	339	1,896,042
Control Variables				
Mother Had First Child as Teenager	100% (27.7%*)	0.45	339	1,896,042
Parents Married at Child's Birth	100% (64.3%*)	0.48	339	1,896,042
Mother's Education				
Less than High School	48.1%	0.50	339	1,896,042
High School Graduate/GED	25.4%	0.43	339	1,896,042
Some College (including 2 year degree)	18.3%	0.39	339	1,896,042
Bachelor's Degree or Higher	8.3%	0.28	339	1,896,042
Religious Affiliation				
Catholic	58.1%	0.49	339	1,896,042
Protestant	19.8%	0.40	339	1,896,042
Other Religions	1.2%	0.11	339	1,896,042
No Religion	20.9%	0.41	339	1,896,042
Consistent Health Insurance	100% (59.0%*)	0.49	339	1,896,042

a Median
b Range
(%*) indicates respondents that answered yes for the category.

Less than one-third (27.7 percent) of the respondents were daughters of teen mothers, and approximately two-thirds had parents who were married at their birth (Table 1). A substantial part of the sample (48.1 percent) had mothers who did not graduate from high school. On average, the religious affiliation of the sample was mostly Catholic (58.1 percent), followed equally by Protestants and no religious affiliation. Only 59.0 percent of the respondents had consistent health insurance in the last year (Table 1).

Specific Contraceptive Method

Table 2 presents the descriptive statistics (percentages, standard deviation, and/or median and range) for specific contraceptive method. Table 2 presents the demographic characteristics of the Mexican American young women in this sample. The sample only includes women who used contraceptives at last sexual encounter and are not currently married. The majority of these women used a condom (43.6 percent), birth control pill (23.4 percent), withdrawal or rhythm (14.3 percent), or other contraceptive measures (18.7 percent). As shown in Table 2, 65.2 percent of Mexican American young women talked to their parents about sex. Over 73 percent of these young women received comprehensive sexual education followed by abstinence-only sex education (17.6 percent). The median age of a respondent at first sex was 16 years old.

Table 2. Descriptive Statistics of Variables Used for Specific Contraceptive Method, 2002, 2006-2013 NSFG

Predictors	Percent	SD	N	Total N Weighted
Dependent Variable				
Specific Contraceptive Method				
Birth Control Pill	23.4%	0.42	273	1,539,139
Condom	43.6%	0.50	273	1,539,139
Withdrawal or Rhythm	14.3%	0.35	273	1,539,139
Other Contraceptive Measures	18.7%	0.40	273	1,539,139
Independent Variables				
Talk to Parents about Sex	100% (65.2%*)	0.48	273	1,539,139
Type of Sex Education				
No Sex Education	8.8%	0.28	273	1,539,139
Abstinence-Only Sex Education	17.6%	0.38	273	1,539,139
Comprehensive Sex Education	73.6%	0.44	273	1,539,139
Age at First Sex	16a	11b	273	1,539,139
Family Income (14-point scale)	8a	13b	273	1,539,139
Intact Family Status				
Both Biological/Adoptive Parents	57.9%	0.50	273	1,539,139
Biological Mom and Step Dad	12.5%	0.33	273	1,539,139
Other Parental Situation	29.7%	0.46	273	1,539,139

Multiple Sexual Partners	100% (64.1%*)	0.48	273	1,539,139
Contraceptives Use at First Sexual Encounter	100% (72.2%*)	0.45	273	1,539,139
Control Variables				
Mother Had First Child as Teenager	100% (26.4%*)	0.44	273	1,539,139
Parents Married at Child's Birth	100% (65.2%*)	0.48	273	1,539,139
Mother's Education				
Less than High School	46.2%	0.50	273	1,539,139
High School Graduate/GED	25.6%	0.44	273	1,539,139
Some College (including 2 year degree)	19.8%	0.40	273	1,539,139
Bachelor's Degree or Higher	8.4%	0.28	273	1,539,139
Religious Affiliation				
Catholic	58.6%	0.49	273	1,539,139
Protestant	20.9%	0.41	273	1,539,139
No Religion	20.5%	0.40	273	1,539,139
Consistent Health Insurance	100% (61.9%*)	0.49	273	1,539,139

a Median
b Range
(%*) indicates respondents that answered yes for the category.

The median score for family income (=8) indicates that half of the respondents had a family income above $25,000-29,999 and half of them were below (Table 2). Over half (57.9 percent) grew up in a household with either biological parents or adoptive parents, followed by some other parental situation (29.7 percent), or a biological mother and stepfather (12.5 percent). The majority of the sample had multiple sex partners (64.1 percent). Over 70 percent of the respondents used contraceptives at their first sexual encounter (Table 2).

Less than one-third (26.4 percent) of the respondents were daughters of teen mothers, and approximately two-thirds had parents who were married at their birth (Table 2). A substantial part of the sample (46.2 percent) had mothers who did not graduate from high school. On average, the religious affiliation of the sample was mostly Catholic (58.6 percent), followed equally by Protestants and no religious affiliation. Only 61.9 percent of the respondents had consistent health insurance in the last year (Table 2).

Contraceptive Use at First Sexual Encounter

Table 3 presents the descriptive statistics (percentages, standard deviation, and/or median and range) for contraceptive use at first sexual encounter. Table 3 presents the demographic characteristics of the Mexican American young women in this sample. The sample only includes women who had sex during the last three months and are not currently married. Over 70 percent of the respondents used contraceptives at the first sexual encounter. As shown in Table 2, 63.1 percent of Mexican American young women talked to their parents about sex. Over 70 percent of these young women received

comprehensive sexual education followed by abstinence-only sex education (16.6 percent). The median age of a respondent at first sex was 16 years old.

Table 3. Descriptive Statistics of Variables Used for Contraceptive Use at First Sexual Encounter, 2002, 2006-2013 NSFG

Predictors	Percent	SD	N	Total N Weighted
Dependent Variable				
Contraceptive Method at First Sexual Encounter	100% (71.1%*)	0.45	453	2,566,427
Independent Variables				
Talk to Parents about Sex	100% (63.1%*)	0.48	453	2,566,427
Type of Sex Education				
No Sex Education	11.0%	0.31	453	2,566,427
Abstinence-Only Sex Education	16.6%	0.37	453	2,566,427
Comprehensive Sex Education	72.4%	0.45	453	2,566,427
Age at First Sex	16a	18b	453	2,566,427
Family Income (14-point scale)	8a	13b	453	2,566,427
Intact Family Status				
Both Biological/Adoptive Parents	58.3%	0.49	453	2,566,427
Biological Mom and Step Dad	11.3%	0.31	453	2,566,427
Other Parental Situation	30.5%	0.46	453	2,566,427
Multiple Sexual Partners	100% (62.7%*)	0.49	453	2,566,427

Control Variables				
Mother Had First Child as Teenager	100% (26.7%*)	0.44	453	2,566,427
Parents Married at Child's Birth	100% (64.5%*)	0.48	453	2,566,427
Mother's Education				
Less than High School	46.1%	0.50	453	2,566,427
High School Graduate/GED	26.5%	0.44	453	2,566,427
Some College (including 2 year degree)	18.5%	0.39	453	2,566,427
Bachelor's Degree or Higher	8.8%	0.29	453	2,566,427
Religious Affiliation				
Catholic	58.4%	0.49	453	2,566,427
Protestant	21.8%	0.41	453	2,566,427
No Religion	19.8%	0.39	453	2,566,427
Consistent Health Insurance	100% (57.0%*)	0.50	453	2,566,427

a Median
b Range
(%*) indicates respondents that answered yes for the category.

The median score for family income (=8) indicates that half of the respondents had a family income above $25,000-29,999 and half of them were below (Table 3). Over half (58.3 percent) grew up in a household with either biological parents or adoptive parents, followed by some other parental situation (30.5 percent), or a biological mother

and stepfather (11.3 percent). The majority of the sample had multiple sex partners (64.5 percent) (Table 3).

Less than one-third (26.7 percent) of the respondents were daughters of teen mothers, and approximately two-thirds had parents who were married at their birth (Table 3). A substantial part of the sample (46.1 percent) had mothers who did not graduate from high school. On average, the religious affiliation of the sample was mostly Catholic (58.1 percent), followed by Protestants (21.8 percent), no religious affiliation (18.8 percent), and other religion (1.3). Only 57.0 percent of the respondents had consistent health insurance in the last year (Table 3).

LOGISTIC REGRESSION ANALYSES

To test all seven hypotheses logistic regression was used because the primary dependent variable was dichotomous. I tested a series of 4 nested logistic regression models for Mexican American young women in order to determine the unique contribution of certain control variables added to independent variable of interest. This section reports these results.

CONTRACEPTIVE USE AT LAST SEXUAL ENCOUNTER

I tested 3 models to answer my Hypotheses (Table 2). Model χ^2, -2 log likelihood and Pseudo R^2 were used as goodness-of-fit statistics that indicate how well the models fit the data. Model 1 only includes the independent variables. Model 2 added the following control variables: dummy variables for teen mother, parents married at child's birth and mother has high school diploma/GED or higher. Model 3 added dummy

variables for religious affiliation and consistent health insurance (Table 4). When looking at the -2 likelihood for Model 1 (1640646.2), Model 2 (1621193.0), and Model 3 (1579515.4) the smallest value of Model 3 indicates the best fitting model (Table 4). When looking at the model χ^2 the larger value indicates a better fit so Model 3 is chosen (254544.79). When looking at the Pseudo R^2 the larger the value additionally indicates a better fit so Model 3 with 0.203 is the best fitting model. Taken together, all the predictor variables explain 20.3 percent of the variation in the likelihood of contraceptive use amongst Mexican American young women.

Women Talk to Their Parents about Sex

As hypothesized, talking to parents about sex was a positive protective factor for contraceptive use at last sexual encounter ($B=0.70$, $p<0.01$; Table 4). Mexican American young women who talked to their parents about sex were more likely to report they used contraceptives at last sexual encounter than those women who did not talk to their parents about sex (Table 4).

Table 4. Logistic Regression Models Predicting Contraceptive Use at Last Sexual Encounter among Mexican American Young Women, 2002, 2006-2013 NSFG

	Model 1		Model 2		Model 3	
Predictors	B	OR	B	OR	B	OR
Talk to Parents about Sex	0.76* [0.26]	2.14	0.68** [0.27]	1.97	0.70** [0.25]	2.01
Type of Sex Education (ref. = No Sex Education)						
Abstinence-only Sex Education	0.59 [0.86]	1.80	0.47 [0.93]	1.61	0.44 [0.86]	1.56
Comprehensive Sex Education	0.06 [0.39]	1.06	0.02 [0.40]	1.02	-0.04 [0.33]	0.97
Age at First Sex	-0.04 [0.08]	0.96	-0.03 [0.08]	0.97	-0.05 [0.05]	0.95
Family Income (14-point scale)	0.17* [0.04]	1.19	0.16* [0.06]	1.17	0.17** [0.06]	1.18
Intact Family Status (ref. = Both Biological/ Adoptive Parents)						
Biological Mother and Stepfather	0.60 [0.84]	1.82	0.59 [0.99]	1.80	0.58 [0.49]	1.79
Other Parental Situation	0.21 [0.16]	1.23	0.18 [0.18]	1.20	0.09 [0.11]	1.09
Multiple Sexual Partners	0.67 [0.36]	0.51	0.66 [0.35]	0.52	0.74* [0.33	1.48
Contraceptive Use at First Sexual Encounter	-0.02 [0.48]	0.98	-0.004 [0.46]	1.00	-0.02 [0.48]	1.00
Mother Had First Child as Teenager			-0.18 [0.32]	0.83	-0.25 [0.41]	0.78
Parents Married at Child's Birth			-0.22 [0.24]	0.80	-0.25 [0.31]	0.78
Mother has High School Diploma/GED or Higher			0.51*** [0.11]	1.66	0.58*** [0.16]	1.78
Religious Affiliation (ref. = Catholic)						
Protestant					0.51 [0.61]	1.66
Other Religions					-0.51 [0.96]	0.60
No Religion					-0.86* [0.42]	0.42

Table 4 continued	Model 1		Model 2		Model 3	
Predictors	B	OR	B	OR	B	OR
Consistent Health Insurance					0.05 [0.23]	1.05
Constant	0.67 [1.28]		0.63 [1.18]		1.15 [0.49]	
-2 log likelihood	1640646.2		1621193.0		1579515.4	
Model χ^2	193413.98***		212867.15***		254544.79***	
Pseudo R^2	0.156		0.171		0.203	
Degrees of freedom	9		12		16	
N	339		339		339	
Weighted N	1,896,042		1,896,042		1,896,042	

*p ≤.05 **p ≤.01 ***p ≤.001
Note: Standard Errors in Brackets.
OR = Odds Ratio

No Difference in Type of Sex Education or Age of Sexual Activity

However, there was no statistically significant effect type of sex education had on contraceptive use at last sexual encounter. We conclude that the type of sex education received does not affect contraceptive use at last sexual encounter. Moreover, there was no statistical effect of age at first sex on contraceptive use at last sexual encounter (Table 4). As a result, we conclude age of sexual activity initiation does not affect contraceptive use at last sexual encounter.

Family Income Influences Contraceptive Use But Not Intact Family Status

Another measurement of contraceptive use as last sexual encounter examined was family income. For each unit increase in family income, the predicted logged odds of contraceptive use at last sexual encounter increases by 0.17 (1.17-1=.17). Even though,

family income had an impact on contraceptive use, intact family status had no statistically significant effect on contraceptive use at last sexual encounter (Table 4).

Multiple Sex Partners Is Important

Having multiple sex partners produces a statistically significant effect on contraceptive use at last sexual encounter. Specifically, women who have had multiple sex partners are 0.48 (1.48-1=.48) more likely to use contraceptives than women who only have 1 sexual partner. This indicates that that having multiple sex partners does play a part in women's contraceptive method decisions among this population (Garcia 2012a) (Table 4).

First Use Does Not Predict Last Use

A measure we sought to assess as a social determinant of contraceptive use at last sexual encounter was one's first sexual encounter contraceptive use. We found no statistical effect of contraceptive use at first sex on contraceptive use at last sexual encounter (Table 4). Based on Table 4 we conclude that contraceptive use at first sex does not influence contraceptive use at last sexual encounter.

Control Variables in Analyses

There is no statistical effect in being the daughter of a teen mother in the predicted logged odds of contraceptive use at last sexual encounter. There is no relationship between parents being married at birth and contraceptive use at last sexual encounter. There is a statistical difference between women whose mothers' had a high school degree or higher ($B=0.58$, $p<0.01$). Mexican American young women whose

mothers had a high school diploma/GED or higher are 0.79 times more likely than those whose mothers had less than a high school education to use contraceptives at last sexual encounter (Table 4).

There is a significant relationship among religious affiliation and contraceptive use at last sexual encounter (Table 4). Individuals with no religious affiliation are about 0.86 times less likely than Catholics to use contraceptives at last sexual encounter. There is no difference between Protestants and Catholics in use of contraceptives during their last sexual encounter. There is no difference between persons who identify as having 'other religion' and Catholics in contraceptive use at their last sexual encounter. There is no statistical difference between having consistent health insurance in the last 12 months in predicting contraceptive use at last sexual encounter.

Based on the results of Table 4, I reject the null hypotheses for hypotheses one, four, and six. I conclude that there is a positive protective factor between talking to parents about sex and contraceptive use at last sexual encounter. Further, I determine that those young women who grew up with a high family income are more likely to use contraceptives at last sexual encounter than those who grew up with a lower family income. Finally, I supported my hypothesis that Mexican American young women who have had multiple sexual partners are more likely to use contraceptives in their last sexual encounter than those who do not have multiple sexual partners.

DIFFERENCES AMONG SPECIFIC CONTRACEPTIVE METHOD

This section presents the results of the data analyses when using specific contraceptive method as a dependent variable. Polytomous regression was conducted because the dependent variable is nominal. The reference category is birth control pill. The other categories are condom, withdrawal or rhythm, and other contraceptive measures. The sample consisted of those Mexican American young women who answered yes to using contraceptives at last sex. All the control variables explain 62.6 percent of the variation in specific contraceptive method amongst all Mexican American young women (Table 5). No respondents reported having an 'other religion'.

Condom vs. Birth Control Pills

Talking to parents about sex produces a negative effect on using condoms rather than birth control pills ($B=-1.25$, $p<0.001$) (Table 5). This indicates that Mexican American women were more likely to use birth control pills than condoms when talking to their parents about sex. Women who received abstinence-only sex education are 6.11 times more likely than those who received no sex education to use condoms rather than birth control pills. Women who received comprehensive sex education are 7.43 times more likely than those who received no sex education to use condoms rather than birth control pills.

Table 5. Polytomous Regression Models for Specific Contraceptive Method among Mexican American Young Women, 2002, 2006-2013 NSFG

	Condom vs. Birth Control Pill		Withdrawal or Rhythm vs. Birth Control Pill		Other Contraceptive Measures vs. Birth Control Pills	
Predictors	B	OR	B	OR	B	OR
Talk to Parents about Sex	-1.25*** [0.46]	0.29	-0.88 [0.55]	0.41	-1.44*** [0.23]	0.24
Type of Sex Education (ref. = No Sex Education)						
Abstinence-only Sex Education	1.96* [0.98]	7.11	1.39 [1.03]	4.00	0.69 [0.51]	2.00
Comprehensive Sex Education	2.13** [0.81]	8.43	0.75 [0.77]	2.11	1.36** [0.53]	3.89
Age at First Sex	-0.05 [0.05]	0.95	-0.17 [0.22]	0.84	-0.36*** [0.06]	0.70
Family Income (14-point scale)	-0.07 [0.05]	0.93	-0.03 [0.05]	0.97	-0.12*** [0.03]	0.89
Intact Family Status (ref. = Both Biological/Adoptive Parents)						
Biological Mother and Stepfather	0.49 [0.66]	1.63	0.95 [1.06]	2.58	1.02 [0.89]	2.78
Other Parental Situation	0.82** [0.29]	2.27	0.19 [0.92]	1.20	-0.01 [0.66]	0.99
Multiple Sexual Partners	-0.67 [0.46]	0.51	1.10* [0.49]	3.02	-0.81* [0.36]	0.45
Contraceptive Use at First Sexual Encounter	0.60 [0.54]	1.81	0.05 [0.54]	1.05	-0.31 [0.39]	0.74
Mother Had First Child as Teenager	1.06** [0.40]	2.90	-0.07 [0.84]	0.94	0.68 [0.50]	1.97
Parents Married at Child's Birth	0.33 [0.76]	1.40	-0.30 [0.83]	0.74	0.48 [0.95]	1.61
Mother has High School Diploma/GED or Higher	-0.49 [1.20]	0.61	-0.99 [1.08]	0.56	-0.58 [1.20]	0.37
Religious Affiliation (ref. = Catholic)						
Protestant	-0.19 [0.43]	0.83	1.54*** [0.33]	4.68	0.01 [0.95]	1.01

Table 5 continued	Condom vs. Birth Control Pill		Withdrawal or Rhythm vs. Birth Control Pill		Other Contraceptive Measures vs. Birth Control Pills	
Predictors	B	OR	B	OR	B	OR
No Religion	0.87	2.38	1.56**	4.76	0.15	1.16
	[0.58]		[0.50]		[1.15]	
Consistent Health Insurance	-0.51	0.60	-1.27**	0.28	-0.38	0.69
	[0.49]		[0.45]		[0.57]	
Constant	0.65		1.89		6.87	
	[1.02]		[2.70]		[0.84]	
-2 log likelihood			3238823.2			
Model χ^2			740166.56***			
Pseudo R^2			0.626			
Degrees of freedom			45			
N			273			
Weighted N			1,539,139			

*p ≤.05 **p ≤.01 ***p ≤.001
Note: Standard Errors in Brackets.
OR = Odds Ratio

There is no significant relationship between family income and using condoms versus birth control pills. Women who grew up in an "other parental situation" are 1.27 times more likely than women who grew up with both biological/adoptive parents to use condoms rather than birth control pills. There is a significant effect of being the daughter of a teen mother on the likelihood of using a condom rather than birth control pills (B=1.06, p<0.001). Among those women who used condoms rather than birth control pills during their last sexual encounter, no other control variables show a significant effect on active contraceptive use.

Withdrawal or Rhythm vs. Birth Control Pills

Talking to parents about sex produces no significant effect with regards to withdrawal or rhythm rather than birth control pills (Table 5). Respondents who identify as Protestant are 3.68 times more likely than Catholics to use the withdrawal or rhythm method rather than birth control (Table 5). Women who identify as having no religious affiliation are 3.76 times more likely than Catholics to use the withdrawal or rhythm method compared to birth control pills. With regards to having consistent health insurance, the predicted logged odds of using a condom compared to birth control pills will decrease by 1.27 ($p<0.01$). Among the women who used the withdrawal or rhythm method rather than birth control pills, no other independent variables or control variables show a significant effect on active contraceptive use for Mexican American young women (Table 5).

Other Contraceptive Measures vs. Birth Control Pill

Talking to parents about sex produces a negative effect on using other contraceptive measures rather than birth control pills ($B=-1.44$, $p<0.001$) (Table 5). This indicates that Mexican American women were more likely to use birth control pills than other contraceptive measures when talking to their parents about sex. Women who received comprehensive sex education are 2.89 times more likely than those who received no sex education to use other contraceptive measures rather than birth control pills. For each year increase in age, the likelihood of using other contraceptives measures rather than birth control pills decreases by 30 percent. Among the women who used other

contraceptive measures rather than birth control pill, no other independent variables or control variables show a significant effect on active contraceptive use for Mexican American young women (Table 5).

The results in Table 5 indicate there is a difference seen in the specific contraceptive method used among some of social determinants this dissertation examined, specifically, talking to parents about sex, type of sex education, intact family status, and religious affiliation.

CONTRACEPTIVE USE AT FIRST SEXUAL ENCOUNTER

This section presents the results of the data analyses when using contraceptive use at first sexual encounter as a dependent variable. Other Religions was not included as no respondents identified as believing in a 'other religion.'

I tested 3 models to see what role the independent variables and control variables had on contraceptive use at first sexual encounter. Model χ^2, -2 log likelihood and Pseudo R^2 were used as goodness-of-fit statistics that indicate how well the models fit the data. Model 1 only includes all the independent variables. Model 2 adds the following control variables: dummy variables for teen mother, parents married at child's birth and mother has high school diploma/GED or higher. In Model 3 dummy variables for religious affiliation and consistent health insurance are further added (Table 6).

Table 6. Logistic Regression Models Predicting Contraceptive Use at First Sexual Encounter among Mexican American Young Women, 2002 and 2006-2013 NSFG

	Model 1		Model 2		Model 3	
Predictors	B	OR	B	OR	B	OR
Talk to Parents about Sex	0.13 [0.25]	1.13	0.17 [0.31]	1.18	0.17 [0.32]	1.18
Type of Sex Education (ref. = No Sex Education)						
Abstinence-only Sex Education	-0.09 [0.25]	0.91	-0.11 [0.55]	0.90	-0.08 [0.55]	0.92
Comprehensive Sex Education	0.16 [0.34]	1.18	0.14 [0.34]	1.15	0.16 [0.32]	1.17
Age at First Sex	0.16* [0.08]	1.17	0.15 [0.09]	1.16	0.15 [0.08]	1.16
Family Income (14-point scale)	0.05 [0.05]	1.05	0.06 [0.05]	1.06	0.06 [0.05]	1.07
Intact Family Status (ref. = Both Biological/ Adoptive Parents)						
Biological Mother and Stepfather	-0.07 [0.23]	0.94	-0.0005 [0.14]	1.00	0.01 [0.18]	1.01
Other Parental Situation	0.05 [0.28]	1.05	0.13 [0.32]	1.14	0.10 [0.33]	1.10
Multiple Sex Partners	-0.15 [0.38]	0.86	-0.15 [0.42]	0.87	-0.17 [0.37]	0.85
Mother Had First Child as Teenager			-0.18 [0.26]	0.84	-0.17 [0.27]	0.85
Parents Married at Child's Birth			0.23 [0.36]	1.26	0.28 [0.36]	1.33
Mother has High School Diploma/GED or Higher			-0.27 [0.32]	0.76	-0.30 [0.36]	0.74
Religious Affiliation (ref. = Catholic)						
Protestant					0.53 [0.30]	1.70
No Religion					0.26 [0.44]	1.29
Consistent Health Insurance					-0.18 [0.32]	0.84

	Model 1		Model 2		Model 3	
Predictors	B	OR	B	OR	B	OR
Constant	-2.22		-2.10		-2.17*	
	[1.42]		[1.41]		[1.10]	
-2 log likelihood	3039578.4		3024820.0		2999333.1	
Model χ^2	125263.79***		140022.17***		165509.06***	
Pseudo R^2	0.067		0.075		0.088	
Degrees of freedom	8		11		13	
N	453		453		453	
Weighted N	2,566,427		2,566,427		2,566,427	

*p ≤.05 **p ≤.01 ***p ≤.001
Note: Standard Errors in Brackets.
OR = Odds Ratio

When looking at the -2 likelihood for Model 1 (3041908.6), Model 2 (3024820.0), and Model 3 (3001989.9) the smallest value of Model 3 indicates the best fitting model (Table 6). The largest model χ^2 designated the best fit as well so Model 3 is selected (165509.06). Additionally, the largest Pseudo R^2 value indicates a best fit so Model 3 with 0.088 is the best fitting model. Model 3 explains 8.8 percent of the variation in the likelihood of contraceptive use at first sexual encounter among Mexican American young women (Table 6).

Talking to parents about sex does not produce an effect on contraceptive use at first sexual encounter (Table 6). There is no association between type of sex education and contraceptive use at first sexual encounter. The age of sexual activity initiation produces a positive effect on contraceptive use at first sexual encounter (B=0.15; SD=0.08). This aligns with literature that demonstrates that young persons lack the

knowledge of where to access contraceptives and older people go to their primary care providers (Plante 2014; Parker 2015) (Table 6).

There is no statistical effect between family income and contraceptive use at first sexual encounter. There is no significant relationship between having an intact family status and contraceptive use at first sexual encounter. There is a significant relationship between religious affiliation and contraceptive use at last sexual encounter (Table 4). Individuals who are Protestant are 0.70 times more likely than Catholics to use contraceptives at last sexual encounter. No other control variables show a significant effect on contraceptive use at first sexual encounter for Mexican American young women (Table 6).

Similarities and Differences at First Sexual Encounter

When comparing first contraceptive use to last contraceptive use, it is evident that talking to one's parents about sex only has an effect at last use. There are no differences in the type of sex education at first or last contraceptive use, yet there is one when examining the specific method among those women who used contraceptives. Interestingly, family income had a positive effect on contraceptive use at last sexual encounter, yet does not produce a significant effect at first sexual encounter. This aligns with literature that indicates that family income is important at last sexual encounter because these individuals have more to lose due to social norms (Zayas and Witt 2010). When examining contraceptive use at first sex we found that age at sexual activity had a positive effect on contraceptive, however there was no effect at last sexual encounter.

There were no significant effects in any of the control variables at first sexual encounter besides religious affiliation which indicates that first use is impacted by being Protestant rather than Catholic.

CHAPTER VI

DISCUSSION AND CONCLUSION

"Sexuality is less about the actual act of having pretty good sex…and much more about surrounding yourself with an ever simmering sensual energy, pulsing just underneath your daily life and infusing almost everything you do." – Sera J. Beak

This chapter summarizes the major findings of the study, discusses the implications of the findings, assesses the contributions and limitations of the study, and discusses recommendations for future research.

SUMMARY AND DISCUSSION

Previous research on contraceptive use of Mexican American young women is limited. As discussed in the second chapter there are limitations in the literature on Mexican American young women's contraceptive use. For example, there is limited research on Mexican Americans contraceptive use during sexual encounters. Other limitations include studies that study all Hispanic groups together (Garcés-Palacio et al. 2008; Jacobson and Crockett 2000; Roncancio et al. 2012). Current literature demonstrates a need for a comprehensive examination of contraceptive use at last sex for Mexican American young women. This study is the first to examine whether the family dynamics affect contraceptive use and to examine the impact the type of sex education has on contraceptive use among Mexican American young women.

This study examines how parents who give the sex talk to their daughters influence contraceptive use of Mexican American young women aged 18-24 and examines which social determinants play a stronger role in contraceptive use and how those who engage in sexual activity at a younger age differ in their contraceptive use. The social epidemiological perspective provides an opportunity in this current study to examine which determinants play a role in producing this protective effect of contraceptive use during last sexual encounter. Social interactions are important in the social epidemiological perspective as these interactions influence a person's behavior. Based on the social epidemiological perspective and the two symbolic interactionist models seven hypotheses were addressed. To answer the research hypotheses, data from NSFG was utilized from the 2002, 2006-2010, and 2011-2013 female respondent datasets. Logistic regression was used to test the seven hypotheses.

Approximately 80.5 percent of the sample used contraceptives at last sexual encounter. Although most Mexican American young women in our sample used contraceptives at last sexual encounter, limited research has not examined why these women are actively using contraceptives to impact current health education programs. The findings show that a significant portion of Mexican American young women have had sex with multiple partners. This puts these women and their partners at an increased risk for STIs because they do not know the health status of their sexual partners. Based on the rates of unplanned pregnancies and STIs in Mexican American young women, these findings should not be discounted.

This dissertation provides a means to examine contraceptive use among Mexican American young women. It provides answers regarding the impact that social determinants have on contraceptive use at last sex for Mexican Americans. Only three of my seven hypotheses were supported.

Those that were supported were:

Hypothesis 1: Controlling for other factors, Mexican American young women who talk to their parents about sex are more likely to have used contraceptives in their last sexual encounter than Mexican American young women who did not talk to their parents about sex.

Hypothesis 4: Controlling for other factors, Mexican American young women who grew up with a high family income are more likely to use contraceptives in their last sexual encounter than Mexican American young women who grew up with a low family income.

Hypothesis 6: Controlling for other factors, Mexican American young women who have had multiple sexual partners are more likely to use contraceptives in their last sexual encounter than Mexican American young women who had one sexual partner.

The results demonstrate how the integrated theoretical framework I developed could be utilized to examine social determinants that impact contraceptive use at last sexual encounter as literature (Kotchick et al. 1999; Rodgers 1999; White and Potter 2013) has shown the social determinants this dissertation examined are important to a Mexican American woman's contraceptive use decisions. At the heart of the integrated

theoretical framework, was the proposition that different levels (subcultural level, interpersonal level, and individual level) directly impact contraceptive use at last sexual encounter.

This study was specifically interested in determining which level was most important to contraceptive decisions. Further, it sought to explore if there were differences across levels. As much of the research in sexuality is atheoretical, this study used the integrated framework to examine whether one specific level was more important than another level in Mexican American young women contraceptive use.

Talk to Parents about Sex

The first hypothesis attempted to predict the protective impact that talking to one's parents about sex has on contraceptive use during last sexual intercourse. The results show that Mexican American young women who talked to parents about sex in fact used contraceptives at higher rates than those women who did not talk to their parents. This indicates that this open communication influences contraceptive use in a positive manner (Jacobson and Crockett 2000; Rodgers 1999). As a result, open parental communication in which parents let their children known they are there if they need anything will decrease the likelihood of having sex without contraceptives.

As stated previously, there are various reasons for why this occurred which include religious affiliation, family income, and mother's education status. Being the daughter of a teen mother had no effect on contraceptive use at last sex. For the third dependent variable, contraceptive use at first sexual encounter, the results demonstrate

that parents who have the ‘sex talk’ with their daughters do not produce the same protective factor as it does at last sexual encounter. One possible explanation for this is these women didn’t want to talk to their parents or didn’t know how to talk to their parents because sexual activity is a sign of growing up (Kotchick et al. 1999).

Type of Sex Education

The second hypothesis addressed whether comprehensive sex education provided a protective factor with regards to contraceptive use at last sexual encounter. The results show there was no significant effect seen when type of sex education was analyzed. Although substantial research has demonstrated that comprehensive programs can be successful (Kirby 2001; Kirby 2008; Manlove et al. 2003; The National Council to Prevent Teen Pregnancy 2009), there are two possible explanations: the programs may not be culturally competent and even though basic guidelines are available through the Centers for Disease Control and Prevention, they are not being implemented by agencies, states and schools (The Associated Press 2016). This suggests that successful programs need to implement the basic guidelines that can be built upon and replicated by other programs. Moreover, it is possible that the even if a culturally competent program is implemented, that Latinos may still not know how to bring up such a topic as sex. One such culturally competent program in place is for Latinos is called Families Talking Together. It is a brief parent-based intervention to reduce risky sexual behaviors among youth (Center for Latino Health and Family Health 2011).

However, when examining those who used contraceptives, there was a significant effect on the specific method. This indicates that every program in place can work, but they need to reach those individuals who do not follow through with contraceptive use. These results on the specific contraceptive method (Table 5) indicate that those women who are receiving some type of sex education are using condoms rather than birth control pills and are using other contraceptive measures (not including the withdrawal or rhythm method) rather than birth control pills.

The same results regarding type of sex education are seen when examining the dependent variable contraceptive use at first sexual encounter. Based on the work of Kirby (2001) it is not what type of sex education one receives that matters, but where the person is receiving it from. There is no research that has addressed this aspect of sex education in the sexuality field. Although the majority of the respondents received sex education, a majority are still engaging in intercourse without protection. One likely reason is these women are encountering resistance from their sexual partners over safe sex discussion. In other words, their gender may be a key reason why it is difficult for them to sustain this dialogue (Garcia 2012a).

Age at First Sex

The third hypothesis addressed whether young women who had sex at an older age were more likely to use contraceptives at last sexual encounter than those who had sex at a younger age. The results demonstrate those women who participated earlier in sexual activity are not using contraceptives at different rates than those women who

waited to have sex at a later age. Remarkably, age may not be important because waiting to have sex does not mean these women are going to learn the necessary information to start using contraceptives (Garcia 2012b). Also, some women may trust their sexual partner, so they let him decide whether contraceptives such as condoms will be used during sexual intercourse (Williams and Adams 2013).

The research on contraceptive use has shown that Mexican American young women are using contraceptives at higher rates than other Hispanic minorities; however, there is no direct research that has studied why are women are talking to their parents and if they are, why might they not actively be using contraceptives (Gilliam et al. 2011). Age at first sex impacts contraceptive use when specifically examining first sexual encounter. This suggests that these women have the necessary information/education to make informed contraceptive decisions during their first encounter. The same does not extend toward last sexual encounter. One possible reason is that these women do not remember as there is a great lapse the important information from their sex education during sexual relations. Another possible reason is among Catholics, the religious teachings can scare women into abstinence for fear of going to hell, so there is a major lapse between first contraceptive use and last contraceptive use (Donoso 2014).

Family Income

The fourth hypothesis addressed whether Mexican American young women who Mexican American young women who grew up in an intact family with biological/adoptive parents are more likely to use contraceptives in their last sexual

encounter than Mexican American young women who did not grow up in an intact family with biological/adoptive parents. The results for family income show that women who grew up in a household with a higher family income are using contraceptives at higher rates than those who grew up with a lower family income. This result supports the work of Zayas and Witt (2010) who found that family income is a strong predictor for contraceptive use because these people have more to lose than poorer people due to social norms and social acceptance. Further, people with a high family income are able to plan for the future and as a result have more to lose in life (Duncan, Magnuson, and Votruba-Drzal 2014).

Although literature has found that family income is tied to the number of children a family has, minimal family planning exists for poorer Mexican families that have more children (DeLuca et al. 2013; Denny-Garamendi et al. 2007). This is why this saying exists, “Those who should have kids, have few or no kids. Yet those who shouldn’t be having kids are having many of them.” Even though the impact of family income on contraceptive use is important, we must determine how we can better serve the members of society who actually need contraceptives because they are living on the edge of poverty (Duncan et al. 2014). As expected, Mexican American young women who have a higher family income would most likely use contraceptives at first sexual encounter. This supports the work of Williams and Collins (2001) who found that higher socioeconomic status is a protective factor for health outcomes specifically among Hispanic youth. As a result, wealth is an important measure that needs further study in contraceptive research.

Intact Family Status

The fifth hypothesis addressed whether Mexican American young women who grew up in an intact family with both parents used contraceptives at last sexual encounter at higher rates than Mexican American young women who grew up in any other family unit. The results found that having an intact family did not have a significant effect on contraceptive use at last sexual encounter or first sexual encounter. Contrary to my results, literature suggests that Hispanic minorities do not use contraceptives when they grow up in a broken home (Dudley et al. 2012; Smock and Greenland 2010). However, this may not extend toward Mexican American young women. We found that among those women who used contraceptives at last sexual encounter, that intact fact family status had a significant effect on condom us rather than birth control pills.

Multiple Sex Partners

The sixth hypothesis addressed whether Mexican American young women who have multiple sexual partners are more likely to use contraceptives in their last sexual encounter than those who had one sexual partner. The results indicate that having multiple sex partners does have a significant effect on contraceptive use at the last sexual encounter. The results show that sexually active women are deciding to use contraceptives. Previous research by Hicks and colleagues (2013) found that increased trust with a sexual partner is a strong predictor for why women decide not to use contraceptives during sexual activity. As these women do not trust their partners they are turning toward contraceptive use to protect themselves.

Contraceptive Use at First Sexual Encounter

The seventh hypothesis attempted to predict whether first contraceptive use produces a protective factor for contraceptive use at last sexual encounter. Table 9 shows that first contraceptive use did not produce a significant effect on contraceptive use at last sexual encounter. Teitelman et al. (2008) established that Latina youth were more likely to use contraceptives with subsequent sexual encounters; however, they did not distinguish between Mexican Americans and other Latin youth. Also, talking to one's child about sex may be tied toward what is actually discussed. More research is needed to determine if sexual education messages are being clearly received by daughters and to determine why these messages may not be clear enough.

IMPLICATIONS OF THE FINDINGS

An objective of this study was to utilize the social epidemiological perspective and the two symbolic interactionist models to provide an explanation of contraceptive use among Mexican American young women population. I expected to find significant effects of all the social determinants in this study on contraceptive use among the Mexican American young women. The results provide limited support for these variables, in particular, talking to parents about sex, family income, and multiple sex partners. The results indicate that parents who have the 'sex talk' encourage the use of contraceptives during the last sexual encounter. They also indicate that parental sex communication produces a protective factor.

This dissertation makes a contribution to our understanding of social determinants of contraceptive use among Mexican American young women by demonstrating that parents that give the 'sex talk' can affect the likelihood of contraceptive use and even the specific contraceptive method. Some of the control variables such as mother's education, and religious affiliation significantly impact contraceptive use as well.

Sex education programs are important; however, this dissertation did not find a distinct difference in terms of producing a significant effect on contraceptive use at last or first sexual encounter. The ideal option would be to examine where specifically young women are receiving sex education and what is the parental involvement in the sex education program. Moreover, it would be idyllic if sexuality researchers were able to determine how all sex education program differs from each other and if they are implementing the basic guidelines that are available through the Centers for Disease Control and Prevention (The Associated Press 2016).

We must determine the best way for young people to receive the most accurate information. The bottom line is sex education programs need to be culturally competent so they can impact contraceptive use. This dissertation shows that Mexican American young women are receiving the messages about the importance of using contraceptives; however, they may not understand the ramifications of not using contraceptives. Audelo (2010) discussed the importance of providing the necessary information to practice safe sexual activity.

Based on this dissertation, the integrated theoretical framework can be used to focus on any level of variables; individual, interpersonal or subcultural level (Figure 3). By focusing on the various levels of the framework social and public health researchers can better examine social determinants to determine their impact on contraceptive use. Additionally, by applying this framework to other populations such as black young women researchers can determine if the same determinants influence contraceptive use. Further, this framework can be applied to contraceptive use at first sexual encounter and even continued contraceptive use as an outcome variable.

In this dissertation I explored the impact of social determinants on contraceptive use at last sexual encounter. Predicting their use and nonuse of contraceptives can help policy makers, primary care providers and others better target the family planning needs of Mexican American young women. The findings of this dissertation add to the existing literature by suggesting interpersonal level social determinants (from the integrated theoretical framework) are more important in impacting contraceptive use at last sexual encounter. Specifically, it shows that parent-child sex communication and family income directly impact contraceptive use for Mexican American young women. This implies that social networks impact a woman's contraceptive use decisions, which can result in lower pregnancies among this population.

To reduce the unmet family planning needs, policy makers should consider culturally competent strategies tailored to Mexican American women to reduce unintended pregnancies. This could result in community health campaigns and

community outreach that provide sex education services and supplies. A broader permanent strategy for policy makers is to design and provide education programs at places (i.e., grocery stores, department stores, community clinics, and community centers) that link patients to health services. Linking these women to the education at locations they actually go may increase contraceptive services. However, several challenging question exist for policy makers and researchers; what will drive these programs?, where are the funds going to come from?, and how can we examine the social norms and social acceptance of these people more closely?.

CONTRIBUTIONS

This dissertation provides several contributions to the literature. First it uses a nationally representative sample that has the ability to distinguish between Mexican Americans and other Hispanic groups. This study demonstrates how the social determinants among these women differ from other racial-ethnic groups. Secondly, since we are able to examine Mexican American young women we are able to separate these women's sexuality without it being lost in the other major racial-ethnic groups (whites and blacks) (Garcés-Palacio et al. 2008; Lyons et al. 2014).

Additionally, this study contributes to the literature by addressing parent-child social interaction to determine if it impacts contraceptive use among Mexican American young women. Finally, these data allow us to control for essential factors such as being the daughter of a teen mother, parents being married at child's birth, mother's education, religious affiliation, and consistent health insurance status.

Current scholarship ignores sub-Hispanic minorities and studies them all together. More research needs to delve into what are cultural reasons that impact contraceptive use. According to Tesei (2015) socioeconomic status, specifically family income, is overlooked when studying female youth's sexual behaviors. One of the benefits of using the NSFG datasets is that the researchers made certain to oversample respondents from middle-income backgrounds.

LIMITATIONS AND FUTURE RESEARCH

The problem of previous sexuality studies is addressing access to available data. One major limitation is that the sample size for Mexican American young women as the study only focused on those respondents who provided a valid response on all dependent variables. An added limitation is the NSFG only focused on young women aged 15-44 years old. The NSFG did not survey 10-14 years old young girls; it would have been quite interesting to determine if there were age differences within young women as well.

This dataset is the only comprehensive dataset that addresses contraceptive use specifically among Mexican Americans, which is the focus of this dissertation. Data for this dissertation came from three separate cross-sectional cycles: Cycle 6 (2002), Cycle 7 (2006-2010), and Cycle 8 (2011-2013). Approximately half (49.3 percent) of our modest sample fell between 15-19 years old and the other half was 20-24 years old. Literature on sex education designates 15-19 years old as adolescents/teens (Kohler, Manhart, and Lafferty 2008; Wilton et al. 2014). The sample size for this dissertation may have impacted the examination of the type of sex education as an independent variable as few

respondents received no sex education, our reference category; further,it may be impacted by the two questions that were used to create the variables for no sex education, abstinence-only sex education, and comprehensive sex education.

As the data were cross-sectional and multi-year, it would have been ideal to use a cohort sample or a panel sample to provide a better explanation of long-term effects of contraceptive use and even studying why these women continued contraceptive use. For future research, the integrated theoretical framework can be used to address contraceptive use among other minority groups such as Black women. This framework could also be applied to continued contraceptive use. No research could be located that examined continued use and nonuse of contraceptives. It is evident that some interpersonal social determinants (parental-child sex communication and family income) are more important for contraceptive use among this population; however, substantial evidence does not support all of the social determinants (Figure 3).

These findings are important, but only a beginning point for research into Mexican American women's sexuality. Additionally, it would have been beneficial to examine what role being in a committed relationship played on contraceptive use. However, only 139 respondents answered the question regarding commitment status. Qualitative studies could be used to determine why the type of sex education may not be important; as well qualitative studies can put an emphasis on what is important to these young women. These studies can also be used to help understand why there are discrepancies between first sexual encounter and last sexual encounter.

Another avenue for future research is focusing on the actual content of parent-child sex communication to see what is shared and at what age the topic(s) are covered. Over the last decade, there has been an increase in parent-child interaction through text messages, Facebook, and even email (Mesch 2009; Wilding 2006). These avenues could provide a measure of how parents talk to their children; also they can be used to determine if children feel confident to talk to their parents to receive the 'sex talk'.

Finally, research needs to focus on better understanding how young adults impact each other's sexual behaviors with particular reference to Mexican American women. Furthermore, research is needed on the impact of the family and religion on the development and expression of sexuality among Mexican American young women since they tend to have strong family bonds. Moving forward, it is important to determine if this framework can be integrated in longitudinal data. Focusing on longitudinal data will provide a centralized means to determine if the social determinants impact contraceptive use for individuals over time.

CONCLUSION

It is evident there is a still a substantial need to study Mexican American women to determine why they differ from their non-minority counterparts in terms of contraceptive use. Sexuality studies need to examine how sex education programs are maintained and why some work and others do not. Also, there is a need to examine what is actually being discussed in the 'sex talk' between parents and children and to see what information both feel comfortable discussing.

Only by studying this relationship can we examine how other social determinants are involved in this dynamic. This study has offered some important clarifications of contraceptive use among Mexican American young women. This dissertation also emphasizes the misguided notions that exist in sexuality studies regarding Hispanics and other sub-Hispanic groups. While it is known Mexican American young women have high birth rates and are dealing with high rates of STIs. These young women are balancing their gender and sexuality which is becoming less obscured in the literature by studying the social determinants of their contraceptive use.

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APPENDIX A

Definitions

1. Latina is another term that is used for female Latino. A Latino is a person who was born in Mexico, South America, or Central America or whose family originates from Mexico, South America or Central America.
2. Age is defined as the number of years old a respondent was at the time of the interview (AGE_A). The respondent were asked “How old are you?”. Our sample only includes young women aged 15-24.
3. Never been married. The researchers created a recoded variable for the number of times a respondent has been married. If a respondent was coded as 0 then they have never been married (FMARNO)
4. Have ever had sexual intercourse with a male. The researchers created a recoded variable for whether a respondent has ever had sexual intercourse with a male. If a respondent was coded as 1 then they have had sexual intercourse with a male (HADSEX).
5. Sexual encounter and sexual intercourse are used interchangeably in this dissertation.

Appendix B

Variables Used in the Analyses

Predictors	Variable Name	Measurement according to NSFG Codebook
Dependent Variables		
Contraceptive Use at Last Sexual Encounter	MTHUSE3	**Whether used any contraceptive method at last sex in past 3 months?(Recode)** 1 = Used a method at last intercourse in past 3 months 2 = Did not use a method at last intercourse in past 3 months 95 = Never used a method
Specific Contraceptive Method	METH3M1	**Contraceptive method used last sex past 3 months: 1st mentioned (RECODE)** 1 = Pill 2 = Condom 3 = Partner's vasectomy 4 = Female sterilizing operation/tubal ligation 5 = Withdrawal 6 = Depo-Provera, injectables 7 = Implant (Norplant or Implanon) 8 = Rhythm or safe period by calendar 9 = Safe period by temperature or cervical mucus test, natural family planning 10 = Diaphragm 11 = Female condom, vaginal pouch 13 = Jelly or cream 15 = Suppository, insert 17 = IUD, coil, loop 18 = Emergency contraception 19 = Other method 20 = Respondent sterile (aside from sterilizing operation above) 21 = Respondent's partner sterile (aside from vasectomy above) 22 = Lunelle Injectable 23 = Contraceptive patch 24 = Contraceptive ring

Contraceptive Use at First Sexual Encounter	USEFSTSX	**Whether R used a method at first sex? - total universe** 1 = Yes 5 = No 98 = Refused 99 = Don't know
Independent Variables		
Talk to Parents about Sex	TALKPAR1	**Before you were 18 years old, which, if any, of the topics shown on Card 23 (did you ever talk/have you ever talked) with a parent or guardian about?** 1 = How to say no to sex 2 = Methods of birth control 3 = Where to get birth control 4 = Sexually transmitted diseases 5 = How to prevent HIV/AIDS 6 = How to use a condom 7 = None of the above 9 = Don't know
Type of Sex Education	SEDNO	**Before you were 18, did / Have) you ever (have / had) any formal instruction at school, church, a community center or some other place about how to say no to sex?** 1 = Yes 5 = No 98 = Refused 99 = Don't know
	SEDBC	**Before you were 18, did / Have) you ever (have / had) any formal instruction at school, church, a community center or some other place about methods of birth control?** 1 = Yes 5 = No 98 = Refused 99 = Don't know

Age at First Sex	AGEFSTSX	**That very first time that you had sexual intercourse with a man, how old were you?** Responses includes 0-44, refused and don't know
Family Income	TOTINCR	**Total income of R's family (Recode)** 1 = Under $5000 2 = $5000-$7499 3 = $7500-$9999 4 = $10000-$12499 5 = $1250-$14999 6 = $15,000-$19,999 7 = $20,000-$24,999 8 = $25,000-$29,999 9 = $30,000-$34,999 10 = $35,000-$39,999 11 = $40,000-$49,999 12 = $50,000-$59,999 13 = $60,000-$74,999 14 = $75,000-$99,999 15 = $100,000 or more
Intact Family Status	INTCTFAM	**Intact status of childhood family (Recode)** 1 = Two biological or adoptive parents from birth 2 = Anything other than 2 biological or adoptive parents from birth
	PARAGE14	**Parental living situation at age 14 (Recode)** 1 = R lived with both biological or both adoptive parents at age 14 2 = R lived with biological mother and stepfather at age 14 3 = R lived in any other parental situation or a nonparental situation at age 14
Multiple Sex Partners (over lifetime)	LIFEPRT	**Counting all your male sexual partners, even those you had intercourse with only once, how many men have you had**

		sexual intercourse with in your life? Responses include 0-50, refused and don't know. 50 = 50 or more partners
Contraceptive Use at First Sexual Encounter	USEFSTSX	**Whether R used a method at first sex? - total universe** 1 = Yes 5 = No 98 = Refused 99 = Don't know
Control Variables		
Mother Had First Child as Teenager	AGEMOMB1	**Age of mother (or mother-figure) at first birth (RECODE)** 1 = Less than 18 years 2 = 18-19 years 3 = 20-24 years 4 = 25-29 years 5 = 30 or older 95 = No mother-figure 96 = Mother-figure had no children
Parents Married at Child's Birth	PARMARR	**Were your biological parents married to each other at the time you were born?** 1 = Yes 5 = No 8 = Refused 9 = Don't know
Mother's Education	EDUCMOM	**Mother's (or mother-figure's) education (RECODE)** 1 = Less than high school 2 = High school graduate or GED 3 = Some college, including 2-year degrees 4 = Bachelor's degree or higher 95 = No mother-figure identified
Religious Affiliation	RELIGION	**Current religious affiliation (respondent recode)** 1 = No religion 2 = Catholic

		3 = Protestant 4 = Other Religions
Consistent Health Insurance Status	COVER12	**In the past 12 months, that is, since [interview month, interview year - 1], was there any time that you did not have any health insurance or coverage?** 1 = Yes 5 = No 8 = Refused 9 = Don't know

APPENDIX C

IRB Approval Letter

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378
email: IRB@twu.edu
http://www.twu.edu/irb.html

DATE: May 15, 2015

TO: Luis Enrique Espinoza
Sociology & Social Work

FROM: Institutional Review Board - Denton

Re: Exemption for ¡Tenemos Que Hablar! (We Need To Talk!): The Contracptive Use of Mexican American Young Women (Protocol #: 18178)

The above referenced study has been reviewed by the TWU Institutional Review Board (IRB) and was determined to be exempt from further review.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. Because a signed consent form is not required for exempt studies, the filing of signatures of participants with the TWU IRB is not necessary.

Although your protocol has been exempted from further IRB review and your protocol file has been closed, any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

cc. Dr. Celia Lo, Sociology & Social Work
Dr. James L. Williams, Sociology & Social Work
Graduate School

APPENDIX D

Biosketch

Luis Enrique Espinoza was born in McAllen, Texas and raised in San Juan, Texas; the son of Enrique, Jr. and Norma Lee Espinoza. He graduated from Pharr-San Juan-Alamo High School in San Juan, TX. He received a Bachelor of Science with a double major in Psychology and Biology in 2005 from The University of Texas-Pan American (UTPA) (now known as The University of Texas Rio Grande Valley), followed by a second Bachelor of Arts (BA) in English in 2006 from UTPA; received a Master of Science in Biology in 2009 from UTPA; and received an additional BA in Sociology in 2012 from UTPA. He completed requirements for a Graduate Certificate in Public Health in 2013 from The University of North Texas Health Science Center (UNTHSC). While working on his PhD in Sociology with a minor in Health Studies (Health Promotion & Education) at Texas Woman's University, Denton, TX, he also completed coursework for a Masters of Public Health in Epidemiology from UNTHSC.

Luis became passionate about sociology when he saw how society shapes our health beliefs, health behavior and identity. As a social scientist he sought to discover how people are influenced by stratification, and examine whether minority women face more problems as likely as their male counterparts. Luis saw the world differently due to his training as a biologist. Recall that biology is all about quantitative observations, but it does not focus on the 'why' it happens; only that it does happen. Luis was fortunate to find sociology while I was working at The University of Texas Medical Branch in the Department of Surgery doing clinical research involving burn patients and was fortunate enough to interact with these patients daily. It was through these interactions with burn

patients, that Luis realized how these people's economic situations hindered these patients from receiving care. He experienced a light bulb moment when he realized the only way to find out why this was happening was to examine the social factors and implications of these patients and other people faced every day of their lives. Sociology became Luis' outlet to study health disparities.