

PARENTING PROCESSES AND RISKY SEXUAL BEHAVIORS IN FIRST AND
SECOND GENERATION HISPANIC IMMIGRANT YOUTH

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PARENTING PROCESSES AND RISKY SEXUAL BEHAVIORS IN FIRST AND
SECOND GENERATION HISPANIC IMMIGRANT YOUTH

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VITA

Elizabeth M. Trejos-Castillo, daughter of Freddy Trejos and Elizabeth Castillo, was born on January 19, 1974, in San José, Costa Rica. She graduated with honors from the Art Conservatory of Castella, where she also obtained a teaching license in 1990 in two fields: Theater and Poetry. In 1991, she entered the University of Costa Rica to study psychology. While attending the university, from 1991 to 1993, she joined the Experimental Group of Theater and The Circle of Costa Rican Writers with whom she published a book of poetry entitled “In the Absolute Forest of Your Eyes” (1992). From 1994 to 1996, she attended Iowa State University to finish a double degree (B.A.) in Psychology and English Rhetorical and Professional Communication. In 1996, she married Pablo R. Martínez-Mejía in Honduras, and in 1997 and 1999 respectively, her two sons, Pablo Enrique Martínez-Trejos and Isaac Rolando Martínez-Trejos were born. She entered the Graduate School at Auburn University in 2001 and completed a Master of Science degree in Rural Sociology in 2003.

DISSERTATION ABSTRACT

PARENTING PROCESSES AND RISKY SEXUAL BEHAVIORS IN FIRST AND
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Despite the remarkable increase of Hispanic immigrant families with foreign-born and American-born children, the unique problems and behavioral characteristics of this particular population continue to be overlooked. Even though empirical evidence has identified parenting processes as key predictors of risky sexual behaviors among Hispanic adolescence, only a handful of studies, most of them cross sectional, have examined the etiology of risky sex in Hispanic immigrants; in addition, almost no studies have taken into consideration potential generational differences which may account for observed differences in risky sexual behaviors (Vélez-Pastrana, et al., 2005; Villaruel et al., 2002). The current study aimed to broaden the scarce literature available on the understanding of parenting and risky sexual behaviors among Hispanic immigrant youth, with a particular focus on potential differences or similarities in developmental processes

across first and second generation immigrant groups and to more closely examine the potential moderating effects of immigration status or acculturation status on the relationships between the study main constructs.

This study used a subsample of Hispanic origin adolescents $N = 1,968$ from the National Longitudinal Study of Adolescent Health (Add Health); data for this study included Hispanic immigrant adolescents ages 12-16 years old sampled in Wave I (1995) and Wave II (1996). Measures included self-reported data on Time 1 and Time 2 parenting processes (i.e., monitoring, support, and communication), and Time 2 risky sexual behaviors (e.g, condom use, STDs, multiple sexual partners). Demographic variables (e.g., age, sex, family structure, SES) were used as control in a series of hierarchical regressions analyses. Results showed that Time 1 parenting processes and their relationships with Time 2 risky sexual behaviors in Hispanic immigrant youth did not differ by generational status. Parental support emerged as the strongest predictor of T2 risky sexual behaviors. In addition, neither immigration status nor acculturation status showed a significant moderation effect on parenting processes over time (Time 1 to Time 2) or had an independent contribution on risky sexual behaviors.

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“There are men who fight one day and they are good. There are men who fight one year and they are better. There are men who fight many years and they are even better. But there are those who fight their entire lives, those are the ones who are indispensable.” Bertolt Brecht.

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CHAPTER 1: INTRODUCTION

Epidemiological evidence shows that American youth are initiating sexual activities at progressively younger ages declining from about 15 years old during the 1980s to around 13 years old during the 1990s (CDC, 2005; O'Donnell, O'Donnell, & Stueve, 2001). About 900,000 15-19 year old adolescent females become pregnant in the U.S. each year—78% of those are unwanted pregnancies. This represents the highest rate of teenage pregnancy among industrialized nations (CDC, 2000). As reported by the Centers for Disease Control (CDC) in 2004, out of 158 national schools surveyed, 46.7% of all high school students reported having had sexual intercourse (CDC, 2005).

Official statistics also document that there are an estimated of 4 million cases of sexual transmitted diseases (STDs) per year among 10-19 year old adolescents and about 6 million cases of STDs among 20-24 year old young adults, that at least one third of males report having had sex before they entered middle-school, and that one-fifth of females have had their first sexual intercourse before they left eighth grade (CDC, 2001; 2005). Furthermore, during 2003, approximately 4,000 youth were diagnosed with AIDS, accounting for about 12% of the total population diagnosed with the illness in that year (CDC, 2005).

The alarming rates of STDs, HIV, and unplanned pregnancies in teens can be explained in part by the fact that sexually active adolescents are engaging more commonly in sexual behaviors considered “highly risky” (O'Donnell et al., 2001). For

example, from 1991 to 2003, the percentage of sexually active teens who reported having had sexual intercourse after consuming alcohol or used drugs increased from 21.6% to 25.4%; similarly, 37% of sexually active high school students had not used protection (i.e., condom) during the last sexual intercourse in 2003 (CDC, 2005).

As a result of such alarming national statistics, early sexual activity has become a greater concern as it places children and youth at an elevated risk for unintended pregnancies, HIV, and other STDs as well as other risky behaviors, such as drug use and alcohol use (CDC, 2005; Small & Luster, 1994; YRBS, 2004). In addition, reproductive health problems in the American population in general—more commonly reported among young adult females, such as pelvic inflammatory disease (PID), ectopic pregnancy, spontaneous abortion, and miscarriages—are often associated with undetected and untreated STDs during adolescence (Macdonald & Brunham, 1997).

Risky Sexual Behaviors among Immigrant Youth

Recently, there has been a particular interest in understanding sexual behaviors among ethnic minorities probably because public health data suggest that the problems associated with risky sexual behaviors¹ are more dramatic among ethnic minority adolescents (CDC, 2000; McKay, Fingerhunt, & Duran, 2000). For example, the Youth Risk Behavior Survey (YRBS) from 2004 shows that the prevalence of having sex before age 13 and having four or more sexual partners among Hispanic adolescents was 8.3% and 15.7% as compared to 4.2% and 10.8% among White adolescents, respectively.

¹ Risky sexual behaviors can be described as behaviors that pose a particular threat to the health and well being of youth and include behaviors such as sexual activity before age 13, sexual activity with multiple partners, and not using protection (e.g., condoms).

Hispanic youth are also reported to be at an increased risk for STDs and AIDS: according to the CDC (2000), even though Hispanic youth in 1999 constituted only 13% of the national youth population, the Hispanic population represented 24% of the newly reported cases of AIDS among teens. In addition, the nationwide prevalence of having had sexual intercourse among students in grades 9-12 in 2004 was 51.4% for Hispanic youth in comparison to 41.8% among White youth. In addition, Hispanic adolescents showed a lower rate of condom use at last intercourse in comparison to White adolescents, that is, 57.4% versus 62.5%, respectively (YRBS, 2004).

Even though national statistics on risky sexual behaviors among immigrant youth are alarming, limited scholarship exists in this area. Recently, Kirby, Lepore, and Ryan (2005) conducted a meta-analysis (N=400) to examine the factors that affect sexual behaviors among teenagers. This meta-analysis included studies conducted with ethnic/racial minorities and immigrant youth. The results revealed that across all studies, family (e.g., parenting practices, parental education, parental health risking behaviors such as alcohol and drug use), community (e.g., neighborhood connectedness, neighborhood rates of drug and alcohol use), peer (e.g., sexually active peers, delinquent peers), and individual characteristics (e.g., age, gender, biological development) emerged as the most frequently reported factors predicting youth sexual activity.

More importantly for informing the current study, Kirby et al. (2005) found that adolescents living in communities with higher rates of foreign-born residents reported higher rates of delay in sexual activity. According to the authors, this finding suggests that potential differences in cultural values or childrearing practices in foreign-born

families and foreign-born youth may positively influence other teenagers in the community by preventing early sexual intercourse.

The importance of Kirby and colleagues' findings resides on the fact that they shed some light on a long-term controversy that portrays immigrant families and adolescents are at a disproportionately higher risk for negative developmental outcomes by contributing to an area of scholarship that has remained neglected and unexplored; that is, that developmental processes—defined by Rowe et al., (1994) as “the psychosocial mechanisms relating the independent variables (e.g., influences) to the dependent ones (e.g., outcomes)—may be similar across ethnic/racial minorities (Barber & Harmon, 2002; Dimitrieva, Chen, Greenberger, & Gil-Rivas, 2004; Vazsonyi, 2004; Vazsonyi et al., 2003)

For decades, there has been the generalized view that cultural differences from the country of origin and the host country threaten family relations and exacerbate the risk for youth to engage in unhealthy and risky behaviors. According to researchers who advocate for differences in developmental processes among immigrant youth, adjustment problems in this particular youth population are exacerbated by the process of migration. That is, families' values, beliefs, and parenting practices are different from the ones found in the host country or are forced to change during the process of acculturation² to the host culture; thus, this affects children's developmental outcomes (Isralowitz & Slonim-Nevo, 2002; Nauck, 2001).

² “The extent to which individuals from another country adopt the values and customs of the host country” (Villareuel, Jemmott, Jemmott, & Ronis, 2004; p. 173).

This line of research appears to overemphasize the difficulties and problems that immigrant adolescents face when trying to adapt to a new culture. For example, risky behaviors (e.g., risky sex) observed among Hispanic youth are commonly interpreted as a sign of failure to adapt to the current living circumstances (Dihn et al., 2002; Gil, Wagner, & Vega, 2000; Santiesteban et al, 2002; Vega et al, 1993). As a result, much of the available literature from this perspective has been plagued by the bias that immigrant youth, especially Hispanic adolescents, represent a high risk population, one that is at risk for the development of multiple behavior problems (Gil, Wagner, & Vega, 2000; Santiesteban et al., 2002).

During the last decade, however, a new line of scholarship has advocated for greater similarities than differences across ethnic/racial groups in developmental processes. This perspective proposes that developmental processes work through similar developmental pathways, and therefore, the relationships between predictors and measures of adjustment or problem behaviors in White youth as well as ethnic/racial minority and immigrant youth are for the most part similar. For example, Rowe, Vazsonyi, and Flannery (1994) examined developmental processes in representative samples of African-Americans (N = 3,392), Hispanics (N = 1,766), Whites (N = 8,582), and Asians (N = 906). The authors compared covariance matrices drawn from six data sources, namely, the National Longitudinal Survey of Youth (NLSY; individuals and siblings), Tucson Substance Use Study, Wisconsin/California Study, Bowling Green Study, Richmond Youth Project, and the Prevention Study; covariance matrices included multiple developmental constructs such as peer pressure, self-efficacy, academic

adjustment, self-worth, parental communication, behavioral control, parental monitoring, parental involvement, among many others.

Even though this study did not specifically examine risky sexual behaviors on youth or did not include immigrant youth, the results show that the developmental processes tested (e.g., academic adjustment and substance use, family functioning and childhood conduct problems), were basically the same across all the ethnic/racial groups.

Within the controversy of “unique” versus “universal” developmental processes, paradoxically, limited research has been conducted using immigrant samples. An exception includes a study by Vazsonyi, Trejos-Castillo, and Huang (in press), which examined whether developmental processes (e.g., associations between family processes and externalizing behaviors) were affected by the immigration processes in samples of native, first and second generation immigrant youth in Switzerland (N = 3,540). A salient finding from this study is that parenting processes (e.g., monitoring and parent-adolescent conflict) emerged as key predictors of alcohol use, drug use, and deviance across native, first, and second generation Swiss youth.

In addition, contrary to official statistics from Switzerland and other European countries, the study also provided evidence of invariance across native, first, and second generation immigrant youth populations in developmental processes. Thus, these findings reinforce the importance of conducting research using immigrant samples for a better understanding of potential universal features on developmental processes as it has been suggested by a newly growing body of literature (Kagitçibasi; 2005; Dmitrieva et al., 2004; Vazsonyi, 2004; Vazsonyi et al., 2003).

In the particular case of Hispanic youth immigrants, even though they represent the largest and fastest growing minority group (nearly 50% of the current immigrant population), and despite the remarkable increase of Hispanic immigrant families with foreign-born and American-born children, scholarship on Hispanic youth and families continues to be limited. To date, most of what is known about parenting processes and sexual behaviors among immigrant Hispanic youth has been documented through studies that have compared Hispanics with other ethnic groups such as African-Americans, Asian-Americans, and non-Hispanic White samples (Florsheim et al., 1996; Gorman-Smith et al., 2000; Hahm et al., 2005; Hovell et al., 1994; Julian et al., 1994; Knight et al., 1992; Kotchick et al., 1999; Marín et al., 1987; Vega et al., 1993); however, limited research has examined those constructs using Hispanic samples only (Vélez-Pastrana et al., 2005; Villaruel, Langfeld, & Porter, 2002).

In addition and more specifically of interest for this study, the available literature on parenting practices and sexual behaviors on Hispanic youth has focused primarily on examining the frequencies of such behaviors (i.e., rates of condom use) instead of examining developmental processes (i.e., the relationships between parenting processes and condom use). In other words, the dynamics of how the process of immigration might change core Hispanic family values and how parenting behaviors might interfere with children's optimal development and adjustment is an area of scholarship that remains for the most part unexplored (Cabassa, 2003).

A pressing question emerges here, that is, whether generational differences affect the relationships between parenting processes and risky sexual behaviors among Hispanic youth. Thus, a main aim of this study is to examine the potential changes in parenting

practices across generations as well as its relationships to the development of risky sexual behaviors among Hispanic adolescents.

By attempting to answer that main question, the current study contributes to literature gaps in two important areas of research among Hispanic immigrant youth, namely, parenting processes and risky sexual behaviors. In trying to overcome previous shortcoming in the literature, this study examines parenting processes by including multiple parenting domains, namely, parental knowledge, support, and communication. In addition, the study also examines multiple risky sexual behaviors, namely, age of first sexual intercourse, the frequency of and type of contraceptive use, STDs, and multiple sexual partners.

The study also aims to generate important knowledge for the understanding of similar processes in other ethnic/racial populations by comparing first and second-generation immigrants and to add to the growing literature on ethnic minority and immigrant youth. Finally, by examining acculturation status and immigration status as alternative constructs to test for generational similarities or differences, the study also aims to shed some light on methodological and substantive issues related to immigration effects.

CHAPTER 2: LITERATURE REVIEW

Introduction

Different theoretical perspectives for understanding risky sexual behaviors among youth, as well as previous empirical studies supporting the theoretical framework, are discussed in depth in this chapter. Multiple key predictors of risky sexual behaviors among youth identified by current the literature are also discussed (e.g., age, gender, ethnic/racial characteristics, parenting processes). Next, the rationale for conducting the study is discussed in detail followed by the study hypotheses.

Understanding Adolescent Risky Sexual Behaviors: Conceptual and Theoretical

Underpinnings

Scientific concern for understanding risk-taking behaviors in youth became more prominent during the 1980s with the emerging evidence that morbidity and mortality of adolescents and young adults were the result of individuals' behaviors and life-styles instead of biomedical origins (Igra & Irwing, 1996). At that particular time, increased attention was paid to behavioral problems such as antisocial behaviors, teen pregnancy, drug use, alcohol use, and sexually transmitted diseases or infections that were noted to first emerge during adolescence (Lerner & Steinberg, 2004). More research efforts concentrated on identifying potential key indicators of risky behaviors in youth by examining a broader spectrum of social, psychological, and contextual intervening factors in adolescents' health and well being (DiClemente, Hanse, & Ponton, 1996). In contrast

to the old notion of risk-taking behaviors conceptualized as a trouble orientation perspective which characterized youth as reckless, restless, complicated, immature, and temperamental (Hall, 1904), the contemporary perspective adopted a more comprehensive view of important individual characteristics, namely, personality traits, and biogenetic composition, as well as social, contextual, family, and peer influences (Lightfoot, 1997).

Risky behaviors are generally described as activities that deviate from the accepted norms as behaviors that elicit societal disapproval and that demand a control response from society (Donovan, Jessor & Costa, 1991; Jessor & Jessor, 1977; Jessor, 1987). This study evaluates risky sexual behaviors which are among the most frequently reported behavior problems in ethnic/racial youth in the United States (CDC, 1995; Dryfoos, 1991; Willoughby, Chalmers, & Busseri, 2004).

Risky sexual behaviors pose a particular threat to the health and well-being of youth and include behaviors such as sexual activity before age 13, sexual activity with multiple partners, and not using protection (e.g., condoms). In trying to explain the causes of risky sexual behaviors in youth, researchers have highlighted a variety of theoretical perspectives that provide a framework for the understanding of such behaviors. The Theory of Problem Behavior formulated by Jessor and Jessor (1977; 1987) suggests that a variety of problem behaviors are different manifestations of a *problem behavior syndrome*. Thus, according to Jessor and Jessor's (1977) social-psychological framework, risky behaviors in youth can be explained by unconventionality in the adolescent's personality and the social environment (Donovan & Jessor, 1985; Jessor, Donovan, & Costa, 1991). For example, Costa, Jessor, Donovan,

and Fortenberry (1995) examined the relationship between early sexual intercourse and psychosocial unconventionality— conceptualized as the “rejection to societal norms and values and proneness to engaging in nonconforming behavior” (pp. 94)—using a sample of White (36%), Hispanics (36%), African-American (22%), Asian (4%), and Native American adolescents (2%) (N = 1,591).

As hypothesized, the study findings revealed that precursors for White and Hispanic adolescents early sexual intercourse were unconventional behaviors such as “lower expectations for success in school, greater tolerance for deviance, association with deviant peers, lower parental disapproval of problem behavior, lower school achievement, and greater involvement in other problem behaviors such as delinquency, alcohol use, and marijuana use” (pp.114-115).

A relevant insight from this study is that an invariant relationship between unconventionality and early sexual intercourse was found. In other words, corresponding to other problem behaviors as stated by the Theory of Problem Behavior and consistent with previous research (e.g., see Jessor & Jessor, 1977), early sexual intercourse can be explained as departing from prevailing social norms. Even though the theoretical model did not hold for African-American adolescents—possibly due to differences in family composition compared to Whites and Hispanics, the relatively small number of African-American participants, and potential selection bias—the theoretical framework applies to Hispanic and other ethnic/racial adolescents (e.g., Asian, Native American) as well as adolescents from different socioeconomic backgrounds.

The General Theory of Adolescent Problem Behavior developed by Gottfredson and Hirschi’s (1994) also provides a conceptual explanation of why risky behaviors, such

as risky sexual behaviors, occur in adolescents. As the theory proposes, the trait of self-control develops during early childhood primarily due to socialization pressures in the family and school, allowing the individual to effectively self-regulate their actions. Thus, a high level of self-control prevents an individual from engaging in risky and health compromising behaviors (e.g., risky sex, alcohol use, drug use). Theoretically, risky behaviors are prone to occur because these behaviors require little foresight and provide immediate short-term gratification. In addition, adolescent-risk-taking behaviors have also been defined to hold a particular set of attitudes, values, and perceptions (Donovan, Jessor, & Costa, 1991)

Adopting an alternative perspective to Jessor and Jessor (1977; 1987) and Gottfredson and Hirschi's (1994), developmentalists have conceptualized risk-taking behaviors in adolescents as a means of coping with normal developmental tasks (e.g., autonomy, exploration). Such behaviors are viewed as normative and adaptive in the sense that they display the need for exploration by adolescents that are part of a healthy psychological development. Thus, according to this perspective, the period of adolescence is broadly described as a time of "normative developmental changes (e.g., physical, cognitive, self-definitional) and renegotiation of relationships" (Steinberg & Silk, 2002, p. 104).

It is also during this developmental period that the parent-adolescent relationship experiences a significant reorganization in order to respond to the changing needs of the adolescent and the challenges presented to parents. According to Steinberg and Silk (2002), adolescence is marked by increased autonomy which forces parents to become more creative in how they monitor and supervise their children's activities. Adolescence

can be also characterized as a time when parent-child closeness diminishes even though cohesion and warmth remain unchanged; the adolescent expresses less affect towards the parents, but becomes more sensitive to parental support. Adolescence can also represent a period of interpersonal conflict due to difficulties in handling the transitions not only from the adolescent but from the parent as well.

In addition, adolescents experience important transitions within the social realm as they are exposed to increasing opportunities to explore and to extend their social network (e.g., recreational, academic, social activities). However, excessive exploration may lead to maladaptive behaviors that represent a risk for the well being of youth. The particular case of risky sexual behaviors represents an example of such deleterious behaviors (Baumrind, 1991).

On the other hand, from an ecological perspective, risky sexual behaviors are conceptualized as part of a “risk factor approach” (Small & Luster, 1994), which proposes that there exist multiple paths to the development of a particular problem behavior, and that risk factors exist at multiple levels of the adolescent’s life. As described by Werner and Smith (1982), risk factors are conceptualized as individual or environmental hazards that increase an individual’s vulnerability to negative developmental outcomes (Small & Luster, 1994). Recent studies have provided empirical support for the ecological model of risky behaviors in youth.

For example, Eamon and Mulder (2005) used an ecological systems analysis to examine multiple predictors (e.g., adolescent’s age, gender, and country of origin; maternal education and nationality; neighborhood quality, peer pressure, and parenting) of antisocial behaviors using a Hispanic sample (N = 420) from the National

Longitudinal Survey of Youth (NLSY). Results indicate that interactions in the family, neighborhood, peer network, and school were predictive of antisocial behavior among the sampled youth.

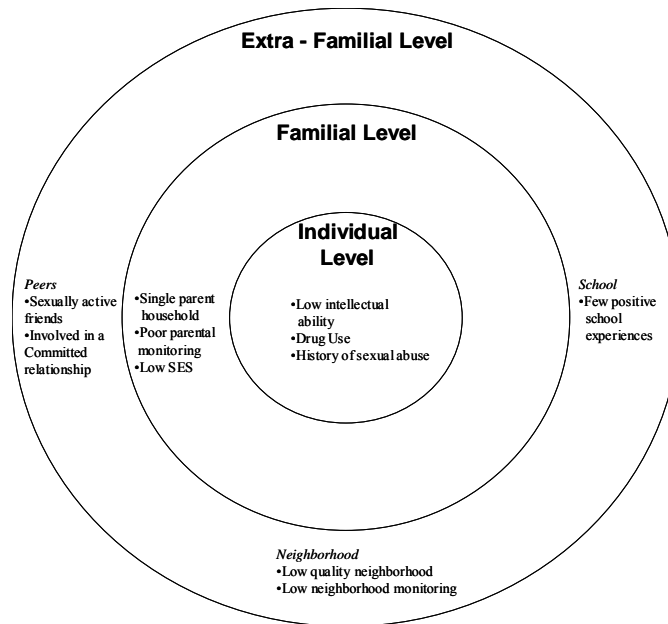
Small and Luster (1994) developed an Ecological Model of selected risk factors for adolescent sexual activity that integrates sexual risk factors into the ecological framework developed by Bronfenbrenner (1979, 1989). Figure 1 presents the detail of the model proposed by Small and Luster. This model argues that risk factors either may be present in the adolescents themselves (e.g., gender, ethnicity) or may be part of the contexts within which youth interact with peers, family, school, and the community (e.g., alcohol use, sexual abuse, low school achievement).

At the family level, risk factors include SES, single-parent families, poor parental monitoring, and low parental education. At the peer level risk factors, the model includes relationships with sexually experienced peers and being involved in a steady romantic relationship among others. At the school level, risk factors include lack of positive experiences at school whereas at the neighborhood level, risk factors include low quality community and lack of adolescent's monitoring by members of the neighborhood (Small & Luster, 1994; Taylor-Seehafer & Rew, 2000).

The Etiology of Risky Sexual Behaviors

In general terms, scholarship on risky sexual behaviors among youth has identified multiple internal and developmental factors linked to the occurrence of these behaviors. For example, the available studies have identified cognitive maturity, belief systems, emotional reactions, and sexual efficacy (Belgrave, Marín, & Chambers, 2000;

Figure 1. Ecological Model of Selected Risk Factors for Adolescent Sexual Activity



Greene, Kamar, & Walters, 2000; Langer, Warheit, & McDonald, 2001; Parson, Siegel, & Cousins, 1997) as well as external/ecological predictors such as peers, school environment, family characteristics, and cultural background (Amaro, 1995; Fine, 2003; Gibbons et al., 1998; Ickovics, Thayaparan, & Ethier, 2000; Jeltova, Fish, & Revenson, 2005) as factors that are linked to the development of risky sexual behaviors. Thus, risky sexual behaviors may be better conceptualized as a multifactor phenomenon, which, as suggested by the ecological perspective, may also vary due to socio-demographic characteristics such as age, gender, and ethnicity/race (Eamon & Mulder, 2005). This section examines relevant literature on two main areas of scholarship on sexual behaviors among youth, namely, age and gender differences and ethnic/racial differences. Even though neither areas represent a main focus of the current study, the literature discussed here is relevant for the conceptualization of the research questions of the study.

Age and Gender Differences

The literature on adolescents has indicated that risky sexual practices increase as adolescents mature. For example, adolescents reporting that they have had sexual intercourse for a longer time and who started at a younger age have also reported less frequent condom use, elevated rates of STDs, unwanted pregnancies, a greater number of sexual partners, and having sex while being drunk or high (Dolcini et al., 1999; Leigh, 1993). In a study conducted by Luster and Small (1994), of the N = 2,567 surveyed adolescents, 35.9% of females and 41.8% of males reported having had sexual intercourse and admitted that, according to their personal experiences, sexual activity markedly increased through the teen years until they reached young adulthood.

Among Hispanic youth, empirical support has been found for a significant association between age, gender, and sexual intercourse with a greater incidence of early sexual initiation reported among males than females (Anderson, 1998). For example, O'Donnell, O'Donnell, and Stueve (2001) examined the relationship between early sexual initiation and subsequent sex-related risks in a sample of seventh to tenth grade urban African-American and Hispanic minority youth (N = 1, 287) using the Reach for Health Study Longitudinal Sample from three middle schools in Brooklyn, New York.

This three-year longitudinal study provided evidence that despite having initiated sexual intercourse at an earlier age, sexually experienced adolescents do not use condoms consistently during sexual intercourse. In addition, the study reports a difference of about two years between males and females in terms of when a significant percentage of the sampled adolescents reported having first experienced sexual intercourse.

Marked differences in patterns of risky sexual behaviors among males and females have also been documented by previous studies. Santelli and colleagues (2000) compared trends of adolescent risky sexual behaviors using four nationally representative surveys: the National Survey of Family Growth (NSFG), the National Survey of Adolescent Males (NSAM), the Youth Risk Behavior Survey (YRBS), and the National Longitudinal Study of Adolescent Health (Add Health). Overall, patterns of sexual activity were consistent by gender and ethnicity/race across all studies. More specifically, males reported higher estimates for having had sexual intercourse, condom use, and number of sexual partners than females; males also reported lower estimates of recent sexual intercourse and partner's use of oral contraceptives than females. In addition, African-American adolescents in this study reported the highest levels of risky sexual behaviors, followed by Hispanic and White adolescents.

Previous studies have documented marked gender differences showing that male youth tend to report higher levels of risky sexual behaviors in comparison to female youth (Dakof, 2000; Florsheim et al., 1996; Griffin et al., 2000; Upchurch, Levy-Storms, Sucoff, & Aneshensel, 1998). Male adolescents have also been documented to engage in sexual behaviors at an earlier age than female adolescents, to be more likely to have had multiple partners, and to be more likely to have had sexual experiences associated to other risky behaviors (e.g., no condom use, alcohol use, drug use) (Barone, Ickovics, Ayers, Katz, Voyce, et al., 1996; Langer, Warheit, & McDonald, 2001; Santelli, Duberstein, Abma, Sucoff, & Resnick, 2000).

O'Donnell, O'Donnell, and Stueve (2001) found evidence that male adolescents were about four times as likely as female adolescents to report having had four or more

partners, whereas females were about four times as likely as males to have reported being involved in unwanted pregnancies and were about half as likely to report having used condoms regularly. In sum, previous literature on age and gender effects in risky sexual behaviors has consistently documented marked differences in levels of engagement among older youth in comparison to younger adolescents. In addition, a higher tendency to engage in risky sexual behaviors has been also reported among male youth when compare to female adolescents.

Ethnic/Racial Differences

As discussed previously, the available literature that has examined risky sexual behaviors among ethnic minority and immigrant youth can be generally divided into two main perspectives, namely, differences and similarities in developmental processes. The difference perspective has largely attributed differences in behavioral outcomes among youth based to their ethnicity/race and culture of origin (Dihn et al., 2002; Gil, Wagner, & Vega, 2000), whereas the similarity perspective argues that despite ethnic/racial or cultural backgrounds, adolescents experience similar developmental processes (Kagitçibasi; 2005; Dmitrieva et al., 2004; Vazsonyi, 2004; Vazsonyi et al., 2003). Also, as discussed in the introduction, within each perspective (e.g., “differences” versus “similarities”), most available literature has focused on examining the frequencies of risky sexual behaviors across ethnic/racial and immigrant groups and Whites on developmental processes.

For example, Santelli et al., (2000) examined the relationship among SES, family structure, and sexual behaviors. The authors found evidence of differences in patterns of sexual behaviors in age of sexual initiation, use of oral contraceptives, and having sexual

intercourse with multiple partners in a sample N = 3,904 multiethnic youth from the 1992 National Health Interview Survey (NHIS). More specifically, differences were found “by ethnicity/race for initiation of intercourse, use of oral contraceptives, and having had multiple sexual partners” (p. 1586). In a study conducted by Barone et al. (1996) among urban students (N = 2,248) in 6th, 8th, and 10th grades, evidence was found that race and ethnicity had a significant effect on number of sexual partners (i.e., African-Americans reported having had more sexual partners followed by Hispanic adolescents) and condom use at last sexual intercourse (i.e., Whites as well as African-Americans were about 1.6 times more likely to use a condom than Hispanics during recent intercourse). In addition, findings from this study also provided evidence that ethnicity/race and gender significantly interacted in predicting sexual intercourse. More specifically, whereas Hispanic females reported the lowest rates of sexual intercourse followed by their White and African-American counterparts, Hispanic males reported similar rates of sexual intercourse as their White and African-American counterparts.

Similarly, Majumdar (2005) examined risky sexual behaviors by race and ethnicity using the 1995 National Longitudinal Study of Adolescent Health (Add Health). Results showed that the percentage of youth who reported not using contraception during recent intercourse was highest among Asians (46%) followed by Hispanics (42%). In addition, Hispanic teenagers were 50% more likely than Whites to not use any contraceptive method during recent intercourse; however, after adding individual, familial, and extra-familial factors, the effect was no longer significant.

The authors also found that blocks of individual factors accounted for an elevated percentage of Hispanics not using contraception; findings were consistent with past

evidence which shows that Hispanics have the lowest levels of condom use (Murphy & Boggess, 1998). Other studies have also documented differences in ethnicity/race in risky sexual behaviors such as inconsistent condom use (O'Donnell, O'Donnell, & Stueve, 2001; Murphy & Boggess, 1998; Sneed, Morisky, Rotheram-Borus, Ebin, et al., 2001) and multiple sexual partners (Barone, Ickovics, Ayers, Katz, Voyce, et al., 1996), particularly with higher rates among Hispanic youth.

In contrast, recent studies have found no significant differences across ethnic/racial groups in levels of risky sexual behaviors. For example, Langer, Warheit, and McDonald (2001) examined risk (e.g., age, gender, ethnicity/race) and protective factors (e.g., attitudes towards condom use, religious values) related to risky sexual behaviors using a multiethnic sample (N = 338) of Hispanics (72%), non-Hispanic White (19.8%), and African-American (8%) undergraduate students. Langer and colleagues reported no significant differences across ethnic/racial groups; more specifically, no significant differences were found in rates of risky sexual behaviors among African-American and Hispanic youth when compared with the White adolescents.

Upchurch, Mason, Kusunoki, and Kriechbaum (2004) examined social and behavioral determinants of STDs among adolescents using a multiethnic sample (N = 3,396) drawn from the Add Health Wave I. Findings revealed no differences in rates of having experienced an STD among Whites, Cubans, Puerto Ricans and other Hispanics with the exception of Mexican-Americans who reported significantly lower levels of STDs than Whites and other Hispanics. When examining age of first sexual intercourse, the authors found no significant differences among Whites, Cubans, Puerto Ricans, Native Americans, and youth from other ethnic groups (e.g., Asian Americans); however,

similar to previous studies, foreign-born adolescents (first generation) were less likely to have had experienced sexual intercourse at an early age.

In sum, despite some significant interactions between ethnicity/race and risky sexual behaviors, most previous studies suggest that race and other demographic variables do not explain risky sexual behaviors because these behaviors are determined by an array of other intervening factors such as parenting processes (Aneshensel, Becerra, Fielder, & Schuler, 1990; Flores, Eyre, & Millstein; 1998).

Parenting Processes and Risky Sexual Behaviors

First, this section provides a brief conceptualization of parenting processes. Second, it discusses the current literature on parenting processes and risky sexual behaviors in youth with a particular focus on three parenting domains, namely, monitoring, support, and communication. Finally, it reviews studies conducted on parenting processes in Hispanic adolescents.

Parenting processes are generally described as specific goal-directed attempts by the parent to socialize the child and adolescent (Steinberg & Silk, 2002). According to Steinberg and Silk (2002), there are three overarching dimensions that organize the current literature in parenting and family processes, namely autonomy (e.g., monitoring, supervision), harmony (e.g., support, communication), and conflict. According to these authors, adolescence is marked by increased autonomy which forces parents to become more creative in how they monitor and supervise their children's activities. On the other hand, adolescence can also be characterized as a time when parent-child closeness diminishes even though cohesion and warmth remain unchanged; the adolescent expresses less affect towards parents, but becomes more sensitive to parental support.

Adolescence can also represent a period of interpersonal conflict due to difficulties in handling the transitions not only for the adolescent, but also for the parent.

Developmental theorists such as Patterson (1982) and Baumrind (1978) have argued that it is the family as the primary socialization institution that represents the “model” which reinforces or discourages children from engaging in risky behaviors. For example, Baumrind (1978) found evidence that the authoritative childrearing style, which combines setting clear norms, nurturance, and encouragement would more likely secure control of undesirable behaviors in youth compared with other parenting styles, such as authoritarian or permissive ones. Furthermore, Dittus, Jaccard, and Gordon (1999) and Kotchick, Shaffer, Forehand, and Miller (2001) have argued that the role of family is central for the sexual socialization of children and youth.

Previous research has extensively documented parenting processes such as monitoring, support, and communication as important determinants of risky sexual behaviors in youth (Fasula & Miller, 2006; Jenkins & Smith, 1991; Kurdek & Fine, 1994; Loeber & Stouthamer-Loeber, 1986; Small & Luster, 1994; Stanton et al., 2000). Parental monitoring has been widely acknowledged as a protective factor against risky sexual behaviors among youth. Small and Luster (1994) examined which factors were more prominent in sexually active adolescents with a lower risk and a higher risk for pregnancy and STDs based on a sample of youth (N = 2,567) from four Midwestern counties.

Findings showed that sexually active teenagers who were closely monitored by their parents and who experienced more parental support engaged in less risky sexual behaviors than adolescents who were less closely monitored by and experienced less support from their parents. The authors concluded that parental monitoring might limit

the adolescent's exposure to opportunities for engaging in risky sexual behaviors by limiting the number of influential individuals and situations that may potentially lead to or facilitate risky sexual intercourse.

Other studies have also established the importance of parental monitoring on increasing condom-use skills (Stanton et al., 2000), reducing teen pregnancy (Miller, 1998), protecting against STDs transmission by reducing exposure to deviant peers (Capaldi, Stoolmiller, Clark, & Owen, 2002), and predicting substance use with sex, number of partners, and condom use among youth (Weber-Shifrin, 2003). Furthermore, other studies have documented potential gender differences in terms of parental monitoring and risky sexual behaviors. For example, Luster and Small (1994) provided evidence that low levels of parental monitoring were associated with higher levels of sexual risk taking among female adolescents while low levels of parental support were more associated with high levels of sexual risk taking behaviors among males.

Parental support—often conceptualized as parental responsiveness, involvement, and family connectedness (Upchurch, Aneshensel, & Mudgal, 2001)—has been widely documented as an important predictor of risky sexual behaviors among youth. For example, Markman, Tortolero, Escobar-Chávez, Parcel, Harrist et al. (2003) examined the association between family connectedness and sexual risk taking using a sample of urban Texan youth (N = 976). Consistent with previous research, the authors found evidence of family connectedness as a protective factor related to risky sexual intercourse in youth. Overall findings showed that adolescents who felt more connected to and thus supported to their parents reported delayed sexual intercourse in comparison with their

peers, had used condoms during sexual intercourse, had less frequent involvement in sexual intercourse, and were involved in a pregnancy.

McNeely, Shew, Beuring, Sieving et al. (2002) examined the mother-adolescent relationship and its influence on the timing of first sexual intercourse among 14 and 15 year olds (N = 2006) using the Add Health data. Findings showed that even though maternal involvement was significantly associated with delayed first sexual intercourse, the effect was stronger among girls than boys. In the same way, using the Add Health data, Ream and Savin-Williams (2005) evaluated reciprocal associations between the parent-adolescent relationship and adolescent sexual activity in a multiethnic sample (N = 13,570). Findings provided evidence that reduced closeness as well as less shared activities in the parent-adolescent dyad were predictive of engaging in more frequent sexual relationships among youth.

In addition, the study also provided evidence of reciprocal effects in the parent-adolescent dyad in terms of sexual activity and gender. More specifically, mother-daughter closeness was affected by the adolescent's sexual activity and recovered after sexual activity ceased, whereas closeness was not significantly affected in the mother-son dyad due to sexual activity. On the other hand, closeness in the father-son dyad seemed to decrease after sexual activity was initiated, whereas closeness in the father-daughter dyad did not decline due to daughter's sexual activity.

Parental communication has been also identified as an important factor related to risky sexual behaviors among youth such as age of first sexual intercourse and having had sex (Karofsky, Zeng, & Kosorok, 2001; Murry-McBride, 1996; Stanton et al., 2000); however, findings from other studies have been inconclusive (Luster & Small, 1994;

Rodgers, 1999). Fasula and Miller (2006) examined the effects of mother-adolescent communication on sexual delay in a sample of non-sexually active African-American and Hispanic high school students (N = 530).

Findings revealed that anticipators (e.g., those who anticipate initiating intercourse within the next year) and delayers (e.g., those who expect to delay intercourse for at least 1 year) differed in mother's responsiveness, peer sexual activity, gender, and race. More specifically, mother's communication buffered the effects of high peer sexual activity among adolescents. In addition, an overwhelming majority of delayers were females, especially Hispanic females (69%) in comparison with African-American females (38%). The authors concluded that parental responsiveness skills exemplified by establishing a sense of shared communication and dialogue provides youth with a safe environment to openly discuss sex issues, experiences, and questions which ultimately reinforce family values that encourage sexual delay in youth.

Rose, Koo, Bhaskar, Anderson, White et al. (2005) collected data from fifth graders and their parents at 16 elementary schools in Washington DC (N = 408)—where the highest national rates of teenager pregnancy were reported in 2001-2002. Results provided evidence that girls who had poorer communication with their parents were especially vulnerable for engaging in early sexual intercourse in comparison to boys. A salient finding of this study is that even though parent-child communication emerged as a protective factor against early sexual intercourse, more frequent parent-child communication was associated with increased levels of other risky behaviors among adolescents, such as alcohol use and smoking marijuana. The authors argue that the results may be explained in the light of the fact that parents of adolescents engaging in

risky behaviors (e.g., alcohol and marijuana use) are aware of the higher risk of initiating sexual intercourse at an early age, and therefore, more frequently talk with their children about sexual issues.

DiIorio, Dudley, Soet, and McCarty (2004) examined potential moderation effects by protective factors (e.g., educational goals, self-concept, future time perspective, orientation to health, self-efficacy, outcome expectations, parent-child communication, values, and prosocial activities) on the relationship between sexual possibility situations (SPS) and sexual behaviors in a sample of early adolescents (N = 491). Three statistically significant predictors were found based on hierarchical logistic regression analyses, namely, age, time alone with a member of the opposite sex, and personal values. Contrary to other studies that have identified communication as an important protective factor in risky sexual behaviors, this study did not find such evidence.

As exemplified by the previous discussed studies, literature on the association between parental communication and risky sexual behaviors in youth remains inconclusive as some researchers have not been able to find a significant association between them. It is possible that the lack of association may be due found to design and measurement problems as described by Jaccard et al. (2002). Another potential explanation suggested by Jaccard and Ditter (1993) and Whitaker and Miller (2000) is that the effect of parental communication may interact with peer norms, which in turn, may exert an influence on the adolescent's sexual experiences.

In addition, as Hovell, Sipan, Blumberg, Atkins, Hofstetter et al. (1994) point out, the lack of association between parental communication and risky sex in youth may be

also due to the fact that communication may have initiated or improved after parents suspect that the adolescent has initiated sexual intercourse.

In the particular case of the Hispanic population, the previous literature has documented the important role that family plays in the socialization of sexual behaviors among Hispanic adolescents (Vélez-Pastrana, González-Rodríguez, & Borges-Hernández, 2005). Previous studies have emphasized the idea that, mainly due to cultural beliefs and values (e.g., traditional gender roles, emphasized respect for adults, religious values on premarital sex), family represents a central element in Hispanic adolescents' sexual experiences. As a result, a significant body of studies has examined family factors such as “familism³” (Romero, Robinson, Haydel, Mendoza, & Killen; 2004), family structure (Kaberege, Modeste, Montgomery, & Fox, 2003), SES (Aneshensel et al., 1990), and cultural beliefs (Rafaelli & Ontai; 2001) among others for adjustment problems among Hispanic youth.

Even though scarce, some studies have examined parenting processes and its potential relationship to risky sexual behaviors on Hispanic youth. For example, Christopher, Johnson, and Roosa (1993) examined parental warmth and communication and its association to early sexual expression (N = 544) among Hispanic adolescent. Contrary to the previous literature, parenting constructs in this study were not associated with adolescent sexual involvement. The authors further elaborate that failure to find a significant association between the variables may be due to the fact that the study used adolescent self-reported data and did not include parental responses. Rafaelli and Ontai (2001) retrospectively examined sexual socialization in Latino families in a sample of

³ Familism can be described as “attitudes, behaviors, and family structures operating within an extended family system” (Velez-Pastrana et al., 2005, pp. 779).

Hispanic young women (N = 22) by looking at four main factors: parental concerns regarding dating, parental communication, dating and sexual experiences using an in-depth interview technique.

Interestingly, most participants reported having experienced a lack of communication regarding to sexual issues, which was associated with late initiation of sexual intercourse and lack of condom use at the first time of sexual intercourse. As the authors further discuss, the lack of parental communication among Hispanic families may potentially represent a protective factor in delaying early sexual intercourse among these adolescents—as other studies have also documented (Hovell et al., 1994; Vélez-Pastrana et al., 2005)—however, it may also account for the increased risk among Hispanic adolescents for experiencing negative sexual outcomes (e.g., STDs, HIV/AIDS) as documented by national statistics due to the lack of information on such issues (CDC, 2004).

Other studies that have examined parental communication and its association with sexual behaviors in Hispanic youth have focused on the type (e.g., open, restricted) and content (e.g., contraception use, premarital sex) of communication messages regarding sex; they have also examined parental communication using a dyadic relationship perspective (Guzman, Schlehofer-Sutton, Villanueva, Dello Stritto, Casad et al., 2003; Romo, Lefkowitz, Sigman, & Terry; 2002; Vesely, Wyatt, Oman, Aspy, Kegler, et al., 2004). In a similar way, only a handful of previous studies have examined the effects of parental monitoring (Beal, Ausiello, & Perri, 2001; Nicholson-Anderson, 2001) and parental support on risky sexual behaviors using Hispanic youth (McBride, 2000).

In summary, the literature on parenting processes stresses the importance of examining the role of the family and parenting behaviors in explaining risky sexual behaviors among youth. Indeed, a significant body of research has documented the relationship between parenting practices and sexual experiences including risky sexual behaviors among youth (Kurdek & Fine, 1994; Loeber & Stouthamer-Loeber, 1986; Maggs & Galambos, 1993; Markham, Tortolero, Escobar-Chávez, Parcel, Harrist et al., 2003; Miller, Forehand, & Kotchick, 1999; Patterson & Stouthamer-Loeber, 1984; Small & Luster, 1994; Wilder & Watt, 2002). However, less attention has been paid to the question whether there exist similar or different developmental processes across ethnic/racial and immigrant youth.

Furthermore, available literature on the relationship between parenting processes and sexual behavior on Hispanic youth, as previously discussed, has mainly focused on parental communication emphasizing more on the type and content of the messages and less on the parent-adolescent communication interaction. In addition, other parental domains such as monitoring and support, with a few exceptions, still remain for the most part understudied.

Why Study Risky Sexual Behaviors among Hispanic Immigrant Families and Youth?

Study Rationale

This section provides the rationale for examining risky sexual behaviors and parenting processes among Hispanic youth. The importance and impact of conducting this study are discussed based on three main areas that map to the study hypotheses, namely, intergenerational differences in parenting and risky sexual behaviors, developmental changes in parenting processes across generations, and methodological

issues related to acculturation status or immigration status. In addition, the study hypotheses are described.

Recent statistics document that one in five children in the United States is born to immigrants (Census Bureau, 2005). According to official data, the Hispanic population grew almost 10% from 2000 to 2002 representing the largest minority group, even larger than African-Americans. Thus, Hispanics currently represent about half of the total number of immigrants entering the United States accounting about 12.5% of the total U.S. population (U.S. Census Bureau, 2002). At the same time, population projections for immigrant adolescents estimate that the number of individuals aged 14-24 will increase between 2000 and 2020, with a larger growth among Hispanics (NCES, 2005). As a result, it is expected that 14-17 years old Hispanics will increase by 34%, while the number of Black adolescents—the second largest ethnic minority group in the U.S.—will increase only by 7%.

The significant growth of the Hispanic population has not only been altered by immigration but also by fertility; for example, in 2002, fertility rates were estimated at 1.8 for White non-Hispanics, 2.1 for African-Americans, and 3.0 for Hispanics (NCES, 2005). Despite this remarkable increase of Hispanic immigrant families with foreign-born and American-born children, the unique problems and behavioral characteristics of this particular immigrant population continue to be overlooked (Cabassa, 2003).

In general terms, immigration represents a transitional process that places families and children in different challenging contexts. Previous research on immigrant families and adolescents have mostly adopted the classical model of assimilation arguing that the process of assimilation/adaptation to the host culture follows a linear progression during

which immigrants gradually adopt new values and behaviors while discarding the ones from their culture of origin. According to this model, the length of residency added to the emergence of new generations positively impact immigrant individuals by narrowing down differences between the culture of origin and the new culture (Mullan Harris, 1999; Rumbaut, 1998). In addition, this approach has also largely supported the erroneous conceptualization of newly immigrants as “in deficit,” (e.g., few marketable job skills, Zea, Diehl, & Porterfield, 1996; low-income, descending economic mobility, and lack of education, Suárez-Orozco & Suárez-Orozco, 2001; Coastworth, Pantin, & Szapocznik, 2002) suggesting that only through the adaptation to the culture and a longer residence, will immigrants be able to make developmental and socioeconomic progress.

Unfortunately, these assumptions about immigrant families and their children have broadened the gap in disparate health services, public policies, and scholarship for immigrant groups and ethnic/racial minorities (Mullan Harris; 1999; Satcher, 2000).

During the last decade, researchers have advocated for the so called “revisionist theories” of immigrant assimilation (Mullan Harris, 1999) which contradict the classical model, namely that the adaptation and assimilation processes to the host culture often result in negative outcomes for immigrant children. For example, previous studies have provided evidence that rates of adjustment problems among immigrant youth are not substantially greater than those of White youth or youth from other racial and ethnic backgrounds; (Foner, 1997; Fuligni, 1998; Kwak, 2003; Neto & Barrios, 2000; Phinney et al., 2001; Vega, 1995). As a result, new trends in research on immigrant families and children have started to pay more attention to generational differences and children outcomes among immigrants (Brindis et al., 1995; Crosnoe, López-González, & Muller;

2004; Harker-Tillman, Guo, & Mullan Harris, 2004; Kao, 2004; Popkin & Udry, 1998; Umaña-Taylor & Bámaca-Gómez, 2003; Villaruel, Langfeld, & Porter; 2002).

Particularly in the case of Hispanic youth, available data document that second-generation Hispanic teens report more intimate behaviors and sexual activity than first-generation youth. Thus, whereas official data show that higher rates of contraceptive use at first intercourse are reported among first-generation youth, the empirical evidence supports that a higher degree of acculturation to the American culture appears to translate into a higher level of risky sexual behaviors in Hispanic youth (CDC, 2004; Villaruel, Langfeld, & Porter; 2002).

Previous studies on Hispanics also show that having stronger core family values and positive parent-adolescent relationships may have a protective effect against multiple behavioral problems among Hispanic youth, including risky sexual behaviors (Barrera, Biglan, Ary, & Li, 2001; Eamon & Mulder, 2005; Forehand, Miller, Dutra, & Chance, 1997; Upchurch, Levy-Storms, Sucoff, & Aneshensel, 1998). For example, Kotchick et al. (1999) examined maternal monitoring, Nichols-Anderson (2001) examined parental monitoring and support, and Lombardo (2002) examined parent-adolescent conflict as predictors of risky sexual behavior in immigrant Hispanic youth. Thus, as exemplified by these studies, parenting in Hispanic youth and families have been studied by examining individual parenting practices in isolation (Luster & Small, 1994; Ramirez et al., 2004; Vega, 1990; Vega et al., 1993).

Furthermore, even though challenges for immigrant families may be similar to non-immigrant families related to adolescents, variations in cultural values, beliefs, and behavior patterns as well as the tension and stress from adapting to a host culture, may

influence how parenting practices evolve to meet and accommodate these needs in children (García et al., 1996; Vega et al., 2004). Thus, this study aims to test a model of the etiology of risky sexual behaviors in first and second-generation Hispanic immigrant youth and their families with a particular focus on the importance of parenting processes (monitoring, support, and communication).

Intergenerational Differences in Parenting Processes and Risky Sexual Behaviors

Hispanic families have been characterized by strong values and beliefs that stress respect, obedience, and conformity to parents' and elders' authority as well as the obligation and loyalty of the individual to the family (Calzada & Eyberg, 2002; Harrison, Wilson, Pine, Chan, & Buriel, 1990; González-Ramos, Zayas, & Cohen, 1998; Marín & Marín, 1991; Rodríguez, Bingham, Mira, Myers, Morris et al., 2003; Rodríguez, Davis, Rodríguez, & Bates, 2006; Samaniego & González, 1999; Zayas, 1994).

In general, literature on Hispanic families has suggested that traditional values and beliefs from the country of origin may help in preventing negative behavioral outcomes among immigrant Hispanic youth (Rodríguez et al., 2006; Samaniego & González, 1999). However, little is known about how parenting practices and youth sexual behaviors may vary as a result of the process of acculturation. Even though limited, previous evidence supporting the rationale for why intergenerational changes in parenting processes and risky sexual behaviors may occur among immigrant families and youth is reviewed in this section.

Developmental Changes in Parenting Processes across Generations

Szapocznik and Kurtines' (1980) model of acculturation argues that the time of exposure to a culture is an important determinant of the individual's accommodation to

that culture. Thus, immigrant parents and first generation adolescents with a greater exposure to the host culture would show higher levels of acculturation (i.e., acquisition of English language and cultural adjustment) compared to individuals who have less exposure to the host culture.

For example, Romero, Cuéllar, and Roberts (2000) examined the transmission of cultural values, norms, and behaviors among Mexican origin immigrant individuals (N=244) who reported on parental attitudes and levels of acculturation. Support was found for the hypothesis that individuals who reported lower levels of acculturation would adhere more to the traditional parenting beliefs and behaviors of the culture of origin; on the other hand, the results also show that individuals with higher levels of acculturation would endorse more the parental attitudes of the American society.

Similarly, Zapata and Jaramillo (1981) found evidence that immigrant Mexican parents exercised stricter punitive practices and granted less autonomy to their children in comparison to American parents. However, traditional parenting practices from the country of origin changed over time due to the exposure to American cultural values and the eventual “Americanization” of parents resulting in less effective parental behaviors (e.g., less monitoring, less consistent use of discipline, and less restrictive rules and norms). Other studies have also documented that more acculturated parents report less knowledge on children’s academic achievement and adolescent’s perceived efficacy, and have lower educational expectations for their children (Planos, Zayas, & Busch-Rossnagel, 1995; Rodríguez et al., 2006; Solís-Cámara & Fox, 1996). In general, these studies suggest that there may be differences in how parents parent their offspring across

generations in Hispanic families and that such differences are related to dissimilar levels of acculturation.

Some researchers working with immigrant populations have pointed out that the culture of origin and the process of adaptation to the host culture may influence important aspects of family socialization and how parents interact and transmit cultural and family values to their children (Kwak, 2003; Raeff, 1997). Samaniego and González (1999) have suggested that changes in parenting practices among Hispanic families may also combine with an increased exposure to influences outside the family that can account for adolescents' negative outcomes such as delinquency, alcohol use, and risky sexual behaviors.

It is important to note that youth simply become more involved with peer groups as part of normal development (Berndt, Hawkins, & Jiao, 1999) and thus, are more susceptible to peer influences; at the same time, they also spend less time with their parents and adults in general. This also means that they become more susceptible to negative peers influences that increases the risk of problem behaviors (Gadner & Steinber, 2005; Steinberg, 2004; Steinberg & Silverberg, 1986; Thorton, Gibbons, & Gerrard, 2002). Among immigrant youth, an additional important factor added to this equation is the process of acculturation. For example, evidence has been found that immigrant Hispanic youth with a higher level of acculturation report higher involvement with peers and other activities outside the family (e.g., school events) in comparison with their less acculturated counterparts (Rueschenberg & Buriel, 1989).

It appears, therefore, that more acculturated Hispanic youth tend to be more peer oriented that in turn influences whether adolescents defy authority, including parental

efforts directed at behavioral control. At the same time, parents may also experience greater difficulty parenting more acculturated adolescents in a closer way which may also result in youth being more susceptible to peer influences and more prone to engage in behaviors that can be characterized as risky or negative, such as risky sexual behaviors (Wall, Power, & Arbona, 1993).

In addition, parental efforts to adhere to the culture of origin may also face a different challenge with first and second-generation children mainly due to the process of acculturation. For example, the parent-child relationship of first-generation immigrant youth may experience more tension and may go through more active processes of negotiation due to the disparity in foreign versus host culture values (Kwak, 2003). As a result of the immigration process and the need to adapt to a new culture while maintaining cultural heritage, first-generation adolescents and parents may experience a period of crisis and marked conflict.

For second generation youth, however, the host culture represents their native culture. Therefore, the relationship in the second-generation parent-child dyad can vary substantially compared to the first-generation dyad in terms of cultural continuity (e.g., reinforcing the same cultural values in foreign-born versus native-born children) and also in terms of the quality of the relationship because second-generation adolescents do not experience a process of acculturation like first-generation children do (Kwak, 2003; Szapocznik & Kurtines, 1980).

Other studies, though in different research areas, also inform about the importance of studying intergenerational differences in parenting of Hispanic youth. For example, Kao (2004) used the Add Health data to examine whether parent-child interactions (e.g.,

communication and closeness) varied across first, second, and third generational groups and how that interaction accounted for educational achievement in Hispanic adolescents. Results of the study show that immigration status was salient for determining differences in parent-child relationships in the Hispanic sample. In addition, differences were observed in educational achievement across children from different generational groups in that parents from first generation adolescents were more likely to talk about college than parents from second generation adolescents.

Similarly, López-González (2002) conducted a study with Mexican-American youth to examine generational differences in the parent-child relationships, academic failure, and risk of obesity in children. This study, which was also based on the Add Health data set revealed that acculturation status predicted differences in the parent-child relationship across first and second-generations. Furthermore, higher rates of academic failure and risk for obesity were found in second-generation Mexican-American youth as compared to the first-generation group. Overall, the authors concluded that more work on how parenting styles and child outcomes vary by generational status in immigrant Hispanics is needed because it is often assumed that those processes occur similarly for other populations of youth. Thus, even though recent literature has attempted to examine potential generational differences and its relationship with children outcomes, little is known in this area of scholarship.

In sum, a significant gap in the available literature on parenting practices among Hispanic youth and their families is a lack of studies that have examined this construct in a more comprehensive and inclusive way by using multiple parenting dimensions (e.g., communication and support, monitoring and support). In addition, the question of how

immigration and the process of acculturation may account for generational differences in parenting practices is an important issue that is yet to be examined.

Intergenerational Differences in Risky Sexual Behaviors and its Relationship to Parenting Practices

Even though hardly any scholarship has been developed in this area, there is some evidence of perhaps differential effects by generations of parenting processes and its relationship to risky sexual behaviors among immigrant youth.

Jeltova, Fish, and Revenson (2005) conducted a study on risky sexual behaviors in immigrant adolescent girls from the former Soviet Union. Even though this study does not use a Hispanic sample, the results are very informative about levels of acculturation and the relationship between parenting and risky sexual behaviors in adolescents from first and second-generation immigrants. More specifically, the study found that a low degree of acculturation to the American culture and a high degree of acculturation to the Russian culture might be protective of risky sexual behaviors. The study confirmed the hypothesis that perceived generational discrepancies in the parent-adolescent dyad contribute to risky sexual behaviors, such that second-generation adolescents may be at a greater risk for engaging in risky sexual behaviors than first-generation adolescents.

The authors concluded that parenting efforts, which stress cultural values and norms of their country of origin in first-generation adolescents, are associated with lower levels of risky sex in this group of adolescents. On the other hand, intergenerational discrepancies and conflict in second-generation adolescents due to maintaining original values versus adopting the host culture values predict higher levels of risky sexual behaviors in this group. In addition, findings reveal that higher levels of acculturation to

the American culture are associated with a higher incidence of risky sexual behaviors in second-generation youth, whereas higher levels of acculturation to the native culture were related to lower levels of risky sexual behaviors in first-generation immigrant adolescents.

Previous studies on Hispanic youth have documented generational differences in risky sexual behaviors due to the acculturation processes. Marín et al. (1993) conducted a study on gender differences and acculturation in sexual behaviors in Hispanic and non-Hispanic youth. The study found that lower levels of acculturation (e.g., English speaking proficiency) were linked to condom use in males and females with a slightly higher degree of such behaviors in males. In addition, lower levels of acculturation were linked to having fewer sexual partners in Hispanic females, but not in Hispanic males. Furthermore, Ford and Norris (1993) found in a study of urban Hispanic adolescents that immigration status was related to a higher number of sexual partners, STDs, and unplanned pregnancies among native-born adolescents in contrast to foreign-born adolescents.

More recently, researchers have also examined generational differences in risky sexual behaviors based on Spanish-dominant Hispanic youth samples versus English-dominant Hispanic samples. For example, Villaruel, Jemmott, Jemmott, and Ronis (2004) examined predictors of sexual activity and contraception use (e.g., condom) in a sample of Hispanic youth (N = 141) who used Spanish as their primary language as compared with adolescents who used English as their primary language. Results showed that Spanish-dominant Hispanic adolescents were less likely than English-dominant Hispanic youth to report that they had ever engaged in sexual activities, had engaged in sexual

activity during the previous three months, and had used condoms at last sexual intercourse. The results from this study support previous findings, namely that low-acculturated Hispanic youth are at a lower risk for engaging in risky sexual behaviors (Ford & Norris, 1993; Marín et al., 1993; Nichols-Anderson; 2001).

Similarly, Ebin, Sneed, Morisky, Rotheram-Borus et al. (2001) compared Spanish-dominant Hispanic youth versus English-dominant Hispanic youth (N = 608) to examine problem behaviors and health promoting behaviors. Findings revealed that Spanish-dominant speakers were less likely to engage in smoking cigarettes, using alcohol, and having sexual intercourse and more likely participated in health promoting behaviors than their English-dominant speaking Hispanic counterparts. In general terms, more acculturated Hispanic adolescents report engaging in higher rates of risky sexual behaviors than less acculturated Hispanic youth.

In general term, despite a growing literature that has examined the role of family in Hispanic youth outcomes and previous studies that have examined sexual behaviors among Hispanic youth, the dynamics of how family may influence Hispanic adolescents' sexual behaviors beyond the mere family composition and structure is an area of research that remains underdeveloped. Furthermore, the potential moderation effect by immigration status or acculturation status on developmental changes in parenting practices and its association to risky sexual behaviors among immigrant youth is an area of study that has been largely neglected and calls for further investigation.

Acculturation Status or Immigration Status: Methodological Issues

A salient feature of studies using immigrant samples is that even though researchers generally agree on the important role of the immigration process in the

relationship between immigrant families and youth, there is a lack of consensus in how the immigration process may affect the parent-adolescent relationship and the adolescent's behaviors, particularly risky sexual behaviors; thus, this still remains as a "controversial and little examined area of investigation" (Anderson, 1998; p.11).

For example, Flores, Tschann, and VanOss Marín (2002) tested a model to examine factors predicting sexual behaviors among Hispanic female adolescents (N = 84) using clinical and a general population samples. Path analysis results show that acculturation status was not a predictor of sexual behaviors (e.g., dating, early sexual experience, intentions to have sex) in the model for either group.

On the other hand, Kotchick, Dorsey, Miller, and Forehand (1999) examined adolescent sexual risk taking behaviors among single-parent ethnic minority families using a sample of youth aged 14-16 years old and their biological mothers from Puerto Rico, Montgomery, and New York (N = 397). As expected, open and receptive communication between mother-adolescents was significantly associated with less adolescent sexual risk taking behavior. Interestingly, no significant relation was found between parental attitudes (e.g., parent-adolescent communication) and risky sexual behaviors in Hispanic youth living in Montgomery and New York, whereas a significant relation was found for the Puerto Rican sample. The authors suggest that ethnic and family values that may protect against engaging in risky sexual behaviors may be stronger among Puerto Rican adolescents, and that weaker ethnic and family values in the Montgomery and New York samples may be due to acculturation to the American culture.

As documented by national statistics, ethnic/racial minorities represent a youth population at a greater risk for engaging in risky sexual behaviors (CDC, 2003; YRBS, 2004); however, many researchers have mistakenly explained this phenomenon in light of misjudged cultural values (Anderson, 1998). Sexual disparity among adolescents, especially immigrant or ethnic/racial minority youth, has often been attributed to cultural differences and/or acculturation processes (Anderson, 1998; Villaruel, Jemmott, Jemmott, & Ronis, 2004); however, such differences might also be attributed to methodological issues (e.g., different measures used). Thus, whereas acculturation status and immigration status have been used interchangeably by some researchers to refer to the immigration and adaptation process to a host culture (Kwak, 2003; Kao, 2004; Rumbaut, 2004), other researchers have used acculturation status and immigration status as two different constructs (Crosnoe et al., 2004; Ford & Norris, 1993; Gil et al., 1994; Jeltova et al., 2004; Mann, 2004; Marín et al., 1993).

Studies on acculturation status and immigration status lack consensus and uniformity in the conceptualization of this construct; thus, acculturation status has been measured as culture identification, use of and proficiency in English versus Spanish language, cultural expectations, and adaptation to host culture among others (Forehand, et al., 1997; Vega, 1990; Vega et al., 2003; Villaruel, Jemmott, Jemmott, & Ronis; 2004). On the other hand, immigration status has been measured as nationality of the foreign-born parent, foreign versus native-born individual, and years of residency in the host country among others (Isralowitz & Slonim-Nevo, 2002; Kao, 2004; Oropesa & Landale, 1997). An interesting study conducted by Upchurch, Aneshensel, and Mudgal (2001) shed some light on the importance of further examining similarities and differences

among constructs of acculturation status and immigration status. The authors examined time of first sexual intercourse among Hispanic adolescents (N = 497) using individual-level characteristics (e.g., gender, language), immigration status, and parenting behaviors as predictors.

Perhaps the most salient finding from this study is that even though immigration status did not independently contribute to explaining age of first sexual intercourse among the sampled youth, immigration status seemed to operate through the language preference of the adolescent participants. That is, Spanish-dominant adolescents whose parents were foreign-born reported being less likely to have had sexual intercourse at an early age than English-dominant adolescents with foreign-born parents. Consistent with previous research (Félix-Ortiz, Newcomb, & Meyers, 1994; Negy & Woods, 1992), findings from that study also support the limitations of using language as a proxy for acculturation status and immigration status.

Recently, Rumbaut (2004) has focused on current methodological problems in the study of immigrant generations pointing out that “the measurement of composition of the first and second-generations, depends on what is meant by these terms, which have not been uniformly defined in the literature or operationalized in research studies... although these may appear to be simple and straightforward matters, they become complex and elusive on closer inspection” (p.1183).

In studies on immigrant Hispanics, acculturation status and immigration status represent the most widely used constructs to identify characteristics of the immigrant individuals in terms of adaptation to the host culture, nationality, and length of residency among others. Interestingly, there is no available empirical evidence that those constructs

have been tested in the same study to examine possible similarities, whether acculturation status can be used as a proxy for immigration status or vice versa. In light of the need for a closer examination of acculturation status and immigration status, the study examines potential moderation effects of each construct separately on the relationships among parenting processes and risky sexual behaviors and on parenting processes' changes over time.

In sum, the literature clearly identifies the need for further study of these issues related to the etiology of risky sexual behaviors among immigrant Hispanic youth, the potential differences in parenting efforts for first and second-generations of Hispanic adolescents, and the potential moderation effects by acculturation status or immigration status on the relationship between parenting practices and risky sexual behaviors across generations. Thus, this study aims to contribute to these gaps. In addition, the study aims to assess parenting processes using a broader conceptualization of parenting that includes monitoring, support, and communication. By drawing comparisons between first and second-generation groups, the study also proposes a more comprehensive understanding of potential changes in parenting across generations and their relation to the development of risky sexual behaviors in Hispanic youth. Finally, findings from the study may provide important insights into whether acculturation status and immigration status represent different or similar constructs that seem to capture the adaptation processes to a new host culture.

Hypotheses

Some researchers working with immigrant populations have pointed out that the culture of origin and the process of adaptation/acculturation to the host culture may

influence important aspects of family socialization and how parents interact with their children and transmit their cultural and family values to them (Kwak, 2003). However, little is known about potential intergenerational differences in parenting processes as a result of immigration, and whether potential differences might impact the etiology of risky sexual behaviors in Hispanic youth. The major contribution of this study is an examination of how the immigration process impacts parent-adolescent relationships and how that may relate to adolescents' behavioral outcomes. The following hypotheses were developed and were examined in this study.

Hypothesis 1. Mean Level Comparisons T1 Parenting

The first set of hypotheses simply aimed to examine whether there exist mean level differences in parenting and risky sexual behaviors in first versus second generation Hispanic immigrant youth. It was hypothesized that the adolescent-parent dyad of first-generation immigrant families is at a greater risk for conflict and tension due to parental efforts to maintain cultural transmission; it is also more likely that these families engage in a negotiation process to accommodate the new cultural norms and values that may differ from ones in the culture of origin (Vega et al., 2004). As a result; it was expected that parents would engage in higher levels of monitoring, support, and communication with their first generation adolescents than with their second generation adolescents who would never experience the acculturation process.

1A. It was hypothesized that there exist mean level differences in parenting constructs (monitoring, support, and communication) at Time 1 (T1; first data collection), where it was expected that first-generation immigrant adolescents would report higher

levels of monitoring, support, and communication in comparison to second-generation youth.

It was expected that mean level differences would exist in risky sexual behaviors at Time 2 (T2; second data collection one year later) between first and second-generation youth. Part of the rationale for testing for these mean level differences at T2 is that youth will be one year older than at T1 and more likely to have engaged in and report such behaviors. Differences were expected because first-generation adolescents have more pressure from the family to follow cultural rules and values that may prevent them from engaging in sexual behaviors at an early age; some researchers have recently found some evidence that these pressures seem to decline for second and subsequent generation youth (e.g., Jeltova et al., 2005).

1B. It was hypothesized that first-generation immigrant youth would report lower levels of risky sexual behaviors in comparison to second-generation adolescents.

Hypothesis 2. Developmental Changes of Parenting Processes .

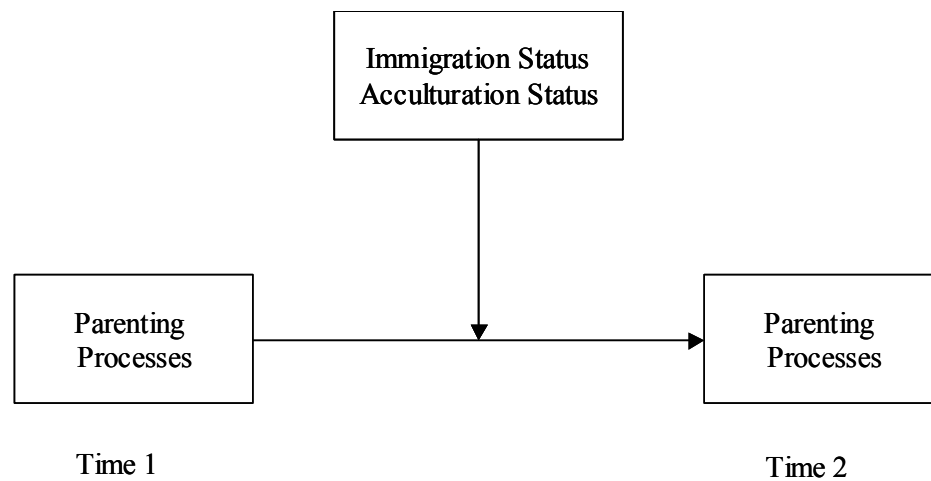
A growing amount of evidence has indicated that immigrant parents often socialize their children in a manner that “prepares” them to cope with the host culture whereas at the same time, they also tend to stress values and norms from their own culture of origin. Some studies have provided evidence that the culture of origin and the process of adaptation to the host culture may influence important aspects of family socialization and how parents interact and transmit cultural and family values to their children (Kwak, 2003; Raeff, 1997). As a result, different levels of acculturation may contribute to differences in socialization practices and how parents parent their children across time—parenting practices that may be more consistent with the culture of origin

when the family first arrived and ones that may be more consistent with the host culture as time passes (Kwak, 2003; Zayas & Solari, 1994).

Previous studies have also documented that these factors are less salient in second-generation immigrant youth, simply because they are born in the host culture, and thus, their culture of origin (Kwak, 2003). In addition, second generation adolescents do not experience the process of acculturation as first generation youth do.

It was hypothesized that parenting processes would be discontinuous in first-generation immigrant families but not in second-generation immigrant youth, where they would remain largely stable; thus, it was expected that the stability of parenting processes between T1 and T2 would be moderated by acculturation status/immigration status. For example, it was hypothesized that sufficient changes may occur in how parent monitor, support, and communicate to their adolescents between T1 and T2 in first generation immigrant families that evidence of discontinuity would be observed (i.e., lower associations, certainly in comparison to second generation immigrant families). Thus, the association between monitoring, support, and communication at T1 and at T2 would be lower in the first generation in comparison to the association between monitoring at T1 and T2 which would remain stable in the second generation.

Figure 2. Developmental Changes of Parenting Processes between T1 and T2



Hypothesis 3. Causal relationships between T1 parenting and T2 risky sexual behavior

The final set of hypotheses examined the longitudinal links between T1 parenting processes and T2 risky sexual behaviors and whether these links were moderated by immigration status or by acculturation status. It was expected that these links among parenting constructs (monitoring, support, and communication) and risky sexual behaviors would be moderated by immigration status or by acculturation status because recent studies have provided evidence that a higher level of acculturation may be related to the association between risky sexual behaviors and parenting among immigrant youth (Jeltova et al., 2005).

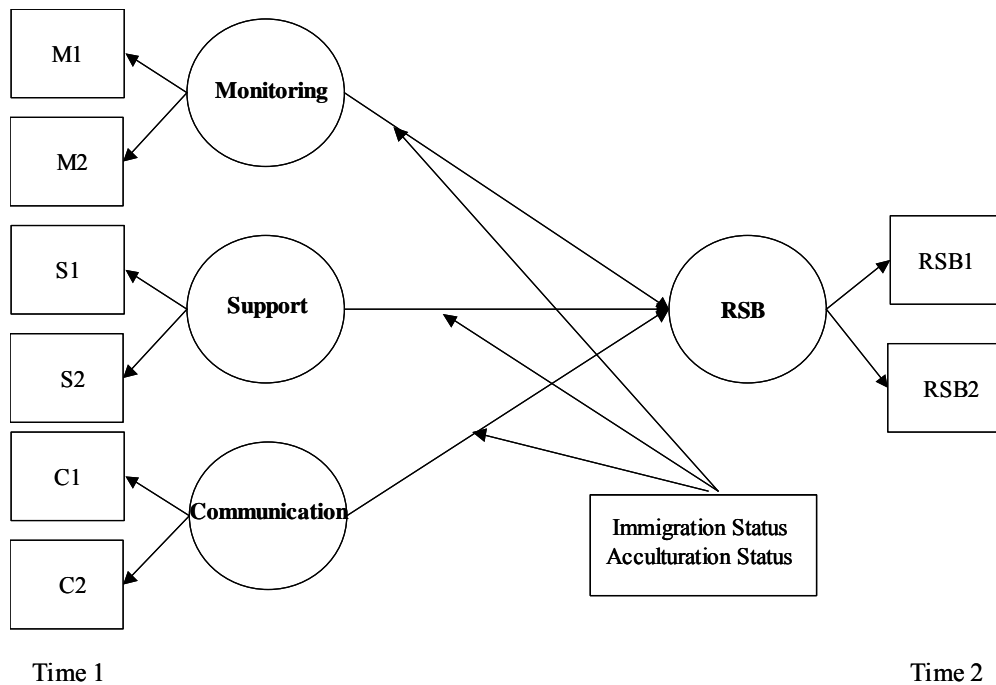
3A. It was hypothesized that acculturation status would moderate the link between T1 parenting and T2 risky sexual behaviors.

3B. It was hypothesized that immigration status would moderate the link between T1 parenting and T2 risky sexual behaviors.

For example, it was expected to find a significant high association between monitoring at T1 and risky sexual behaviors at T2 in first generation families in comparison to second generation families. In the same way, the relationship between support and communication at T1 and risky sexual behaviors at T2 would be significantly higher in first generation adolescents in comparison to second generation families.

In addition, even though differences in parenting across generations have not been adequately tested in relation to risky sexual behaviors in Hispanics, studies conducted on Hispanics in other areas show evidence that there exist differences in the effects of parenting efforts between first and second-generation immigrant families (Kao, 2004; López-González, 2002). Figure 3 presents the model that includes T1 parenting and T2 risky sexual behavior latent constructs. The figure also depicts the potential moderation effect by acculturation status / immigration status.

Figure 3. Links between T1 Parenting and T2 Risky Sexual Behavior



CHAPTER 3: METHODS

Sample

This study used the National Longitudinal Study of Adolescent Health (Add Health) which is has a school based sample. The ADD Health data set includes a total of $N = 20,745$ from which, a subsample of Hispanic origin adolescents $N = 1968$ was used to this study; data for this study include Hispanic immigrant adolescents grades 7-12 sampled in Wave I (1995) and Wave II (1996).

In order to select the Hispanic sample for this study, three filters were applied. The first filter used was based on the question “Are you of Hispanic origin?” which reduced the sample to $N = 3,525$. The second filter used was based on the question “In what country were you born”. For the purpose of this study, individuals from Spanish speaking countries (e.g., Guatemala, Honduras, Nicaragua, Mexico, Panamá, Perú) were selected which reduced the sample to $N = 3,468$ participants. A final filter was applied to classify adolescents 13-16 years old at T1 from the total sample which ages ranged from 11-21; this reduced the sample to $N = 1,968$. In addition, the second filter allowed for classifying the first (foreign born $N = 391$) and second (American born $N = 1,577$) generations of Hispanic immigrant participants.

Sampled adolescents reported on their ethnicity, their relationships with their parents, and their own sexual behaviors (Popkin & Udry, 1997; Mulan, Florey, Tabor, Bearman, Jones, & Udry, 2003).

Procedures

The National Longitudinal Study of Adolescent Health (Add Health) is a nationally representative study aiming to explore the causes of health related behaviors of youth. More specifically, the study provides data on how social contexts (e.g., family, peers, friends, school, neighborhoods, and communities) influence youth health outcomes and risk behaviors (e.g., risky sexual behaviors).

Data collection procedures were established by the institutional review board of the University of North Carolina at Chapel Hill. Using a school-based cluster sampling design, this study initiated in 1994 in 80 schools collecting data from adolescent grades 7-12 and a principle caregiver (typically mother). As described by Popkin and Udry (1997), “a stratified sample of 80 high schools was selected, with probability proportional to size. A high school was defined as such if it included an 11th grade and an enrollment of >30 students. The sample was stratified by region, degree of urbanization (urban/suburban/rural), school type (public/private/parochial), ethnic mix, and size” (p. 702). From the originally selected 80 schools, only 52 schools were eligible and accepted to participate in the study; thus, 28 replacement schools were selected to participate using the same selection criteria. All participating schools were requested to identify a feeder school (i.e., expected to provide a minimum of 5 students to the entering class of the high school; Mulan et al., 2003); from the total sample, 20 schools were their own feeder school.

Passive or active consent forms as required by each school were used to generate the participants’ list. In the case of passive consent forms, unless parents signed the form denying permission for their children and turn it to the school, it was assumed that

Table 1. Add Health Participating High Schools

Add Health Participating High Schools N=80		
Region	Northeast	17
	South	27
	Midwest	19
	West	17
School Type	Public	71
	Catholic	3
	Other Private	6
Grade Span	K - 12	7
	7 - 12	10
	9 - 12	49
	10 - 12	7
	Other	7
Metropolitan Status	Urban	24
	Suburban	42
	Rural	14

permission was granted to adolescents to take part in the study. In the case of active consent forms, adolescents were required to turn in the consent form at school signed by their parents indicating their approval for participation in the study.

In terms of confidentiality of participants' information, the Add Health uses a thorough security system that averts linking identifying information with the participants' responses (i.e., identification numbers used to collect data are never used for data distribution) even though allowing researchers to link questionnaires across the study apparatus (Mulan et al., 2003).

The Add Health was set out to collect data for two main components, namely, the In-School Component and the In-Home Component. The In-School Component (self-administered questionnaire) collected data from student's general characteristics and

background (e.g., parents, friends, school life, school work, school activities, health status, and health related behaviors). At the same time, every school administrator was required to complete the School Administrator Questionnaire, which gathered information about general characteristics of the school (e.g., curriculum, school services, and programs). School rosters were used to randomly select students to participate in Wave I collected during 1994-1995 (Popkin & Udry, 1997).

School rosters were also used to select adolescents in grades 7-12 for the In-Home Component which included an In-Home Interview of the target adolescents, a Parent Interview, and an In-Home Sample. The In-Home Interview consisted of a Computer-Assisted Personal Interview (CAPI) /Audio Computer-Assisted Self Interview (ACASI) that was administered to the adolescent by trained personnel—more sensitive questions were asked in the self-administered part of the interview. The Parent Interview was completed by one of the parents or primary caregivers of participating children, usually the mother. This interview provided information on the adolescent and parents' health and demographic characteristics as well as the family composition and relationships (Mullan Harris et al., 2003).

The In-Home Sample was composed of a core sample of adolescents derived from in-school participation, a sample derived from two schools to study relationship patterns, a genetic sample of siblings and twins, and a sample of unrelated adolescents living in the same house. In addition, the In-Home sample, the Add Health included four oversamples of black adolescents (college educated parents), Hispanic youth (Cuban and Puerto Rican), Chinese youth, and physically disabled adolescents (Wave I only). The In-School Questionnaire and the Parent Interview were administered only during Wave I whereas

the In-Home Interview was administered to adolescents at Wave I and at Wave II one year later from April to August 1996 (Mullan Harris et al., 2003).

For the purpose of this study, data were used that were collected as part of the Hispanic samples only. This procedure has been used by previous investigations that have focused on Hispanics only (Guilamo-Ramos, Jaccard, Pena, & Goldberg, 2005). Thus, the current sample is not nationally representative and can effectively be treated as a convenience sample. This also means that no sampling weights were applied as commonly done when using the total Add Health data set (Chantala & Tabor, 1999; Crosnoe, López-González, & Muller, 2004; Gordon-Larsen, Mullan-Harris, Ward, & Popkin, 2003) from Wave I and Wave II In-Home Interviews (for a similar approach see Mullan Harris et al., 2002).

Measures

Demographics

Age

Following the guidelines provided by the Add Health, age was computed using the following variables from Wave I In-Home Interview: 1) month when the interview was completed, 2) day when the interview was completed, 3) year when the interview was completed, 4) birth date (month), and 5) birth date (year). Age of participants was calculated based on the interview completion date and the date of the participant's birth. The fifteenth of the month of the participants' birth date was used as the day when calculating age because only the month and year of birth of participants were available.

Participants were 13-16 years old at Time 1 (1995) with a mean age of 15.7 for first generation and a mean age of 15.3 for second generation. Time 2 data was collected one year later (1996) when adolescents were 14-17 years old.

Sex

Participants' sex was reported by the interviewer using the following coding: "Male = 1" and "Female = 2." When unsure, the interviewer was required to ask the participant. A total of N = 192 (49.1%) males and N = 199 (50.9 %) females from first generation and N = 772 (48.9%) males and N = 805 (51.1 %) females from second generation participated in the study.

Ethnicity/Race

Self-identified race/ethnicity of participants was measured by a combination of two items, namely: 1) "Which one category best describes your racial background?" and 2) "Are you of Hispanic or Latino origin?" For the purpose of this study, only Hispanic adolescents were used. In addition, since the main focus of the study was to examine Hispanic immigrant adolescents as a group and not in terms of a particular Hispanic background or heritage (e.g., Cuban, Puerto Rican), information regarding country of origin was not included in this measure. Table 2 provides a breakdown of youth who were classified as Hispanic by country of origin.

Family Structure

A measure of family structure was created based on the household member roster of the In-Home Interview. The original variable for household member contained the following categories: biological parents, biological mother only, biological father only, biological mother and step father, biological father and step mother, biological mother

Table 2. Participating Hispanic Adolescents by Country of Origin

Study Participants by County of Origin N = 1,968		
North America	Mexico	155
	Puerto Rico	23
	United States*	1577
Central America	El Salvador	21
	Honduras	17
	Guatemala	7
South America	Colombia	9
	Cuba	93
	Ecuador	4
	Panama	4
	Peru	8
	Southern**	4
Caribbean	The Dominican Republic	15

Note: *Hispanic origin American-born adolescents; **As described by the ADD Health data In Home Questionnaire Code Book “countries were combined into geographic regions if the number of respondents designating those countries were 10 or fewer.” (pp.8). Thus, under the Southern South America geographic region, the following countries were comprised: Belize, Costa Rica, French Guiana, Guyana, Suriname, Venezuela.

and other, biological father and other. Based on the inspection of frequencies for each family structure, the following four categories were created: 1 = biological parents, 2 = biological mother only, 3 = step families, and 4 = other (Table 3). In addition, the variable was dummy coded to be used as a control in the analysis of the main study constructs. The biological parents category was used as a reference to dummy code the other family structure categories, namely family 1 (i.e., biological mother only), family 2 (i.e., step family), and other (i.e. living with another family member).

Table 3. Family Structure Categories Before and After Recoding

Household Member Roster N = 1,968		
Original Categories	N	%
Biological parents	1008	51.2
Biological mother only	541	27.5
Biological father only	63	3.2
Biological mother and step father	161	8.2
Biological father and step mother	28	1.4
Biological mother and other	10	.5
Biological father and other	1	.1
Recoded Categories	N	%
Biological parents	1008	51.2
Biological mother only	541	27.5
Step families	189	9.6
Other	74	3.8
Total	1,968	100

Family Socio-Economic Status

Family socio-economic status (SES) was measured through parental education and yearly income measures obtained from the Parental In-Home Questionnaire. SES was based on two measures previously developed by Harker, Guo, and Mullan-Harris (2006) and Harker (2001). As described by Harker (2001), yearly income reports obtained from the parental questionnaire were used to construct a household income variable with four categories: 1) \$15,000 or less, 2) \$16,000- \$34,000, 3) \$35,000- \$59,000, 4) and \$60,000 or more. As described by Harker et al. (2006), maternal education was measured using a variable that indicated the highest educational degree attained by the resident female

caretaker: 1) “less than high school”, 2) “high school diploma or GED”, 3) “more than high school (e.g., some college)”, 4) and “college or post-graduate schooling.” In the current study, family socio-economic status was assessed by computing a score based on the average of both standardized items.

Parenting Processes

Findings from previous studies have suggested different patterns of parental involvement with their children based on gender. For example, mothers have been reported to be more closely involved with their offspring in comparison to fathers potentially due to social and cultural norms and expectations that tend to reinforce more maternal than paternal involvement (Arendell, 2000). Hawkins, Amato, and King (2006) recently examined the influence of parental involvement and gender using the Add Health data set finding evidence that mothers and/or primary female caretakers were more frequently involved with their adolescents than fathers or primary male caretakers.

In addition, particularly among Hispanic families, researchers have widely documented the important role that mothers play in the socialization of children and youth evidencing higher rates of maternal involvement (Christopher, Johnson, & Roosa, 1993; Marín & Marín, 1990; Rodríguez, Davis, Rodríguez, & Bates, 2006; Zayas, 1994). Thus, for the purpose of this study, only maternal parenting processes were used.

Three parenting processes were assessed, namely monitoring, support, and communication. Previous studies have also focused on these constructs that were assessed both through the In-Home Interview adolescent report at Wave I and Wave II.

Maternal Monitoring. As discussed by Stattin and Kerr (2000), an important issue on current measures of parenting processes is the differentiation between *parental*

monitoring—conceptualized as “active surveillance or tracking of children’s behaviors” (p. 1072)—and *parental knowledge*—described as “parents’ knowledge of their children’s activities” (p. 1073). That is, parental monitoring implies an active control/surveillance of children’s behaviors by setting up rules and observing that those rules are followed whereas parental knowledge refers more to the parents knowing about their children’s whereabouts and activities without actively controlling those.

Consistent with some previous investigations interested in examining parental monitoring based on the Add Health data set, this study used items that have been tested by other researchers (Mullan-Harris, 1999). It is important to note though that the items tap into more than simply monitoring, and in fact, may assess parental efforts to control an adolescent’s decision making; thus, the items tap into parental psychological control as a negative construct or into parental autonomy granting as a positive construct.

Seven items were used to assess maternal monitoring. The specific items included the following questions: Do your parents let you make your own decisions about 1) “the time you must be home on weekend nights”, 2) “the people you hang out with”, 3) “what you wear”, 4) “how much television you watch”, 5) “which television programs you watch”, 6) “what time you go to bed on week nights”, and 7) “what you eat ”; response categories for all items were 1= no, 2= yes. Due to the lack of scalar properties, items were recoded and summed to compute an overall index of monitoring, which ranged from 0 to 7, where 7 indicated a high level of monitoring; thus, no Cronbach’s alphas are reported.

Parental Support. Parental support was assessed by five items; again, this construct has also been previously measured with similar items in previous studies based

on the Add Health data set (e.g., Mullan-Harris, 1999; Ream & Savin-Williams, 2005). The first two items, namely, 1) “how close do you feel to your mother”, 2) “How much do you think your mother cares about you” were measured by a 5 point Likert-scale (1= not at all, 2= very little, 3=somewhat, 4=quite a bit, 5=very much).

The last two items, namely, 3) “most of the time, your mother is warm and loving to you”, 4) “you are satisfied with the way your mother and you communicate with each other”, and 5) “overall, you are satisfied with your relationship with your mother” were measured by a 5 point Likert-scale (1= strongly agree, 2= agree, 3= neither agree nor disagree, 4= disagree, 5= strongly disagree). Items were recoded so that a high score (e.g., 5) reflects high support whereas a low score (e.g., 1) reflects low support. Cronbach’s alpha reliability estimates for this scale were as follows: $\alpha = .84$ for males, $\alpha = .86$ for females, and $\alpha = .84$ for total sample.

Parental Communication: Parental communication was assessed by four items; similarl to previous constructs, parental communication has been previously measured using this items based on the Add Health data set (e.g., Willgerodt & Thompson; 2005). Items used included: 1) “talk about someone you are dating, or a party you went to”, 2) “had a talk about a personal problem you were having”, 3) “talked about your school work or grades”, and 4) “talked about other things you’re doing in school” (1= no, 2= yes). Items were recoded and summed to compute an overall index of maternal communication, which ranged from 0 to 4, where 4 indicated a high level of communication.

Risky Sexual Behaviors

The Add Health Wave I and Wave II include multiple items on adolescents' sexual and contraceptive histories. Due to the sensitive quality of those questions, this section of the interview was assisted by a computer (Computer Assisted Self Interview CASI) using an audio system that provided participants with the questions via headphones as well as instructions to answer the questions using the computer.

Adolescents' sexual activity was determined by the following question: "Have you ever had sexual intercourse, we mean when a male insert his penis into a female's vagina?" Participants who answered "yes" were automatically provided with additional questions regarding their sexual behavior (Scales, Regnerus, & Comer, 2003).

For the purpose of this study, risky sexual behaviors were examined through a *composite of six items* measuring risky sexual behaviors. The risky sexual behavior composite was created based on previous studies by Upchurch, Lillard, Aneshensel, and Li (2002), Guilamo-Ramos et al. (2005), and Ream and Savin-Williams (2005). For this purpose, each one of the six items was dichotomized to reflect high and low risk, for example, use of contraception during recent sexual intercourse reported as "no" was recoded as "1 = high risk" whereas "yes" was recoded as "0 = low risk".

Items were summed to compute an overall index of risky sexual behaviors, which ranged from 0 to 6. Cronbach's reliability estimates are not reported for risky sexual behaviors because this measure is simply a composite and not a scale with psychometric properties.

The first item measured the participant's age of first sexual intercourse based on the question "In what year did you have sexual intercourse for the very first time";

answers were provided in years from 1976 to 1995. Age of first sex of the participants was calculated by using the participants' reported age and the date of the participants' first sexual intercourse. The answers were recoded based on the rationale that youth engaging in sexual intercourse after age 14 are considered low risk (0) whereas youth having sexual intercourse before age 14 are considered high risk (1).

Item two and three measured the frequency and type of contraceptive use respectively during sexual intercourse based on the following questions: "Did you or your partner use any method of birth control when you had sexual intercourse most recently?" (1= no, 2= yes); this question was recoded as 1= no (high risk) and 0=yes (low risk). The other question was: "What method of birth control did you or your partner use?" For this last question a list of contraceptive methods were provided which included condoms (rubbers), withdrawal, rhythm, birth control, IUD (intrauterine device), Norplant, ring, and Depo Provera among others. Given the fact that, with the exception of condom use, all contraceptive methods do not protect against STDs, the question was recoded as 0 for condom use (low risk) and 1 for all remaining contraceptive methods (high risk).

The following item assessed the frequency of condom use: "Thinking of all the times you have had sexual intercourse, about what proportion of the time (have you/has a partner of your) used a condom?" Answers were provided in a Likert-type scale 1=none of the time, 2=some of the time, 3=half of the time, 4=most of the time, and 5=all of the time. The answer "all the time" was recoded as 0 (low risk) and the remaining answers (e.g., none of the time, some of the time, half of the time, most of the time) were recoded as 1 (high risk).

A fifth item assessed the participant's history of sexual transmitted diseases (STDs) as follows: "Have you ever been told by a doctor or a nurse that you had chlamydia, syphilis, gonorrhea, HIV or AIDS, genital herpes, genital warts, trichomoniasis, hepatitis B, bacterial vaginosis, or non-gonococcal vaginitis?" (1= no, 2= yes). Since each STD is an independent item with the same range of potential answers, all items were summed to create the STD variable. Similarly to the first item, the answers reflected high (1=yes) versus low (0=no) risk; thus, no recoding was needed.

The last item assessed the participant's sexual involvement with multiple partners. The computer-aided self-interview asked participants detailed information for up to three romantic partners and three non-relationship partners. For each possible partner the following question was used to measure sexual intercourse: "We had sexual intercourse" (1= no, 2= yes). Responses were dichotomized (0-1) based on the rationale that sexual activity with up to two romantic partners was considered "low risk" (0), whereas sexual activity with more than two romantic partners and any non-relationship partner was considered as "high risk" (1).

Acculturation Status/Immigration Status

Acculturation Status. A salient goal of this study is to test the potential moderation effects by immigration status on the relationships between parenting practices and risky sexual behaviors among first and second generation Hispanic youth. Previous studies using the Add Health data set have also tested for generational differences using a similar approach; however, the focus was on educational outcomes (e.g., Crosnoe et al., 2004; Tillman et al., 2004), parenting (Willgerodt & Thompson, 2005), social capital (Pong, Hao, & Gardner; 2005), or body weight (Gordon-Larsen et al., 2003).

Two main constructs have been used to assess this, namely a measure of acculturation status and a measure of immigration status. Acculturation status has been assessed with different items that are consistently used as indicators of acculturation status in the literature (Ford & Norris, 1993; Marín, Sabogal, Marín, Otero-Sabogal, & Pérez-Stable, 1987; Villaruel et al., 2002). These include language use at home, language use with friends, language of music listened at home, parents' and children's citizenship and country of origin, and length of residency among others.

As previously described in Chapter II, a great criticism in the recent literature has been the lack of consensus and consistency in the operationalization of acculturation status (Forehand, et al., 1997; Vega, 1990; Vega et al., 2003; Villaruel et al., 2004) as well as the interchangeable use of acculturation status and immigration status to refer to the immigration and adaptation process to a host culture (Gordon-Larsen et al., 2003; Kwak, 2003; Kao, 2004; Rumbaut, 2004).

The current study overcame some of these limitations by focusing on and testing for potentially similar or different immigration effects through two separate measures, namely one conceptualized as a measure of acculturation status as tested by previous studies and one that is simply based on immigration status, namely an indicator being foreign born versus native born.

Though the Add Health data set does not include a specific measure of acculturation status, some items that tap into the construct are part of the data set, such as language use and length of residency which have been tested by previous Add Health studies interested in acculturation effects in Hispanic youth (e.g., Crosnoe, López-González, & Muller; 2004; Guilamo-Ramos, Jaccard, Pena, & Goldberg, 2005).

However, length of residency only applies to first generation youth because second generation adolescents are native born. Thus, for the purpose of this study, only language use was used.

As described by Guilamo-Ramos and colleagues, language use is “conceptually, a rough indicator of the amount of exposure to U.S culture: adolescents residing for longer periods of time have probably have more exposure to the U.S. majority culture, on average” (p. 89). In addition, previous studies have extensively documented the use of language use and proficiency when examining acculturation in general (Nguyen, Messé, & Stollack, 1999; Popkin & Udry, 1998).

Acculturation status was measured using a single item namely language used at home (Guilamo-Ramos et al., 2005; Gordon-Larsen et al., 2003). The item measured language spoken at home (e.g., “What language do you use most with your family and close relatives?”) Since this study focus on a Hispanic sample, the item was dichotomized into 1 = English and 2 = Spanish.

Rationale for using this item to test for acculturation status is based on previous evidence supporting that adolescents who report Spanish as their primary language of use at home are less likely to adopt the host culture in comparison to their Hispanic English speaking counterparts and, therefore, are considered to be less acculturated (Guilamo-Ramos et al., 2005).

Immigration Status. Previous studies using the Add Health data set have examined immigration status differences by classifying generational groups based on the country of origin and citizenship of parents and adolescents. As described by previous literature (Crosnoe et al., 2004; Gordon-Larsen et al., 2003; Popkin & Udry, 1998;

Tillman, Guo, & Mullan-Harris, 2006), an immigration status measure was used based upon the child's citizenship status and on the child's and their parents' country of birth using the following items: "Were you born in the United States?", "In what country were you born?", and "In what country was your mother/father born? as indicated at Wave I; for these questions, a detailed list of countries was provided.

Generational groups were classified as First Generation (i.e., not born in the U.S. or not born in a foreign country with U.S. citizenship) and Second Generation (i.e., born in the U.S. or in a foreign country with a U.S. citizenship with at least one parent of foreign birth).

Plan of Analysis

Initial Analyses

Initial analyses included descriptive statistics, reliability estimates of the maternal support scale used, and correlations for main constructs and demographic variables. As previously indicated, reliabilities were not conducted for maternal knowledge, maternal communication, and risky sexual behavior indexes.

Descriptive Statistics

An initial set of analyses was computed on demographic and background variables. Table 4 presents the frequencies of age, sex, family structure, and SES by generational groups.

Nested Data Effects

Preliminary analyses tested for multi-level/nesting effects prior to the main analyses. The Add Health data are a "multistage, stratified, school-based, cluster sampled data" (Harker, 2001; p. 978) which study design, if not adjusted appropriately, may lead

to “biased parameter estimates and incorrect variance estimates” (Chantala & Tabor, 1999; p.2). A procedure was conducted using appropriate statistical software (e.g., SPSS) to test for potential nesting effects. If nesting effects were found, thus, appropriate adjustments were applied; if none were found, the analysis was completed without any data adjustments.

Analyses Related to Hypotheses

Hypothesis 1

It was hypothesized that there exist mean level differences in parenting constructs (parental knowledge, support, and communication) at Time 1, where it was expected that first generation immigrant adolescents would report higher levels of monitoring, support, and communication in comparison to second generation youth. In addition, it was also hypothesized that first generation immigrant youth would report lower levels of risky sexual behaviors in comparison to second generation adolescents.

To test the first set of hypotheses, mean level comparisons were be completed for parenting processes (monitoring, support, and communication) and measures of risky sexual behaviors by immigration status through ANOVAs.

Hypothesis 2

It was hypothesized that parenting processes would change from T1 to T2 in monitoring, support, and communication in first generation immigrant families moderated by acculturation status and/or immigration status. In contrast, it was also hypothesized that parenting processes in second generation immigrant youth would remain largely stable from T1 to T2 moderated by acculturation status and/or immigration status.

To test the second set of hypotheses, a series of repeated measures ANOVA were completed. In addition, a regression framework was used to examine whether acculturation status and/or immigration status moderated the stability of parenting.

Hypothesis 3

It was hypothesized that immigration status, acculturation status and gender would moderate the causal relationship between T1 parenting and T2 risky sexual behaviors.

To test the third set of hypotheses, SEM with multigroup analyses was conducted. Using a multigroup modeling approach would allow tests of equivalence of model parameters between first generation and second generation immigrant youth and between groups characterized low versus high on the measure of acculturation status (MacCallum & Austin, 2000). The general procedure for multigroup analysis is to test for invariance between an unconstrained model for the total sample and then for a model where parameters (the structural paths only) are constrained to equality for the two groups. If chi-square difference test reaches statistical significance, this provides evidence of moderation; on the other hand, if the chi square statistic does not reach statistical significance, then a conclusion can be made that there was no evidence of moderation. The same analytic procedure was used for acculturation status and immigration status.

CHAPTER 4: RESULTS

Preliminary Analysis

In an initial step, frequencies were computed for demographic variables, namely sex, family structure, and SES by generational status and were compared by immigrant status using a χ^2 test. In addition, mean ages were compared by generational status and then compared using an ANOVA. Differences were found in participants' ages, where first generation immigrant youth were slightly older (15.7 years) in comparison to second generation youth (15.3 years). Findings from these comparisons are presented in Table 4. No differences were found in the number of male versus female youth in each group (49.1% and 50.9% for first generation youth and 48.9% and 51.1% for second generation youth).

Across both groups, about 50% of youth lived with two biological parents, whereas about 30% lived with their biological mother only; a smaller percentage of youth reported living in a stepfamily (10%) or living with another family member (4%), such as biological father, grandparents or aunts. Second generation youth reported a significantly higher level of maternal education (e.g., high school diploma or GED) and a significantly greater household income (e.g., \$16,000 to \$34,000) in comparison to first generation immigrant adolescents (e.g., less than high school; \$15,000 or less). Based on some of these observed differences and on previous research that has linked background variables

to both parenting and risky sexual behaviors, demographic variables were used as controls in subsequent analyses.

In a second step, correlations were computed for the main study constructs by immigration status, namely between demographic variables, parenting processes at T1 and T2, and risky sexual behaviors at T2. Findings are presented in Table 5. Age was associated with T1 and T2 monitoring, but not with the other parenting constructs in first generation immigrant youth, whereas it was correlated with T1 monitoring, support, and communication and T2 monitoring and T2 support but not with communication among second generation immigrant youth; in addition, age was correlated with risky sexual behaviors only in second generation immigrant youth.

Sex was correlated with T1 and T2 support and T1 and T2 communication in both first and second generation youth, but it was not correlated with either T1 or T2 monitoring on either generational group; in addition, sex was correlated with T2 risky sexual behaviors. Family structure (1) (i.e., living with biological mother only) was negatively correlated with T1 support in both first and second generation suggesting that adolescents not living with both biological parents but with only the mother report less support. In addition, living with mother only was also negatively correlated with T1 communication and T2 monitoring in second generation youth suggesting that these adolescents report less communication and monitoring than adolescents living with both parents.

Family structure (2) (i.e., living in a step family) was correlated with T1 communication among first generation youth and with T1 support among second generation youth indicating that first generation adolescents living in a step family report

more communication, while second generation adolescents living in a step family report more support. Family structure (3) (i.e., living with other family members) was not correlated with any main study constructs among first generation youth, while it was negatively correlated with T1 monitoring among second generation youth suggesting that these adolescent report less monitoring than adolescent living with both biological parents.

SES was correlated with T1 communication and T2 monitoring only in second generation youth. Most parenting constructs were significantly correlated with each other both within date collection period as well as between both assessment periods in the conceptually expected directions in both first and second generation immigrant groups. In addition, all parenting constructs were negatively correlated with risky sexual behaviors, ranging from $r = -.02$ to $r = -.13$. Both, immigration status and acculturation status were significantly correlated with age ($r = .14$ and $r = .15$), SES ($r = .35$ & $r = .34$), family1 ($r = .09$ and $r = .09$), family 2 ($r = .06$ & $r = .05$), and T2 monitoring ($r = .09$ & $r = .13$). In addition, immigration status was correlated with T1 monitoring ($r = .05$), while acculturation status was significantly correlated with T1 communication ($r = .30$); the correlation between acculturation status and immigration status was $r = .47$.

Nesting Effects

Potential school effects on the main study constructs were examined (Chantala & Tabor, 1999). A variance component analysis was conducted using the VARCOMP procedure in SPSS (Advanced Models) to estimate the contribution of the random effect (e.g., school effect) to the total variance of the dependent variables. The proportion of the

variance explained (R^2) by the random effect was computed using the following procedure described by Yaffee (2006) and Leyland (2004): $R^2 = 1 - SS_{Error}/SS_{Total}$.

Table 4. Frequencies of Demographic Variables by Immigration Status

	Hispanic Immigrant Youth N = 1,968		χ^2
	First Generation <i>n</i> = 391	Second Generation <i>n</i> = 1,577	
Age (mean, years)	15.71	15.33	37.32***
Sex			.003
Male	49.1	48.9	
Female	50.9	51.1	
Family Structure			3.11
Biological parents	49.4	51.7	
Biological mother only	28.6	27.2	
Step families	11.3	9.2	
Other	2.8	4.0	
Maternal Education			27.93***
Less than high school	48.3	35.5	
High school diploma or GED	29.2	35.0	
More than high school (some college)	11.8	19.7	
College or post-graduate schooling	9.2	9.8	
Annual Family Income			71.47***
\$15,000 or less	30.7	18.3	
\$16,000 to \$34,000	25.1	25.7	
\$35,000 to \$59,000	7.2	19.3	
\$60,000 or more	4.1	12.0	

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 5. Correlations between Demographics and Main Study Constructs

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age		.01	.01	-.01	-.01	-.12*	-.20**	-.09	.07	-.20**	-.08	.05	-.01
2. Sex	-.03		.07	-.01	.05	.01	.01	-.12*	.12*	.03	-.13*	.17**	-.16*
3. Family 1 ^a	-.02	.01		-.25**	-.12*	-.17**	.02	-.13*	.08	.01	-.04	.08	.02
4. Family 2 ^a	.01	-.01	-.22*		-.06	.09	-.01	-.02	.14**	-.05	-.04	.01	.05
5. Family 3 ^a	-.01	-.03	-.14*	-.07*		-.04	-.05	.13	.01	.01	-.02	.02	.13
6. SES	-.10**	.02	-.16*	.05	.03		-.05	.09	.06	-.03	-.02	.02	.01
7. Monitoring (T1)	-.17**	-.05	-.05	-.01	-.05*	-.05		-.01	-.01	.39**	.03	.01	-.07
8. Support (T1)	-.07*	-.17**	-.11*	-.06*	.02	.01	.03		.19**	-.01	.45**	.15*	-.03
9. Communication (T1)	.06*	.14**	.08*	.02	.01	.05*	-.03	.24**		-.05	.18**	.31**	-.02
10. Monitoring (T2)	-.21**	-.03	-.09*	.01	-.03	-.09*	.38**	.08**	-.01		.04*	.02	-.09
11. Support (T2)	-.08**	-.16**	-.08*	-.05	-.06	-.03	.05	.58**	.12**	-.03		.27**	-.02
12. Communication (T2)	.07	.14**	.03	.01	-.01	.04	-.04	.13**	.32**	-.05	.26**		-.12
13. Risky Sexual Behaviors	-.09*	-.04	-.07	.05	-.09	-.09	-.07*	-.11**	-.02	-.13**	-.12**	-.09**	

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. First generation immigrant youth are above the diagonal, while second generation youth are below; ^aFamily structure was dummy coded using ‘biological parents’ as the reference variable.

The results for the random effects for monitoring indicated a variance component by schools (3.6%); however, 96.4% of the total variance estimated for monitoring remained in the residual indicating that school clustering had a very small effect on the variable ($SS_{Model} = .094$ and $SS_{Error} = 2.509$). Similarly, results for support showed that about 2% of the variance was accounted for by school effects, and 98% of the variance remained in the residual; thus, school effects on support were very small ($SS_{Model} = .003$ and $SS_{Error} = .147$) and the bulk remained as between individual differences. Finally, results for communication ($SS_{Model} = .004$ and $SS_{Error} = 1.626$) and risky sexual behaviors ($SS_{Model} = .012$ and $SS_{Error} = .400$) also indicated that only a modest amount of variability was due to school clustering (1% and 2.9% respectively), and that the majority, namely 99% for communication and 97% for risky sexual behaviors remained in the residuals or between individual differences.

In general, results showed that there were very modest school nesting effects across the main study constructs and only explained between 1% to 4% of the variance. These findings were consistent with previous studies that have reported no few important school nesting effects for the Hispanic subsample of the Add Health data set (e.g., Crosnoe, López-González, & Muller, 2004; Guilamo-Ramos, Jaccard, Peña, & Goldberg, 2005), and thus, a decision was made to complete “simple” analyses for the remaining research questions.

Hypothesis 1: Mean Level Comparisons

T1 Parenting (A) and T2 Risky Sexual Behaviors (B)

Part A

It was hypothesized that mean level differences existed in parenting constructs

(monitoring, support, and communication) at Time 1; it was expected that first-generation immigrant Hispanic adolescents would report higher levels of monitoring, support, and communication in comparison to second-generation youth. Prior to conducting the ANOVAS, the parenting constructs were residualized by age, sex, family structure, and SES. The rationale for residualizing the parenting variables was based on the importance of eliminating potential confounds by demographic variables and also to allow for a closer examination of potential mean differences. Table 6 summarizes the results of the ANOVAS for parenting processes by immigration status; for ease of inspection, raw means and standard deviations are presented as well as associated *p* values based on mean level comparisons of the residualized scores. Contrary to expectations, no mean level differences were found for parenting constructs between first and second generation immigrant youth.

Part B

Hypothesis 1B proposed that first-generation immigrant youth would report lower levels of risky sexual behaviors in comparison to second-generation adolescents. Similar to parenting process constructs, the risky sexual behavior construct was residualized by age, sex, family structure, and SES. The results of the ANOVA are also presented in Table 6. Contrary to expectations, the residualized means scores of RSB indicated no significant differences between first and second generation immigrant youth.

Table 6. Mean Level Comparisons of T1 Parenting Processes and T2 Risky Sexual Behaviors by Immigration Status

	Items (range)	1 st Generation Immigrant Hispanic Youth		2 nd Generation Immigrant Hispanic Youth		<i>p</i>
		M	SD	M	SD	
Parenting Processes (T1)						
Monitoring	7 (0-7)	2.49	1.75	2.19	1.57	.614
Support	5 (1-5)	4.43	.585	4.39	.680	.915
Communication	4 (0-4)	1.80	1.30	1.94	1.28	.872
Risky Sexual Behaviors (T2)	6 (0-6)	.663	.883	.717	.950	.499

Hypothesis 2: Developmental Changes in Parenting Processes from T1 to T2

It was hypothesized that the stability of parenting processes between T1 and T2 would be moderated by immigration status and/or acculturation status. To test this hypothesis, a series of hierarchical regressions were completed separately for each parenting construct (monitoring, support, and communication). In order to examine potential moderation effects, three sets of hierarchical regression analyses were completed first by immigration status, second by acculturation status, and finally by including main effects by both immigration and acculturation status in the model. In addition, interaction terms were computed for each analysis (i.e., immigration status X parenting construct, acculturation status X parenting construct, and immigration status X acculturation status X parenting construct). Table 7 presents the results of these analyses.

The following steps were employed to enter the variables in the models for each analysis. In a first step, demographic variables, namely age, sex, family structure, and SES, were entered as controls. In a second step, the T1 parenting construct was entered;

in the third and four steps, immigration status or acculturation status and the interaction terms were entered.

For the three sets of analyses, demographic variables (i.e., age, sex, family structure, and SES) explained a modest amount of variance, 6%, 5%, and 3%, for monitoring, support, and communication, respectively. Monitoring explained an additional 12% of the variance, whereas support explained 28% and communication explained 9% of the variance. In the first set of analysis, neither immigration status nor the immigration status X parenting interaction term explained any variance in parenting constructs. However, the results showed that immigration status only had a significant main effect on T2 monitoring; this suggested that first immigration adolescents were monitored more. No main effects or moderation effects were found for immigration status on the remaining two parenting constructs. In the second set of analyses, no additional variance was explained by acculturation status for T2 support or T2 communication or by the parenting X acculturation status interaction term in any of the parenting constructs.

In addition, a main effect and a moderation effect by acculturation status were found; however, due to the unusually large standardized regression coefficients, additional analyses were computed to further examine them. The correlation between acculturation status and support was $r = .47$; the test for multicollinearity revealed that tolerances were below 1 for support (.048) and acculturation status (.002) and that VIF scores were above 10 for both support (20.6) and acculturation status (483). This suggested that both variables were highly collinear, and thus, did not allow for a reasonable interpretation of regression coefficients. In addition, no main effects or

moderation effects were found for acculturation status on the remaining parenting constructs.

In the final set of analyses, immigration status and acculturation status were entered in the third model step, while interaction terms for immigration, acculturation status, and parenting constructs were entered in a fourth step. In addition, a three way interaction term (i.e., immigration status X acculturation status X parenting construct) was entered in a final step. Similar to findings from analysis 2, acculturation status explained an additional 1% of the variance for T1 monitoring, but not for the two remaining parenting constructs; interaction terms explained no additional variance above and beyond the main effects by immigration status and acculturation status. Finally, the three-way interaction term did not reach statistical significance in the final model step.

The significant main effect by immigration status found in analysis 1 and the main effect and moderation effects of acculturation status reported in analysis 2 were no longer significant in analysis 3; again, this provided some evidence of potential multicollinearity problems between immigration status and acculturation status. Thus, statistics assessing multicollinearity were examined. These statistics showed that VIFs were above 10 for immigration status (57.2) and for acculturation status (12.5); in addition, tolerances were below 1 for both variables (e.g., .097 & .080, respectively). This provided conclusive evidence that immigration status and acculturation status were highly collinear, and thus, findings where both variables were entered into a model test were uninterpretable due to multicollinearity.

Table 7. Hierarchical Regression Analyses Predicting T2 Parenting Processes by T1 Parenting Processes

Analysis/Steps	Monitoring T2					Support T2					Communication T2				
	b	SE	β	<i>p</i>	ΔR^2	b	SE	β	<i>p</i>	ΔR^2	b	SE	β	<i>p</i>	ΔR^2
1	Demographic Variables														
2	Demographic Variables														
3	Demographic Variables														

Notes: ^a Parenting variable refers to the parenting constructs on each one of the columns (e.g., monitoring T2, support T2, and communication T2); ^b No interpretable solution was found due to multicollinearity (additional details are described in text); the numbers presented in the table are from the final model step.

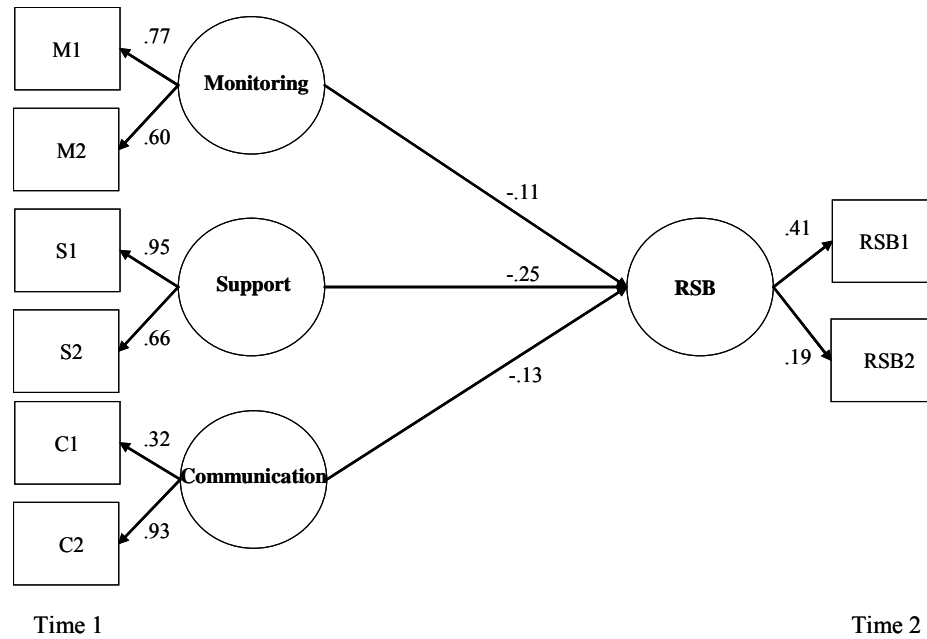
Hypothesis 3: Links between T1 Parenting and T2 Risky Sexual Behaviors

Hypothesis 3A proposed that immigration status would moderate the link between T1 parenting constructs and T2 risky sexual behaviors, whereas hypothesis 3B proposed that acculturation status would moderate these links. The hypothesis was set up to be tested in an SEM framework using multigroup analysis in AMOS 5.0 (2004). Thus, latent variables were developed for each T1 parenting construct and for T2 risky sexual behaviors; each latent variable had two indicators in the form of item parcels. The procedure suggested by Little et al. (2002) was followed to compute parcels.

More specifically, a principal component factor analysis was conducted to examine item factor loadings of the items that were used to assess each T1 parenting construct as well as T2 risky sexual behaviors. Items were assigned to the parcels following a procedure where the items with the first and third highest factor loadings were assigned to parcel 1, items with the second and fourth highest factor loadings were assigned to parcel 2 and so forth. Before conducting the multi-group SEM analyses by generational groups (immigration status and acculturation status), the model was tested using the total sample to examine general model fit. Figure 7 includes standardized loadings based on the analysis with transformed RSB parcels (see below).

Findings indicated that the model fit the data rather well ($\chi^2 = 123.35$, $\chi^2/df = 3.34$, CFI = .959, RMSEA = .038); however, none of the T1 parenting constructs significantly predicted T2 risky sexual behaviors. A closer inspection of the standardized loadings of each parcel on the latent construct revealed that the loadings for the RSB parcels were extremely low (i.e., parcel 1 = .087 and parcel 2 = .044); this provided some evidence of problems due to skew. Skew statistics provided some support

Figure 4. Fully Latent Structural Equation Model



for this (1.3 and 1.2 for parcels 1 and 2, respectively); the distribution of parenting constructs did not show any skewness problems. Thus, a square root ($1/x$) transformation was computed to normalize the data for the RSB parcels (.616 and .209 for parcels 1 and 2, respectively after transformation were conducted). In addition, the regression coefficient for the communication construct in predicting RSB was notably low in comparison with the support and monitoring constructs. An additional consideration of item frequencies and face validity of each of the parenting items provided some evidence of conceptual overlap between the parental support and communication constructs; in addition, item frequencies of the communication construct also showed some inconsistencies in the answers provided by the participants; thus, a decision was made to eliminate communication from the model and to re-test it. The SEM model with only monitoring and support latent constructs provided excellent fit to the data for the total sample ($\chi^2 = 101.84$, $\chi^2/df = 1.455$, CFI = .998, RMSEA = .015); in addition, both

monitoring ($\beta = -.109, p = .008$) and support ($\beta = -.191, p = .000$) significantly predicted risky sexual behaviors. In a next step, multi-group SEM analyses by immigration status and by acculturation status were tested. However, the model was not able to converge to a solution based on a single data file and a grouping variable. Thus, to further test this model, separate data files were created for first and second generation groups and for low and high acculturation status groups and fitted to the model. Once again, fit problems were found when testing the model for each sample; parcels were generally unstable in that the parcel loadings were acceptable in one group and not acceptable in the other, even though model fit remained very good across groups (CFI = .959 to .970 and RMSEA = .035 to .056). However, none of the parenting constructs significantly predicted risky sexual behaviors when conducting these analyses separately by each of the four groups. In a final effort to try to find a solution to these issues, an alternative model including monitoring and support as latent variables with two parcels and a risky sexual behavior manifest variable was also tested; unfortunately, the same problems related to estimation and solutions were found, much like in the previous analyses based on a fully latent construct model. In conclusion, due to the described problems in SEM models, most likely because of measurement limitations—three out the four measures, namely, monitoring, communication, and risky sexual behaviors were based on a small number of dichotomized items—a decision was made to test the third hypothesis using a simple regression approach in SPSS. Two sets of hierarchical regressions were computed to test the links between T1 parenting constructs and T2 risky sexual behaviors by immigration status and by acculturation status (two sets of analyses). Similar to the approach used to test predictions in hypothesis 2, demographic variables were entered as

controls in a first model step; all three T1 parenting constructs were entered in the second step, while immigration status or acculturation status, respectively, were entered in the third model step, followed by interaction terms for each parenting construct by immigration status by or acculturation status in the final model step. In order to avoid potential problems with the risky sexual behavior index, the transformed index ($1/x$) was used for these analyses. The results of the regression analyses are presented in Table 8 (See Appendix D for complete results for each variable at step of entry in the models). Demographic variables explained a modest 3% of the variance in both sets of analysis. Parenting constructs explained only an additional 1% of the variance when entered in the model, though only support was statistically significant ($\beta = .459, p < 0.01$). Immigration status did not explain any additional variance when entered in the model while parenting X immigration status interaction terms explained an additional 1% of variance. In addition, neither acculturation status nor parenting constructs X acculturation status interaction terms did not explained any additional variance when entered in the model. However, in the first set of analyses, a main effect was found for immigration status and a statistically significant moderation effect was found for the immigration status by support interaction term. Following Baron and Kenny's (1986) guidelines and using Cohen and Cohen's (1983) z test formula to examine for significant differences in regression coefficients using the unstandardized coefficients and standard error terms, the link between T1 support and T2 risky sexual behaviors was tested to find out whether it differed by immigration group ($\beta = -.054, SE = .082$ for first generation immigrant youth; $\beta = -.095, SE = .034$ for second generation immigrant youth). Findings provided evidence of no significant differences in the regression coefficients from the two groups ($z = 1.39,$

$p < 1.96$). In the second analysis, support was not statistically significant; in addition, no main or interaction effects were found involving acculturation status, again perhaps due to multicollinearity problems.

Table 8. Regression Analyses Predicting T2 Risky Sexual Behaviors

Analysis	Steps	T2 Risky Sexual Behaviors				
		b	SE	β	p	ΔR^2
1	Demographic Variables					.03
	Monitoring	-.013	.052	-.033	.728	.01
	Support	.442	.158	.459	.005	
	Communication	-.052	.071	-.105	.458	
	Immigration Status	1.27	.365	-.796	.001	.001
	Monitoring X Imm Status	-.004	.028	-.020	.882	.011
	Support X Imm Status	-.288	.084	-.963	.001	
	Communication X Imm Status	.029	.038	.114	.449	
2	Demographic Variables					.03
	Monitoring	-.011	.019	-.029	.544	.01
	Support	-.083	.134	-.086	.537	
	Communication	-.023	.026	-.047	.369	
	Acculturation status	.097	.873	.074	.912	.004
	Monitoring X Acculturation Status	-.017	.026	-.042	.511	.002
	Support X Acculturation Status	-.009	.195	-.032	.962	
	Communication X Acculturation Status	.038	.034	.082	.258	

Notes: the numbers presented in the table are from the final model step.

CHAPTER 4: DISCUSSION

Despite recent statistics which show that 1 in 5 children in the United States are born to immigrants, where Hispanic children represent the largest child minority group in the nation (U.S. Census, 2004), the developmental and behavioral characteristics of this particular immigrant population continue to be overlooked. The current study aimed to enhance and broaden the scarce literature available on the understanding of parenting and risky sexual behaviors among Hispanic immigrant youth, with a particular focus on potential differences or similarities in developmental processes across first and second generation immigrant groups.

Do Parenting Practices and Risky Sexual Behaviors Differ Across Generations?

For the first hypothesis on mean level differences in parenting across generations, contrary to expectations, findings provided evidence of no differences in parenting practices, namely, monitoring, support, and communication, across first and second generation Hispanic immigrant youth. The observed similarity in levels of parenting across generations provides some evidence that core family values among Hispanic families and youth do not appear to change, and thus remain largely stable over time across generations. This finding is consistent with some previous work by Varela and colleagues (2004) who examined cultural differences and social context in parenting styles on a sample of Mexican, Mexican-American, and Caucasian Non-Hispanic families (N = 300). The results of the study showed that no differences in authoritative parenting style were found between Mexican, Mexican-American, and Caucasian families. It also is consistent with previous research on immigrant youth and families

which suggest that socialization efforts are not necessarily affected by the immigration process in a way that will result in different socialization patterns across generations of children (e.g., Kwak, 2003).

Similar to the previous issue, and contrary to predictions, levels of risky sexual behaviors did not differ between first and second generation Hispanic immigrant youth. This finding is not consistent with previous research which documents that first generation immigrant adolescents engage in lower levels of risky sexual behaviors than their second generation counterparts (e.g., Ebin et al., 2001; Jeltova et al., 2005; Villaruel et al., 2002). In addition to a possible idiosyncratic sample characteristic, another potential explanation for this finding may be related to the particular characteristics of the Hispanic family which has been described to exert a high emphasis on unity, respect and obligations toward elders, obedience, and more restrictive values in terms of premarital sexual exploration (Christopher et al., 1993; Pérez & Padilla, 2000; Raffaelli & Ontai, 2001; Vélez-Pastrana et al., 2005). Thus, assuming that these values are present in both groups of immigrant families, this may prevent both first and second generation Hispanic youth from engaging in risky sexual behaviors. In fact, previous research has pointed out that Hispanic immigrant youth engage in generally higher levels of health risking behaviors than any other ethnic group. These behaviors include alcohol consumption, driving while drinking, smoking cigarettes, and marihuana use (Brindis et al., 1995; Frank & Lester, 2001); however, the empirical evidence on risky sexual behaviors in Hispanic youth is less consistent in the literature, where some studies provide evidence of higher levels, while others provide evidence to the contrary.

For example, whereas official data based on the Youth Risk Behavior Surveillance System report that the prevalence of having had sexual intercourse before age 13, not using condoms, and having had sexual intercourse with ≥ 4 partners is consistently higher among Hispanic youth in comparison to Caucasian adolescents and other youth from other ethnic groups (CDC, 2005), some studies have documented that Hispanic immigrant youth engage in lower levels of sexual intercourse at an early age (Frank & Lester, 2001) and that they report lower rates of sexual activity than youth from other ethnic groups (Beal et al., 2001). It is important to note that in the current study, a relatively small number youth reported being sexually active or having engaged in risky sexual behaviors in both first and second generation groups. Again, this finding is consistent with some empirical evidence based on individual investigations of the topic, but inconsistent with the national statistics.

Another potential explanation may relate to the broadly established link between parenting and sexual behaviors in youth, where positive parenting practices (e.g., high levels of monitoring, closeness, or support) have been found to considerably delay sexual intercourse and lower sexual risk taking behaviors among youth (Hovell et al., 1994; Luster & Small, 1994; Miller, 2002; O'Connor, 1998; Rose et al., 2005). In addition, the relationship between positive parenting and lower levels of risky sexual behaviors has been well established across different ethnic groups (Kotchick et al., 1999; Meschke et al., 2002). For example, Ream and Savin-Williams (2005) has suggested that the lack of change in parenting (e.g., support, communication) between Waves I and II in the Add Health data set may have positively impacted youth in the sense that it prevented them from engaging in risky sexual activities at Wave II.

Finally, the current findings may also be related to inconsistencies in the types of statistical tests used to test for potential similarities or differences in levels of risky sexual behaviors. For example, conclusions have been drawn related to similarities or differences in levels of risky sexual behaviors by immigrant status with no rigorous statistical tests (Jeltova et al., 2005; Villaruel et al., 2002).

Do Immigration Status and/or Acculturation Status Moderate Changes in Parenting Processes over Time?

A salient finding from this study is that neither immigration status nor acculturation status showed a significant moderation effect on parenting processes over time. These results suggest that even though differences in levels of cultural assimilation of and adaptation to the host culture may be evident in first and second generation youth and families as documented by previous literature (e.g., Pérez & Padilla, 2000; Rueschenberg & Buriel, 1989), this appears to not significantly affect parenting behaviors over time in either group.

It is important to clarify that some empirical evidence supports differences in parenting related to immigration status or acculturation status of Hispanic immigrant parents (e.g., Buriel, 1993; Romero et al., 2000; Zapata & Jaramillo, 1981); these differences have been documented to be associated with language acquisition patterns and ethnic identity among immigrant parents. For example, some evidence shows that less acculturated parents used more punitive discipline than more acculturated parents and report emphasizing more traditional values from the culture of origin in their socialization efforts, whereas more acculturated parents report using socialization patterns that reflect more closely the values of the host culture (Calzada & Eyberg, 2002;

Romero et al., 2000). However, these differences have not been documented to be associated with risky sexual behaviors among Hispanic immigrant youth.

Do Immigration Status and/or Acculturation Status Moderate the Link Between
T1 Parenting and T2 Risky Sexual Behaviors?

For the third hypothesis on the links between T1 parenting and T2 risky sexual behaviors, the results showed that only support significantly predicted risky sexual behaviors. This finding reinforces the extant literature on the importance of parental support among Hispanic families in preventing risky sexual behaviors in youth (Christopher et al., 1993; Meschke et al., 2002; Rodgers, 1999; Vélez-Pastrana et al., 2005). The lack of association between both T1 monitoring and communication and T2 risky sexual behaviors may be due to the lack of sound measurement instruments to test those constructs as both included a limited number of dichotomized items. Furthermore, the finding of no associations between communication and risky sexual behaviors is consistent with some previous studies (Karofsky, Zeng, & Kosorok, 2001; Murry-McBride, 1996; Rodgers, 1999; Stanton et al., 2000). In the current study, this issue may be also due to the fact that the items measured general communication between parents and youth and not specific to sexual behaviors (Vélez-Pastrana et al., 2005).

Though some evidence supports the idea of immigration status or acculturation status effects on immigrant Hispanic sexual behaviors, there is not a clear agreement in the literature as to how these constructs are related to risky sexual behaviors among Hispanic immigrant youth. Flores et al. (2002) examined the influence of acculturation status in a sample of Mexican, Central American, and Mexican-American female adolescents' attitudes and social norms regarding having sex. Findings showed that

acculturation status was unrelated to any of the attitudes or social norms related to sexual behaviors. On the other hand, Valentine and Mosley (2000) found that immigration status and acculturation status affected adolescents' sexual behaviors and attitudes among Mexican American youth. In addition, whereas some studies report that less acculturated Hispanic youth are less sexually active (Driscoll et al., 2001; Mujdamar, 2003), other studies provide evidence that first generation Hispanic youth are less likely to use condoms (O'Donnelle, O'Donnelle, & Stueve, 2001).

In the current study, immigration was found to have a significant main effect on T2 risky sexual behaviors; however, adding the immigration status variable to the model did not add a statistically significant amount of variance. In addition, immigration status was found to moderate the link between T1 support and T2 risky sexual behaviors; however, follow-up analyses provided evidence that T1 support was predictive of T2 risky sexual behaviors in an invariant manner across immigrant groups. Thus, consistent with previous research, immigration status does not appear to have a unique or independent contribution on developmental outcomes (Upchurch et al., 2001; Villaruel et al., 2002).

Are Immigration Status and Acculturation Status Similar or Different Constructs?

The current study aimed to more closely examine potential moderation effects by immigration status and acculturation status on the relationships between the study main constructs. Two important issues were raised by the study results. On one hand, the correlation and multicollinearity tests showed that both variables were highly collinear, thus, not permitting a conclusion about potentially unique effects of each construct on the relationships tested. When entered in the regression models both immigration status and

acculturation status “behaved” in a similar way, suggesting a high degree of similarity between them; however, this also requires a cautious interpretation in light of the fact that acculturation status has been documented to include multiple dimensions (Marín et al., 1987; Szapocznik & Kurtines, 1993; Zea et al., 2003) and that immigration status has been included by some researchers as part of the acculturation status measure (Ford & Norris, 1993; Upchurch et al., 2001; Villaruel et al., 2002). Thus, it is unclear from the study results whether both constructs reflect a similar process or whether each construct, though related, may explain a different dimension of the adaptation process to the host culture.

Perhaps the most important finding from this study is the fact that parenting processes and their relationships with risky sexual behaviors in Hispanic immigrant youth did not differ by generational status. This represents an important insight supported by a growing body of literature that argues for similarities in developmental processes across ethnic and racial groups (Dmitrieva et al., 2004; Kagitçibasi, 2005; Vazsonyi, 2004; cf., Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004) or across different immigrant groups (Vazsonyi, Trejos-Castillo, & Huang, in press). In other words, even though parenting behaviors among Hispanic youth and families may be affected by the stress and challenges posed by the assimilation and adaptation processes to a new host culture, the core characteristics of parenting behaviors remain unchanged in different generational groups over time and in how they affect risky sexual behaviors. Thus, the role of parents as socializing agents and the effects of positive parenting in children developmental outcomes among Hispanics appears to be largely similar across generations, and perhaps

to other racial groups (Calzada & Eyberg, 2001; Cardona et al., 2000), certainly only to the extent tested in the current study.

This finding opposes the common view that has emphasized obstacles which immigrant youth and families face when trying to adapt to and assimilate into a new host culture (e.g., learning a new language, adapting to a different school system, having limited financial resources, experiencing rejection and hostility) and the deleterious effects that such processes may have on child and adolescent outcomes (Santiesteban et al., 2002). In addition, the immigration processes in isolation cannot fully explain generational differences in parenting and adolescent outcomes among immigrant populations, since there are many other untested intervening factors, such as individual characteristics, the peer context, or neighborhood effects (Aneshensel, Becerra, Fielder, & Schuler, 1990; Flores, Eyre, & Millstein, 1998; Small & Luster, 1994).

Limitations of the Current Study

Although the present study provides significant insights, limitations are also important to be acknowledged. First, self-reported data may not be the best representation of actual behaviors, especially with topics that are sensitive, such as risky sexual behaviors. At the same time, there are few alternatives to assessing risky sexual behaviors, unless physiological tests are used for sexually transmitted diseases, for example vaginal swab samples or urinary samples (Mazzaferro, Murray, Ness, Bass, Tyus et al., in press). However, this would omit other important considerations of what constitutes risky sexual behavior, such as number of sexual partners or age of first sexual intercourse.

As discussed by Stattin and Kerr (2000), monitoring measurements may be more a reflection of parental knowledge because they do not clearly identify the parental active surveillance and control on adolescents' behaviors. In addition, even though the Add Health sample was collected using a computer assisted self-interview, it is still possible that adolescents may have not reported sexual activity due to social desirability bias or the lack of understanding about the confidential nature of the data collection.

Perhaps the most important and significant limitation of this study relates to the quality of the measures used. Two of the three parenting process constructs, namely, monitoring and communication, and the dependent variable, namely risky sexual behaviors, were assessed by a rather modest numbers of dichotomous items that formed indices. This may have contributed to an inability to test the SEM model and to conduct multi-group analyses by immigration status and acculturation status which may have provided additional insights due to improved measurement properties and improved relational modeling ability. Thus, the missing psychometric properties of the measures previously discussed did not allowed for a full test of the third hypothesis using latent variables.

Another limitation is the fact that the sample of first generation was smaller (N = 391) in comparison to the second generation immigrant youth (N = 1,577); however, power considerations were not an issue in the analyses. In addition, even though a strength of the study is the inclusion of participants from different Hispanic countries, most youth identified themselves as having a Mexican or Cuban origin. Thus, it is important to acknowledge that previous studies have documented differences in different Hispanic ethnic groups (Coastworth et al., 2005; Cuellar et al., 1997), and therefore,

findings from this study may not generalize to all Hispanics. At the same time, sample limitations did not allow analyses by the different Hispanic groups, though it is also not clear that this would in any way provide any new or nuanced insights related to the main study questions.

Finally, one of the main study aims was related to the overreliance on cross-sectional data to test the relationships between parenting processes and risky sexual behaviors. Even though the current study was based on a longitudinal sample, only two points in time were examined (and available during the adolescent years of the study participants of the Add Health data set); thus, it will be important to further examine the current findings using samples followed over multiple and a larger number of years.

Future Directions

An important goal of this study was to add to the extant literature on parenting practices in Hispanic youth by examining multiple parenting domains. Though the study was able to accomplish this goal in part by examining three parenting process, namely, monitoring, support, and communication, it is important to acknowledge that future studies need to consider additional ones (e.g., closeness or conflict) that are cited in the current parenting literature (Galambos, Barker, & Almeida, 2003). In addition, measurement problems experienced with parenting constructs (e.g., limited number of items, dichotomized variables) can be overcome by including more sound parenting measures (e.g., multiple items, continuous variables and scales).

As suggested by previous studies, it is possible that engagement in risky sexual behaviors among the Hispanic youth population may be particularly related to behaviors such as condom use (O'Donnelle et al., 2001; Sneed et al., 2001) or age of first sexual

intercourse (Sabogal et al., 1995; Upchurch et al., 1998). Future research efforts should also test individual indicators of risky sexual behaviors (e.g., condom use, multiple sexual partners, age of first sexual intercourse, etc.).

It is also possible that adolescents may have not perceived changes in parenting processes over time even though parents may have “intended” to socialize their children in a different way in response to the assimilation and adaptation process parents themselves experience as suggested by previous studies (Romero, Cuellar, & Roberts, 2000). Future research should collect data on parenting processes and acculturation status from the parents’ point of view in addition to the adolescent one in order to more closely examine potential immigration and acculturation status effects on parenting processes across generations as well as potential differences in socialization effort effects on risky sexual behaviors. Thus, it is critical that future research evaluates the potential unique contribution of immigration status and acculturation status.

Finally, previous research has largely discussed the importance of examining peer influences during adolescence and its relationship to the development of problem behaviors (Lansford, Criss, Pettit, Dodge, & Bates; 2003; Gadner & Steinber, 2005; Thorton, Gibbons, & Gerrard, 2002). Among immigrant youth, researchers have also pointed an existing link between levels of acculturation and peer oriented behaviors which may in turn affect the parent-adolescent relationship placing immigrant youth at a greater risk for engaging in risky behaviors (Rueschenberg & Buriel, 1989; Wall et al., 1993). In addition, as discussed by Small and Luster (1994) there are multiple predictors that may influence the development of a particular problem behavior such as risky sexual behaviors among youth (e.g., adolescent’s age, gender, and country of origin; maternal

education and nationality; neighborhood quality, peer pressure, and parenting). Thus, future research efforts should examine other predictors of risky sexual behaviors among Hispanic immigrant adolescents.

Final Remarks

Working with immigrant youth and families requires a further appreciation and understanding of how the process of immigration and adaptation to the host culture may relate to parenting efforts and child outcomes across generations. More importantly, professionals working with immigrant families and youth need to be sensitive to the particular needs of those populations without overemphasizing the inherent challenges presented by the adaptation process to a new culture.

Thus, the insights provided by this study may have important implications for professionals, educators, and policy makers, so that efforts will focus on strengthening positive parenting skills to prevent and reduce risky sexual behaviors among Hispanic immigrant youth, just as among other ethnic and racial groups. This study may also inform clinicians and therapy practitioners about the appropriateness of current intervention efforts used with immigrant Hispanic youth and families. Finally, findings from this study lay groundwork for additional research on immigrant youth and on similar processes in other immigrant populations.

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APPENDICES

APPENDIX A: RISKY SEXUAL BEHAVIORS ITEMS

Item	Responses
Age of First Sexual Intercourse: "In what month and year did you have sexual intercourse for the very first time"	1= 1976 - 1977 2= 1978 - 1979 3= 1980 - 1981 4= 1982 - 1983 5= 1984 6= 1985 7= 1986 8= 1987 9= 1988 10= 1989 11= 1990 12= 1991 13= 1992 14= 1993 15= 1994 16= 1995 96= Refused 97= Legitimate Skip 98= Don't know
Frequency of Contraceptive Use: "Did you or your partner use any method of birth control when you had sexual intercourse most recently?"	0= No 1= Yes 6= Refused 7= Legitimate skip 8= Don't know 9= Not applicable
Type of Contraceptive Use: "What method of birth control did you or your partner use?"	1= Condoms (rubbers) 2= Withdrawal 3= Rhythm (safe time) 4= Birth Control Pills 5= Vaginal Sponge 6= Foam, Jelly, Creme, Suppositories 7= Diaphragm, with or without jelly 8= IUD (intrauterine device) 9= Norplant 10= Ring 11= Depo Provera 12= Contraceptive film 13= Some other method 96= Refused 97= Legitimate Skip 98= Don't know 99= Not applicable

APPENDIX A: RISKY SEXUAL BEHAVIORS ITEMS—Cont.

Item	Responses
History of Sexual Transmitted Diseases (SDTs): “Have you ever been told by a doctor or a nurse that you had:	0= No 1= Yes
Chlamydia	6= Refused
Syphilis	7= Legitimate skip
Gonorrhea	8= Don’t know
HIV or AIDS	9= Not applicable
Genital Herpes	
Genital Warts	
Trichomoniasis	
Hepatitis B	
Bacterial Vaginosis	
Non-Gonococcal Vaginitis	
Sexual Involvement with Multiple Partners: “We had sexual intercourse”	0= No 1= Yes
Romantic Relationship Partner No.1	6= Refused
Romantic Relationship Partner No.2	7= Legitimate skip
Romantic Relationship Partner No.3	8= Don’t know
Non-Relationship/ Romantic Partner No.1	9= Not applicable
Non-Relationship/ Romantic Partner No.2	
Non-Relationship/ Romantic Partner No.3	
Non-Relationship/ Non-Romantic Partners No.1	
Non-Relationship/ Non-Romantic Partners No.2	
Non-Relationship/ Non-Romantic Partners No.3	

APPENDIX B: PARENTING PROCESSES SCALES

Item	Responses
Parental Monitoring ^a	<p>“Do your parents let you make your own decisions about:”</p> <ol style="list-style-type: none"> 1. The time you must be home on weekend nights 2. The people you hang out with 3. What you wear 4. How much television you watch 5. Which television programs you watch 6. What time you go to bed on week nights 7. What you eat
Parental Support ^b	<ol style="list-style-type: none"> 1. How close do you feel to your mother ^{b1} 2. How much do you think your mother cares about you ^{b1} 3. You are satisfied with the way your mother and you communicate with each other ^{b2} 4. Most of the time, your mother is warm and loving to you ^{b2} 5. Overall, you are satisfied with your relationship with your mother ^{b2}
Parental Communication ^c	<ol style="list-style-type: none"> 1. Talk about someone you are dating, or a party you went to 2. Had a talk about a personal problem you were having 3. Talked about your school work or grades 4. Talked about other things you’re doing in school

Note. ^a Possible Responses: 0= No, 1= Yes, 6= Refused, 7= Legitimate skip, 8= Don’t know, 9= Not applicable; ^{b1} Possible Responses: 1= not at all, 2= very little, 3=somewhat, 4=quite a bit, 5=very much; ^{b2} Possible Responses: 1= strongly agree, 2= agree, 3= neither agree nor disagree, 4= disagree, 5= strongly disagree ; ^c Possible Responses: 0= No, 1= Yes, 6= Refused, 7= Legitimate skip, 8= Don’t know, 9= Not applicable.

APPENDIX C: ACCULTURATION STATUS IMMIGRATION STATUS ITEMS

Item	Responses
Acculturation status ^a	1. What language do you use most with your family and close relatives?
Immigration status ^b	1. Were you born in the United States? ^{b1} 2. In what country were you born? ^{b2}

Note. ^a Possible Responses: 1= English , 2= Spanish, 3= Another European language, 4= An Asian language, 5= A non-European, non-Asian language, 6= Half English and half another language, 7= Other, 8= Don't know; ^{b1} Possible Responses: 0= No, 1= Yes, 8= Don't know; ^{b2} Possible Responses: a detailed list of countries was provided. (see Code Book Wave I, Section 1: Overview and Demographics, <http://www.cpc.unc.edu/addhealth>).

APPENDIX D: REGRESSION ANALYSES PREDICTING T2 RISKY SEXUAL BEHAVIORS

		T2 Risky Sexual Behaviors			
Analysis	Steps	b	SE	β	<i>p</i>
	Demographic Variables				
1	Monitoring	-.022	.012	-.056	.069
	Support	-.093	.031	-.096	.003
	Communication	.001	.016	.003	.927
	Immigration Status	.045	.050	.028	.368
	Monitoring X Imm Status	-.004	.028	-.020	.882
	Support X Imm Status	-.288	.084	-.963	.001
	Communication X Imm Status	.029	.038	.114	.449
	Demographic Variables				
2	Monitoring	-.022	.012	-.056	.069
	Support	-.093	.031	-.096	.003
	Communication	.001	.016	.003	.927
	Acculturation status	.089	.043	.069	.038
	Monitoring X Acculturation Status	-.017	.026	-.042	.511
	Support X Acculturation Status	-.009	.195	-.032	.962
	Communication X Acculturation Status	.038	.034	.082	.258

Notes: the numbers presented in the table are from the step they were entered.