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PARENT-CHILD COMMUNICATION ABOUT SUBSTANCE USE:
EXPERIENCES OF LATINO EMERGING ADULTS

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of
Philosophy at Virginia Commonwealth University.

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Table of Contents

	Page
Acknowledgements.....	ii
List of Tables	vii
List of Figures	ix
Abstract.....	x
Introduction.....	1
Review of the Literature	4
Emerging Adulthood: Development from the Late Teens through the Twenties	4
Emerging Adulthood as a Risk Period	11
Substance Use among Emerging Adults	11
Parents as a Protective Factor for Substance Use	15
Parenting Influences on the Substance Use of Emerging Adults	15
Parenting Influences on Substance Use in Latino Youth	16
Culturally Specific Risk and Protection for Latinos	21
Socialization Model of Adolescent Drug Use –	
Continued Influence into Emerging Adulthood	23
Parent-Child Communication about Alcohol, Tobacco, and Other Drug Use	24
Potential Cultural Factors that may Influence Parental Messages	35
Purpose and Proposal.....	38
Study 1: Method.....	39

Participants	39
Procedures	39
Study 1: Results and Discussion	42
Scale Development.....	48
Study 2: Method.....	54
Participants	54
Procedures	55
Measures.....	56
Study 2: Results and Discussion	63
Principal Components Analysis	63
Relation of Parental Messages to Demographic Variables	73
Reported Substance Use and Relations among Parental Messages about Substance Use ...	78
Regression analyses with cigarette use.....	79
Regression analyses with alcohol use.....	88
Regression analyses with marijuana use	98
Regression analyses with drugs other than tobacco, alcohol, or marijuana	102
Regression analyses predicting problems associated with drug use	103
Negative Consequences of Use	110
Religious Beliefs	111
Rewards and Punishments.....	112
Focus on Yourself	113
Respecting Parents	114
Never Addressed	114

Summary of Parental Message Findings	115
General Discussion	116
Study Limitations and Strengths	120
Directions for Future Research.....	122
List of References	124
Appendices.....	130
1 Consent Forms.....	130
2 Measures.....	136
Vita.....	149

List of Tables

	Page
Table 1. Parental Messages Regarding Substance Use that Emerged from Focus Group Analysis	45
Table 2. Parental Messages Measure: Item Number and Content	49
Table 3. Summary of Study Participant Demographics	57
Table 4. Rotated Component Matrix – Varimax Rotation	66
Table 5. Component-Based Scale Descriptions and Corresponding Parental Messages Items with the Highest Loadings.....	69
Table 6. Reliability Analysis of the 24-Item Parental Messages Measure	71
Table 7. Pearson’s Correlation Coefficients for 6 Subscales and the Total Score of the 24-Item Parental Messages Measure	72
Table 8. Correlation among Parental Message Subscales and Hypothesized Influencers Parental Messages	74
Table 9. Differences in Parental Messages by Participant Gender	76
Table 10. Differences in Parental Messages by Mother’s Country of Origin	77
Table 11. Differences in Parental Messages by Father’s Country of Origin	77
Table 12. Logistic Regression Analysis Examining Lifetime Cigarette Use	81
Table 13. Hierarchical Regression Analysis Predicting Age of Cigarette Use Initiation.....	82
Table 14. Hierarchical Regression Analysis Predicting Past Year Cigarette Use	86
Table 15. Hierarchical Regression Analysis Predicting Past Month Cigarette Use	87
Table 16. Logistic Regression Analysis Examining Lifetime Alcohol Use	89
Table 17. Hierarchical Regression Analysis Predicting Age of Alcohol Use Initiation.....	90
Table 18. Hierarchical Regression Analysis Predicting Past Year Alcohol Use	93
Table 19. Hierarchical Regression Analysis Predicting Past Month Alcohol Use	94

Table 20. Hierarchical Regression Analysis Predicting Average Alcoholic Drinks per Week.....	96
Table 21. Hierarchical Regression Analysis Predicting Recent Binge Drinking	97
Table 22. Logistic Regression Analysis Examining Lifetime Marijuana Use.....	99
Table 23. Hierarchical Regression Analysis Predicting Age of Marijuana Use Initiation	100
Table 24. Hierarchical Regression Analysis Predicting Past Year Marijuana Use	104
Table 25. Hierarchical Regression Analysis Predicting Past Month Marijuana Use	105
Table 26. Hierarchical Regression Analysis Predicting Lifetime Number of Illicit Drugs Used.....	106
Table 27. Hierarchical Regression Analysis Predicting DAST Total Score	107
Table 28. Summary of Associations between Parental Messages Regarding Substance Use and Substance Use Outcomes.....	108

List of Figures

	Page
Figure 1. Mean levels of parental messages on the Rewards and Punishments Subscale by age of cigarette use initiation.....	83
Figure 2. Mean levels of parental messages on the Religious Beliefs Subscale by age of cigarette use initiation.....	83
Figure 3. Mean levels of parental messages on the Negative Consequences of Use Subscale by age of cigarette use initiation.....	84
Figure 4. Mean levels of parental messages on the Focus on Yourself Subscale by age of cigarette use initiation.....	84
Figure 5. Mean levels of parental messages on the Negative Consequences of Use Subscale by age of alcohol use initiation.....	91
Figure 6. Mean levels of parental messages on the Respecting Parents Subscale by age of alcohol use initiation.....	91
Figure 7. Mean levels of parental messages on the Rewards and Punishments Subscale by age of marijuana use initiation.....	101
Figure 8. Mean levels of parental messages on the Negative Consequences of Use Subscale by age of marijuana use initiation.....	101

Abstract

PARENT-CHILD COMMUNICATION ABOUT SUBSTANCE USE: EXPERIENCES OF LATINO EMERGING ADULTS

By Kathryn Reid-Quiñones, M.S.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2011

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The purpose of the current studies was to identify messages that Latino parents communicate to their offspring about the use of legal and illegal drugs and to determine associations between parental messages and substance use outcomes. Previous research has identified parent-child communication as protective against tobacco, alcohol, and other drug use. However, most of these studies have failed to examine the specific messages communicated and those that have focused almost exclusively on non-Hispanic Caucasians. Study 1 identified messages that Latino parents communicate to their offspring regarding legal and illegal drugs through two focus groups with Latino college students ($N = 7$; ages 18-25). Many parental messages expressed in the focus groups were consistent with previous research. However, two distinct messages emerged from the focus groups: abstaining from substance use for religious reasons and because it would be disrespectful to parents. Results of qualitative analyses were combined with previous research identifying parental messages about substance use to create a 75-item questionnaire assessing the degree to which parents

conveyed identified message types. Following the first study, an additional sample of Latino emerging adults ($N = 222$) was recruited from Virginia Commonwealth University, other Virginia colleges, and organizations with primarily Latino members in order to examine the psychometric properties of the newly developed questionnaire and to assess the associations between parental messages and substance use outcomes in Study 2. Principal Components Analysis (PCA) produced six components: Rewards & Punishments, Religious Beliefs, Never Addressed, Respecting Parents, Focus on Yourself, Negative Consequences of Use. These resulting components then were examined in association with substance use outcomes while also controlling for participants' age, sex, religious commitment, familism, and acculturation. Results suggest that parental messages about substance use are differentially associated with substance use outcomes, with some messages appearing to be protective and other messages associated with increased risk. Further, select parental messages were strongly associated with the substance use patterns of Latino emerging adults while some messages were not related or marginally related to substance use. Specifically, messages focused on the negative consequences of use were most protective, while messages stressing rewards and punishments and respecting parents were associated with increased risk. These data indicate that attention to the specific messages parents communicate to their offspring regarding substance use, and not merely the frequency or openness of communication, is important. Implications, next steps for future research, and limitations of the current study are discussed.

Parent-Child Communication about Substance Use: Experiences of Latino Emerging Adults

It is a common misperception that rates of substance use are higher among minority populations. In fact, nationally representative studies consistently have indicated that while ethnic and racial differences do exist in rates of licit and illicit drug use, Latinos/Hispanics¹ display lower lifetime and recent rates of alcohol, tobacco, marijuana, and hard drug use than do Whites and African Americans (SAMHSA, 2007). For instance, results of the 2007 National Survey on Drug Use and Health (NSDUH; SAMHSA, 2007) revealed that 49% and 15% of Latinos aged 18 to 25 reported lifetime and past month use of illicit drugs, respectively, whereas the rates for Whites of the same age cohort were 62% and 22%. For lifetime and past month use of marijuana, the rates were 56% and 18%, respectively, for Whites and 40% and 12% for Latinos. This trend of lower rates of substance use among Latinos aged 18 to 25 persists when examining alcohol and tobacco use. However, prior reports from SAMHSA suggest that the consequences of substance use may be greater for Latinos relative to Caucasians. Results from the 2004-2005 NSDUH examining the percentages of past year alcohol dependence or abuse among individuals aged 12 or older indicated that 12.1 % of Latino males experienced alcohol dependence or abuse in the past year versus 10.6% of Whites. This same survey revealed that, as a whole, 18 to 25 year olds were at the highest risk of having a past year alcohol dependence or abuse designation.

The developmental period of emerging adulthood spans the ages of 18 to 25 and is a time of increased risk taking (Arnett, 2000). Latinos currently are the fastest growing minority group in the United States with a large proportion (40%) of its population under the age of 21 (Ramirez & de la Cruz, 2002), making understanding more about how to prevent

¹ Based on the standard usage in the field, the generic ethnic terms “Hispanic” and “Latino” are used interchangeably in this paper. Further, non-Hispanic Whites and African Americans will simply be referred to as “White” or “African American.”

substance use in the group particularly relevant as they will soon comprise a substantial segment of adults aged 18-25.

While minority adults report lower prevalence rates of substance use and substance use disorders, they are at higher risk for drug related morbidity and mortality (Stinson, Grant, & Dufour, 2001). For example, Hispanic males in the United States have nearly twice the mortality rates for alcohol-related cirrhosis of the liver than their White counterparts—a disproportionate rate when one considers their rates of alcohol use (Trujillo et al., 2006). Additionally, lung cancer and coronary heart disease related to smoking are two of the leading causes of death among Latinos (U.S. Department of Health and Human Services, 1998).

Studies consistently have indicated that rates of substance use among Latinos vary as a function of generational status and acculturation status (see Epstein, Botvin, & Diaz, 2001 for a review). Acculturation has been defined as the process of psychological and behavioral change individuals and groups undergo as a consequence of long-term contact with another culture (Berry & Sam, 1997). Researchers have found that culture is protective – that is, individuals who are mostly tied to their culture of origin generally have lower rates of substance use and abuse. This has been termed the “Hispanic Paradox.” The Hispanic Paradox suggests that immigrant and low-acculturated Hispanics in the United States possess certain culture-based protective factors which result in comparatively lower rates of morbidity and mortality than predicted by their risk factor profile on certain health indicators despite experiencing a profile of economic and health-related disadvantages (Alderete, Vega, Kolody, & Aguilar-Gaxiola, 2000). The acculturation process has been conceptualized as a stressor which can result in mental health distress for Latinos and other immigrants. This

assertion is supported by a 3 ½ year longitudinal study conducted by Warheit, Vega, Khoury, Gil, and Elfenbein (1996) that examined the cigarette, alcohol, and illicit drug use among an ethnically diverse sample of Hispanic, African American, and White adolescents in Miami, Florida. Their findings indicated that foreign-born Hispanics reported positive relationships between length of time in the country and substance use.

Prior research has indicated that parent-child communication is protective against alcohol, tobacco, and other drug use. Most of this research focuses on the frequency (e.g. Brody, Flor, Hollett-Wright, & McCoy, 1998; Jackson & Henriksen, 1997; Partnership for a Drug-Free America, 1999) or openness (Cohen, Richardson, & LaBree, 1994; Distefan, Gilpin, Choi, & Pierce, 1998; Kafka & London, 1991) of parent-child communication. However, little research has examined the actual messages that parents relay to their offspring regarding substance use (see Miller-Day, 2008; Miller-Day & Dodd, 2004; Suárez & Galera, 2004). Furthermore, with few exceptions (e.g., Suárez and Galera, 2004), the majority of this research has focused exclusively on non-Hispanic Caucasians. Suárez and Galera identified the parent-child conversations regarding legal and illegal drugs in a small sample ($N = 13$) of university students in Bogotá, Columbia. The results of their qualitative study indicated that Columbian parents emphasized the patriarchal culture context and traditional gender roles in their conversations about drugs. While some information regarding the process of parent-child communication regarding drugs with Latinos residing in the U.S. can be gleaned from these studies, further research is necessary to accurately identify the most frequent and most effective parental messages in reducing tobacco, alcohol, and other drug use among emerging adults.

A nationally representative sample of 82,918 students in the United States identified parents as the individuals most likely to have talked to their children about drugs (Kelly, Comello, & Hunn, 2002). Moreover, their study indicated that as perceived family sanctions increased, the offspring's drug involvement decreased. Extending these findings, a 2002 report by the Partnership for a Drug-Free America® (PDFA) revealed that while 32% of parents overall indicated that they believed that they have *little* influence on whether their offspring use marijuana or alcohol, these statistics were considerably higher for minorities. Latino parents had the lowest rate of confidence in their influence of their offspring's marijuana and alcohol use with 43% indicating that they believed that they had little influence. Together, these studies suggest that parents are likely a more potent influence on their offspring's drug use than they presume to be.

Review of the Literature

Emerging Adulthood: Development from the Late Teens through the Twenties

Emerging adulthood has been proposed as a distinct developmental stage that encompasses the late teens through the twenties, approximately ages 18 to 30, with a focus on individuals between the ages of 18 and 25. Jeffrey Arnett (2000, 2004) posited that emerging adulthood is neither adolescence nor young adulthood due to its theoretical and empirical distinctions from them both. He asserted that it is a separate period which is distinguished by five main features: the age of identity explorations, the age of instability, the age of self-focus, the age of feeling in-between, and the age of possibilities (Arnett, 2004).

Emerging adulthood is characterized by substantial demographic diversity and instability in contrast to other developmental life stages preceding and following this time period (Arnett, 2000; 2004). Adolescence, conversely, is a period with little demographic

variation: over 95% of American adolescents aged 12-17 live at home with one or more parents, over 98% are unmarried, fewer than 10% have had a child, and over 95% are enrolled in school (U.S. Bureau of the Census, 1997). Likewise, by the age of 30, new demographic positions have been established: about 75% of 30-year-olds have married, about 75% have become parents, and fewer than 10% are enrolled in school (U.S. Bureau of the Census, 1997). However, between the ages of 18 to 25, a person's demographic status is very difficult to predict on the basis of age alone (Arnett, 2000; 2004).

Arnett (2000, 2004) asserted that a key feature of emerging adulthood is identity explorations. He acknowledged that adolescence traditionally has been viewed as the developmental period in which identity formation transpires (see Erikson, 1950) but asserts that emerging adulthood is the period of life that offers the most opportunity for identity explorations, particularly in the areas of love, work, and worldviews. Arnett (2000; 2004) recognized that, in all three of these areas, the process of identity formation begins in adolescence but contends that it takes place mainly in emerging adulthood. Arnett's proposition is supported by research on identity formation during adolescence which has shown that identity achievement is rarely reached by the end of high school (Montemayor, Brown, & Adams, 1985; Waterman, 1982) and that identity development continues through the late teens and twenties (Valde, 1996; Whitbourne & Tesch, 1985).

Arnett (2000; 2004) discussed the trajectory of explorations in love from adolescence through emerging adulthood. Love explorations during adolescence are typically tentative and transient with dating primarily viewed as recreational (Roscoe, Dian, & Brooks, 1987), whereas explorations in emerging adulthood tend to involve a deeper level of intimacy and seriousness. Research on romantic relationships during the early 20's indicates that

relationships during emerging adulthood last longer than during adolescence, are more likely to include sexual intercourse, and may include cohabitation (Michael, Gagnon, Laumann, & Kolata, 1995).

Arnett (2000; 2004) highlighted work as an additional area where exploration begins during adolescence and continues into emerging adulthood. While the majority of high school students are employed (Barling & Kelloway, 1999), adolescents often view their jobs as a means to pay for their leisure activities, not as occupational preparation (Bachman & Schulenberg, 1993; Shanahan, Elder, Burchinal, & Conger, 1996; Steinberg & Cauffman, 1995). Emerging adults, on the other hand, tend to focus on acquiring jobs that can lead them to the career path which they desire for adulthood. In addition to serving as direct preparation for adult roles, the goals of identity exploration in the areas of love and work during emerging adulthood are also seen simply as part of gaining a broad range of life experiences before taking on enduring, and often limiting, adult responsibilities.

Regarding worldviews, Arnett (2000) cited the work of William Perry (1970, 1999) who described changes in worldviews as a central part of cognitive development during emerging adulthood. This change in worldviews is most often depicted as a process that occurs as the result of exposure to a variety of different worldviews via the course of a college education. It is asserted that during the college years, emerging adults examine and consider a variety of possible worldviews and that by the end of college they have typically committed to a different worldview from which they began and remain open to further modifications of it (Pascarella & Terenzini, 1991). While most research in the area of changes of worldview have focused on college students, Arnett's (1997) research indicated

that adults who do not attend college are as likely as college students to designate deciding on their own beliefs and values as an essential criterion for reaching adult status.

Another key feature of emerging adulthood is that it is the age of instability. Emerging adults make frequent changes in their lives, especially in the areas of education, work, and love, in response to revisions to their idea about the route that they will take from adolescence to adulthood. Arnett (2004) suggested that these revisions are natural consequences of explorations during emerging adulthood and asserts that exploration and instability go hand in hand. He maintained that emerging adults learn something about themselves with each revision and hopefully draw closer to clarifying the future they desire. Arnett (2005) claimed that the best illustration of the instability in emerging adulthood is how frequently they move from one residence to another—they have the highest rates of residential change of any age group (Rindfuss, 1991). These frequent moves are typically related to explorations in love, work, or education.

Arnett (2004) declared that emerging adulthood is the most self-focused time of life. This is a result of their relative freedom from daily obligations and commitments to others (versus adolescence and adulthood). Larson (1990) found that Americans 19-29 spend more of their leisure time alone than any other age group other than the elderly and they tend to spend more of their time in productive activities (e.g., school and work) alone than any other age group under 40. Arnett (2004) differentiated between being self-focused and being selfish or egocentric in that being self-focused means that they are freer than people in other life stages to make decisions independently, without obtaining the approval of others. He emphasized that there is nothing wrong about being self-focused during emerging adulthood and states that it is normal, healthy, and temporary. Such a self-focus allows emerging adults

to develop skills for daily living, gain a better understanding of who they are and what they want from life, and begin to build a foundation for their adult lives. Arnett (2004) contended that the goal of self-focus in emerging adulthood is self-sufficiency, learning to stand alone as a self-sufficient person. Furthermore, emerging adults do not expect to be self-focused forever, but rather view it as a necessary step in order to prepare themselves for the enduring commitments in love and work that adulthood entails.

As discussed above, emerging adulthood is characterized by exploration and instability, qualities which give it the feature of an in-between period. Emerging adults do not see themselves as adolescents, yet most of them also do not view themselves entirely as adults. Several studies conducted by Arnett (1994a, 1997, 1998) of Americans in their late teens and early twenties indicate a subjective sense for most that they have left adolescence but have not yet completely entered young adulthood. While heterogeneity in demographic factors characterizes emerging adulthood, it is not completion of these demographic transitions (i.e. finishing education, career attainment, marriage, and parenthood) that typifies the subjective sense of attaining adulthood. Rather, the characteristics that signify the attainment of adulthood are internal and individualistic qualities. According to a range of studies (Arnett, 1994a; 1997; 1998; 2001; 2003; Nelson, 2003), the top three criteria marking the transition to adulthood are: accepting responsibility for one's self, making independent decisions, and becoming financially independent. The qualities that emerging adults consider most important for becoming an adult are gradual and incremental, rather than all at once. Therefore, their feeling of becoming an adult is gradual, too. While demographic transitions are not viewed by emerging adults as necessary for attaining adulthood, parenthood in particular is frequently sufficient for marking a subjective sense of adult status

(Arnett, (1998). It has been suggested that this results from the restrictions on typical exploration that occur during emerging adulthood as a consequence of parenthood (Arnett, 2000).

Arnett (2004) defined emerging adulthood as the age of possibilities when hopes flourish due to the chance of individuals in this period to change their lives in profound ways. This is possible in that, at this point in development, little about a person's direction in life has been decided for certain and many different futures remain open. He asserted that high hopes and great expectations are common for emerging adults because few of their dreams have been tested by reality. Further, Arnett (2004) cited a study by Hornblower (1997) that revealed that nearly all (96%) of the 18-24 year olds that took part in a national survey were highly optimistic about their future as evidenced by their agreement with the statement "I am very sure that someday I will get where I want to be in life." Leaving their family of origin and not yet being committed to a new network of relationships and obligations is one feature of emerging adulthood that makes it the age of possibilities. This is particularly significant for those who have grown up in challenging environments and now have the greatest opportunity to transform their lives. Departure from these settings allows young people to transform their lives.

Arnett (2000; 2004) acknowledged that emerging adulthood is not a universal developmental period, but is observed only in cultures that allow the postponement of entry into adult roles and responsibilities well past the late teens. Accordingly, emerging adulthood is a relatively new developmental period in response to 20th century industrialization and is restricted to highly industrialized and postindustrial countries which encourage higher levels of education. The pursuit of higher education is frequently

synonymous with the delay of marriage and parenthood, allowing for an extended period of exploration. Arnett (2000; 2004) emphasized that even within industrialized countries there are variances which can result in a shortened period of emerging adulthood or no emerging adulthood at all. For instance, he cited the Mormons in the U.S.; cultural pressures on American Mormons result in their median ages of marriage and first childbirth being much lower than the overall American population (Heaton, 1992). Further, limitations in the ability to explore educational and occupational opportunities as a result of social class or early parenthood can shorten or eliminate emerging adulthood for some young people (Arnett, 2000, 2004). The anthropological work by Schlegel and Barry (1991) included a comprehensive integration of information on adolescence in 186 traditional non-Western cultures. They concluded that adolescence is a universal life stage but that a period between adolescence and adulthood existed in only 20% of the cultures that they studied. In the majority of the cultures that they studied, marriage typically signified adulthood, and marriage usually took place around 16 to 18 years old for females and 18 to 20 for males. Arnett (2000) suggested that timing of marriage permitted the developmental period of adolescence but precluded emerging adulthood.

In summary, emerging adulthood has become a distinct period of the life course for young people developing in industrialized societies. It is a life stage characterized by change and exploration. While emerging adulthood provides endless opportunities for individuals to explore which can change their life course in positive ways, it also provides the freedom to take chances that may result in negative outcomes.

Emerging Adulthood as a Risk Period

The prevalence of several types of risk behavior, including risky sexual behaviors, most types of substance use, and risky driving behaviors such as driving at high speeds or while intoxicated, peaks during emerging adulthood (Arnett, 1992; Bachman, Johnston, O'Malley, & Schulenberg, 1996), yet the majority of research in these areas focuses on adolescence (Arnett, 2000). Arnett (2000) proposed that the risk behaviors displayed by emerging adults can be understood as part of their identity explorations—efforts to gain a wide variety of experiences before they settle into the roles and responsibilities of adulthood. Prior research indicated that sensation seeking, the desire for novel and intense experiences, is a motivation found to consistently be related to participation in a variety of risk behaviors (Arnett, 1994b). Arnett (2000) asserted that emerging adults are able to pursue novel and intense experiences more freely than adolescents as a result of lower likelihood of monitoring by parents and than adults because they are less limited by roles. This feature of greater autonomy allows for greater risk taking during emerging adulthood, particularly in the use of licit and illicit drugs.

Substance Use among Emerging Adults

Emerging adulthood has been identified as the period of life during which drug use typically increases, peaks, and subsequently, for most emerging adults, decreases (Bachman, Johnston, O'Malley, & Schulenberg, 1996). Furthermore, it is the time period that drug users will most likely escalate from use to abuse and progress from “soft” to “hard” drugs. Yet, much of the research on drug initiation and use has focused on the earlier developmental transition from childhood to adolescence leaving gaps in knowledge about drug use during the transition from late adolescence to young adulthood (Martin & White, 2005). In a special

issue of the *Journal of Drug Issues* aimed at increasing the research focus on this critical developmental period, Martin and White (2005) delineated the gaps in knowledge regarding drug initiation and use among emerging adults. They asserted that we know little about the patterns of use during emerging adulthood and how these patterns relate to earlier drug use and other life experiences. Furthermore, as a direct consequence of the lack of knowledge of drug initiation and use patterns among this group, little is known about how to intervene to prevent drug use and associated issues successfully or to provide appropriate services to higher risk subpopulations.

Arnett (2005) applied the distinguishing features of emerging adulthood to drug use in order to explain the high rates of drug use during this age period. Further, he offered hypotheses suggesting how each feature of emerging adulthood could influence higher drug use. Arnett's propositions are detailed below and, when relevant, discussed in relation to tasks specifically facing Latino emerging adults.

Arnett (2005) proposed that substance use may be a part of identity explorations in several ways. First, he suggested that experimentation with drugs may be a part of taking part in a wide range of experiences before settling into adult life. Secondly, Arnett discussed identity formation as confusing and difficult and suggested that some emerging adults may use drugs as a way of relieving their identity confusions. Further, sensation seeking is higher in emerging adulthood than in either adolescence or young adulthood and he hypothesized that this will help explain why drug use is also highest during this developmental period.

The process of identity formation may be a particularly relevant aspect of identity exploration that contributes to substance use for Latino emerging adults. As discussed in more depth later in this paper, ethnic identification, which is one aspect of identity formation,

can result in considerable stress for Latinos and has been related to substance use (e.g., Casas, Bimbela, Corral, Yanez et al., 1998; Marsiglia, Kulis, Hecht, & Sills, 2004; Orozco & Lukas, 2000). Ethnic identification involves an individual's self-identification as a group member, a sense of belonging to an ethnic group, attitudes toward ethnic group membership, and degree of ethnic group affiliation or involvement (Phinney, 1990). Furthermore, Szapocznik and Kurtines (1989) revealed that increasing levels of acculturation were related to conflicts in identity formation.

Arnett (2005) posited that the instability of emerging adulthood could promote drug use. Specifically, he suggested that instability events (i.e. transition in residence, love relationships, school, or work) will result in anxiety and sadness, which could lead to substance use as a means of self-medication.

Arnett (2005) put forward that the self-focused quality of emerging adulthood results in a decreased level of social control as they are less monitored by parents and, due to frequent changes in love partners and jobs, these relationships are an unlikely source of social control. He suggested that a lack of social control during emerging adulthood results in an increased likelihood of behaviors that violate norms, such as drug use. Additionally, the one social network that tends to strengthen during emerging adulthood, friendships, may not act as a source of social control for emerging adults who use drugs or who are at risk for drug use. Arnett suggested that emerging adults who use drugs and/or who share similar characteristics that place them at risk for drug use will likely select each other as friends and these friendships will provide a social context for drug use.

Arnett (2005) argued that substance use increases during emerging adulthood because those individuals who use view drug use as a behavior that is acceptable at their current age

but one that they will cease once they reach adulthood. He suggested that substance use is higher during this period because of their subjective status as being in between adolescence and adulthood. Since emerging adults are no longer adolescents, they feel that they are capable of deciding on their own whether or not to use drugs. Additionally, given that they do not yet feel like adults, they may not feel committed to adult standards of behavior and an adult level of responsibility. Emerging adults perceive a freedom to do things during this age period that will not be acceptable once they reach adulthood.

Arnett (2005) suggested that the optimism that is characteristic of emerging adulthood may lead to increases in substance use as emerging adults do not consider the negative consequences that may result from their substance use. He theorized that emerging adults with a stronger optimistic bias would be more likely to engage in substance use, relative to other emerging adults. Finally, Arnett hypothesized that there are two distinct types of emerging adults who use drugs. The first is those who have especially high well-being and use drugs out of exuberance and the second being those who have especially low well-being and use drugs to self-medicate. He suggested that both of these groups would use drugs more than emerging adults in the middle range of well-being.

While substance use is highest in emerging adulthood, not all emerging adults display increases in use upon moving out of their parents' homes. Therefore, it is important to identify the protective factors in high school that moderate the transition to higher levels of substance use after high school (White, McMorris, Catalano, Fleming, et al., 2006). Prior investigations have indicated that parenting characteristics continue to influence offspring alcohol use into emerging adulthood (e.g. Brook, Whiteman, Finch, & Cohen, 2000; King & Chassin, 2004; Patock-Peckham & Morgan-Lopez, 2006; White et al., 2006).

Parents as a Protective Factor for Substance Use

Research indicates that parents play a significant role in impacting their offspring's substance use. However, much of this work focuses on the impact that parents have on their offspring during adolescence. For instance, parenting processes such as parental monitoring or knowledge of adolescents' friends and activities, parental control, and warmth or conflict have predicted later levels adolescent substance use (Dishion, Nelson, & Bullock, 2004; Duncan, Duncan, Biglan, & Ary, 1998; Fletcher, Steinberg, & Williams-Wheeler, 2004). Such work reveals that parenting behaviors can serve as both risk and protective factors for adolescent substance use.

Studies consistently identify parental monitoring and parental support as protective factors for adolescent substance use (e.g. Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Barnes, Reifman, Farrell, & Dintcheff, 2000; Coley, Votruba-Drzal, & Schindler, 2008; Peterson et al., 1994; Schulenberg & Maggs, 2002; Vucina & Becirevic, 2007, Wills & Cleary, 1996; Wills, Mariani, & Filer, 1996; Wood et al., 2004). To a lesser extent, studies have examined the impact that parent communication has on adolescent substance use. For example, Wills, Cleary, Filer, Shinar, et al. (2001) indicated that parental support and communication have a extensive impact on other variables that are related to adolescent substance use, including adolescents' self-control, competence, and peer affiliations. These studies provide directions for future research examining the protective influence that parents can have in preventing substance use among their emerging adult offspring.

Parenting Influences on the Substance Use of Emerging Adults

Although researchers have devoted considerable attention to parenting influences on substance use among adolescents, less research has focused on parents as protective factors

against substance use among emerging adults. This lack of research examining the protective influences of parents into the emerging adulthood period is not surprising given the assumptions that parental influence decreases with youths' increased autonomy. Moreover, while a handful of researchers have examined the continued influence of parents on substance use during emerging adulthood, many of these studies have been limited to alcohol use in college students (e.g., Turrisi, Wiersma, & Hughes, 2000; Turrisi, Jaccard, Taki, Dunham, & Grimes, 2001). These studies have established a continued influence of parents on substance use during emerging adulthood. Specifically, studies have indicated parental monitoring (Sessa, 2005; White, McMorris, Catalano, Fleming, et al., 2006), parental knowledge (Abar and Turrisi, 2008), parental discipline (King & Chassin, 2004), a close parent-child mutual attachment in early adolescence (Brook, Whiteman, Finch, and Cohen, 2000), parenting style (Patock-Peckham & Morgan-Lopez, 2006), and parental messages about alcohol, tobacco, and marijuana (Miller-Day, 2008) impact substance use during emerging adulthood.

Parenting Influences on Substance Use in Latino Youth

Until recently, the research examining the influences of parents on substance use among youth neglected to investigate whether the processes leading to adolescent substance use are different across ethnic groups. Pilgrim, Schulenberg, O'Malley, Bachman, and Johnston (2006) asserted that key differences in values among ethnic groups within the United States may foster differences among adolescents in their substance use. Specifically, they proposed that U.S. adolescents from ethnic groups that value collectivism would be less likely to engage in behaviors that would be viewed negatively by others in their ethnic group. In a large, nationally representative sample of 8th and 10th graders, Pilgrim and colleagues

found that parental involvement significantly predicted lower levels of substance use across all gender and ethnic groups. Further, they tested whether gender and ethnicity moderated a model of substance use in which school success mediated the effect of parental involvement on drug use, and found that the model held true across gender and African American, Caucasian, and Latino ethnicities. Their results support the generalizability of previous findings of the effect of parental involvement on adolescent substance use.

Ramirez et al. (2004) investigated the associations of culture, family, and education on Latino adolescent drug use. They examined parental monitoring and familism as moderators of the relation between knowledge about the dangers of drugs and diminished marijuana and inhalant use. Familism is a core cultural value across the various Latino subgroups and carries the expectation that the family is the primary source of support, loyalty, and solidarity (Cauce & Domenech-Rodríguez, 2002). In Ramirez and colleagues' study, familism and parental monitoring were significantly associated with marijuana and inhalant knowledge and use. Higher familism scores were associated with more accurate knowledge of marijuana and inhalants, and reduced likelihood of being a current marijuana user. Results for parental monitoring were similar to those for familism; adolescents who reported higher levels of parental monitoring were more knowledgeable and were less likely ever to have used marijuana or inhalants or to be current users. Results revealed a significant parental monitoring and drug knowledge interaction in which parental monitoring was associated with lower inhalant use for adolescents who possessed high knowledge. Parental monitoring was less strongly related to usage among adolescents of moderate or low knowledge. Analyses also uncovered a significant interaction of familism and parental monitoring for lifetime inhalant use. Adolescents who endorsed high levels of familism

reported lower inhalant use as parental monitoring increased compared to those with moderate to low familistic values. For marijuana use, familism interacted with knowledge; familism was negatively associated with substance use only for those who possessed high or moderate knowledge of the drug. Overall, knowledge was more strongly associated with less drug use among adolescents reporting greater parental monitoring or higher familism. Acculturation did not moderate the interaction of knowledge with either familism or parental monitoring. While Ramirez et al. extended the literature on parental influences of substance use for Latinos, their study was cross-sectional and limited to adolescents, thus preventing the ability to draw conclusions about the continued influence of parenting factors into emerging adulthood.

Elder and colleagues explored predictors of cigarette and alcohol susceptibility and use among Latino migrant adolescents (Elder, Campbell, Litrownik, Ayala, et al., 2000). Their examination of 660 Latino adolescents between the ages of 11 and 16 years old revealed a number of significant predictors for susceptibility and use of tobacco and alcohol. Most relevant to the current study, they found that perceived frequency of communication with parents was negatively associated with both use and susceptibility to tobacco and alcohol. A limitation of this study is that they merely studied the frequency of parent-child communication and did not explore the quality of this communication.

Family climate, specifically assessed by cohesion, low levels of conflict, and emotional expression, also has strong links with adolescent drug use. Kliewer and Murrelle (2007) examined risk and protective factors for adolescent substance use in a large sample ($N = 17,215$) of youth from Panama, Costa Rica, and Guatemala. Their results indicated that negative family interaction uniquely predicted increased risk for tobacco use, other drug use,

and problems with alcohol. In a prior study, Kliewer, Murrelle, Prom, Ramirez, et al. (2006) investigated the associations between witnessing serious violence and drug use, and the protective influences of family cohesion and parental monitoring in a sample of 9,840 adolescents living in Panama and Costa Rica. Consistent with previous research on the links of violence exposure and substance use, they found that witnessing violence was associated with greater drunkenness, tobacco use, number of illicit drugs used, and problems with drugs and alcohol. Furthermore, parental monitoring interacted with exposure to witnessed violence to reduce risk for number of illicit drugs used and problems with drugs and alcohol.

In a 5-year longitudinal study, Brook and colleagues studied the interrelation of personality, family, peer, ecology, acculturation domains measured in adolescence as they impact later drug use measured in emerging adulthood in African American and Puerto Rican youths (Brook, Whiteman, Balka, Win, & Gersen, 1997). Additionally, they assessed whether family factors offset adolescent personality risk factors (i.e. unconventionality) or enhance protective factors leading to drug use. Results indicated that pathways to drug use were similar for African American and Puerto Rican youths. Acculturative influences were associated with family relations, which in turn were related to personality attributes. Additionally, a reciprocal relationship emerged between the personality and peer domains in their impact on drug use. Family variables primarily enhanced the effect of protective personality traits on drug use. A mutual parent-child attachment in which the offspring identifies with the parent seemed to shield the offspring from emerging adult drug use. Furthermore, family modeling of drug use and deviance appeared to facilitate adolescent imitation of these behaviors and maintenance of the behaviors into emerging adulthood.

Brook et al. concluded that family strongly influences both vulnerability and resilience to drug use for both ethnic groups.

Furthermore, the mixed method study of Marsiglia, Miles, Dustman, and Sills (2002) revealed that for Latino seventh graders the family is the core source of advice, direction, modeling, and support in relation to drug use. Three-fourths of their sample indicated that their father or mother taught them the most about the consequences of using drugs and most (79-83%) stated that their parents would be “very angry” if they used alcohol, tobacco, or marijuana. Furthermore, the majority of adolescents in their study did not use alcohol, cigarettes, or marijuana and agreed that alcohol use was inappropriate at their age. A high degree of attachment and strong ties to their parents and their school environment emerged as a protective factor for youth. While shedding additional light on the role of Latino parents in their offspring’s use of alcohol and other drugs, the current study was limited to mostly pre-adolescents, a period of relatively low drug use.

The studies discussed above highlight the important role of parenting factors that may influence the substance use of Latino youth. However, this research is limited in that studies examining the influence of Latino parents on their offspring’s substance use have focused on the influence of parenting through adolescence and have failed to explore the continued role of parents during emerging adulthood. Future research must investigate this relationship between parenting and substance use into the riskiest period for drug use—emerging adulthood. In addition, this work must consider other cultural factors which may impact the use of licit and illicit drugs by Latino emerging adults.

Culturally Specific Risk and Protection for Latinos

A number of factors have been linked with low drug use among Latinos. These include frequent church attendance, religious affiliation, and educational achievement and aspirations (Chavez, Oetting, & Swaim, 1994; Menon, Barrett, & Simpson, 1990; Paulson, Coombs, & Richardson, 1990; Schinke, Orlandi, Vaccaro, Espinoza et al., 1992; Zapata & Katims, 1994). On the other hand, several studies of Latino immigrants and low-accultured Latinos associate increasing levels of acculturation with higher prevalence rates for a number of health problems including alcohol abuse (Markides, Ray, Stroup-Benham, & Trevino, 1990), cigarette smoking (Haynes, Harvey, Montes, Nickens, & Cohen, 1990), illicit drug use (Amaro, Whitaker, Coffman, & Heeren, 1990), and Type 2 diabetes mellitus (Stern, Knapp, Hazuda, Haffner et al., 1991). Moreover, Szapocznik and Kurtines (1989) revealed that increasing levels of acculturation were related to conflicts in identity formation and impairment in family relations.

The concept of a “Hispanic Paradox” proposes that despite experiencing a profile of economic and health-related disadvantages, immigrant and low-accultured Hispanics in the United States display comparatively lower rates of morbidity and mortality than predicted by their risk factor profile on certain health indicators (Alderete, Vega, Kolody, & Aguilar-Gaxiola, 2000). The paradox suggests that low-accultured and traditional Hispanics possess certain culture-based protective factors, although the specific hypothesized protective factors and their mechanisms have not been examined until recently (Castro, Garfinkle, Naranjo, Rollins, et al., 2007).

Castro and colleagues examined several Hispanic cultural traditions as protective factors among Latino children of illicit drug users (Castro, Garfinkle, Naranjo, Rollins, et al.,

2007). Specifically, they examined three cultural values (family traditionalism, Latino orientation, and American orientation) and one social variable (social responsibility) in relation to family bonding among Latino adolescents whose fathers were users of marijuana and/or methamphetamine. Castro and colleagues hypothesized that high levels of paternal drug use would be associated with the youth's alienation from the family, but endorsement of traditional cultural values and social responsibility would protect youth against this effect. Results revealed that the father's level of illicit drug use and language-based acculturation were unrelated to youth's family bonding. However, high levels of a Latino orientation (affective wants and likes favorable to the Latino culture and its people) were more strongly associated with greater family bonding than high levels of an American orientation (affective acculturation). Furthermore, youth who adopt traditional Latino family values and community consciousness to "give back" to the community appear to be more strongly connected with their families. While adding to the understanding of the Hispanic Paradox, Castro et al.'s study is limited by a small sample size (N = 23 youth-father dyads) and failure to examine other variables that may affect youth family bonding (i.e. youth's own drug use, drug use of other family members and peers).

Strong cultural identification is an established protective factor for substance use. In a study comparing migrant and non-immigrant Mexican American youth, Casas and colleagues found that Mexican American adolescents with strong Mexican cultural identification were less likely than those with weaker ethnic identification to be regular users of tobacco, and more likely to believe that tobacco was harmful (Casas, Bimbela, Corral, Yanez et al., 1998). Strengthening these findings, Marsiglia, Kulis, Hecht, and Sills (2004)

found that a strong ethnic identity was associated with less substance use and stronger antidrug norms in a large sample (N = 4,364) of Mexican American seventh graders.

Szapocznik and colleagues recently suggested that the family processes commonly suggested to create risk for drug abuse (e.g., inconsistent and unpredictable parenting practices, family conflict, poor parent-child relationships) could be exacerbated by acculturation-related processes (Szapocznik, Prado, Burlew, Williams, & Santisteban, 2007). They cited the extensive literature that has established that the family is the most important and fundamental social system influencing human development (e.g., Bronfenbrenner, 1979, 1986; Perrino et al., 2000; Szapocznik & Coatsworth, 1999) and suggested that this may be especially true among Latinos, for whom familism is an central part of the culture.

Socialization Model of Adolescent Drug Use – Continued Influence into Emerging Adulthood

Kliewer (2010) proposed a socialization model of adolescent substance use in order to explain the familial influence factors on adolescent coping and substance use. She detailed a model in which parental modeling, parental coaching, and family context work together to shape youth coping processes, which are closely associated with the development of drug use behaviors. Kliewer acknowledged in this model that socialization agents outside of the family, such as peers and neighbors, also influence youth drug use. Furthermore, the model recognizes other aspects that play a role in shaping youth behaviors that lead to drug use or affect drug use directly; these include unique features of the situation, biology and temperament, and local or national culture.

Kliewer considered three distinct pathways through which parents and families affect adolescent behavior: parental coaching, parental modeling, and family context. Parental coaching is defined as messages that parents relay to their children and is considered to be influenced by demographics (e.g., parent gender, SES, age), qualities of the parent (e.g., personality, adjustment, resources, values), qualities of the child (e.g., age, gender, temperament/personality, adjustment, history of coping), and situational demands (e.g., controllability, novelty). Parental modeling, or parents' own behavior, is shaped by demographics and parent personality, adjustment, values, and resources. Kliewer asserted that messages that parents convey to their offspring, whether overt or subtle, intended or unintended, are the result of multiple factors that are expressed via parental modeling and parental coaching. Moreover, Kliewer recognized in this model that parental coaching and parental modeling occur within the family context which is characterized by features that either support or inhibit behavior through the establishment of rules and the emotional tone of family interactions. Taken together, parental coaching, modeling, and family context are proposed to affect youth coping processes which are closely related to the development of drug use behaviors.

Parent-Child Communication about Alcohol, Tobacco, and Other Drug Use

Parent-adolescent communication consistently has been identified as an important parenting variable affecting adolescent behavior (Patterson, Reid, & Dishion, 1992). Furthermore, numerous studies have implicated parent-child communication as a protective factor for adolescent substance use (Andrews, Hop, Ary, Tildesley, & Harris, 1993; Brody, Flor, Hollett-Wright, & McCoy, 1998; Jackson & Henriksen, 1997; Partnership for a Drug-Free America, 1999). Many of these studies have examined parent-child communication in

general rather than communication directly related to substance use. Consequently, substance use prevention programs have stressed the need to increase communication between parents and their offspring. More recently, researchers have begun to look at the influence of parent-child communication about substance use on actual youth substance use. These studies have produced inconsistent findings and suffered from limited methodologies (e.g. cross-sectional) which constrain the conclusions that can be drawn from the data.

Boone and Lefkowitz (2007) recently conducted an observational study of communication about health topics with 52 mother-adolescent dyads. The purpose of the study was to examine mother-adolescent conversations about drugs and alcohol, sexuality, and nutrition and exercise to determine the extent to which mothers treat these issues similarly. Three types of mother communication strategies were identified: discussing negative consequences, asking questions, and lecturing. Boone and Lefkowitz examined how these strategies differed by the topic of conversation and found that parents used the strategies of discussing negative consequences and asking questions more frequently when discussing drugs and alcohol than in discussions on sexuality or nutrition and exercise. Their results are limited by the characteristics of their sample size; it was relatively small and consisted entirely of European American dyads. Identification of the most effective messages in reducing youth substance use and those which Latino parents are most comfortable employing when talking about drugs and alcohol has important implications for prevention programs. If parents are more comfortable utilizing strategies that are found to be related to higher levels of substance use, prevention programs could focus on role-plays in order to increase parental comfort with alternate messages.

Turrisi, Wiersma, and Hughes (2000) examined the impact of mother-teen communication about drinking on the drinking beliefs of college freshman. It was expected both drinking beliefs and binge-drinking tendencies would be associated with binge-drinking consequences. They found that mother-teen communication about drinking was consistently related to drinking beliefs that prevented the experience of negative drinking consequences. Turrisi and colleagues concluded that parents may influence the drinking beliefs of their offspring through communication with them. Further, these beliefs may have a role in influencing the likelihood that the college students experience negative binge-drinking consequences. Turrisi et al.'s study was limited by the lack of diversity in their sample; they did not note the race or ethnicities of their sample but did state that it was "restricted" and was comprised of students from a moderate-sized university in the Pacific Northwest.

Following up on his previous findings that parents can influence alcohol use in college students, Turrisi and colleagues (2001) designed a preventive intervention for incoming college freshman. The intervention provided parents with a guide book for recognizing and preventing alcohol misuse by their teen. The intervention booklet included modules on prevalence and consequences of heavy drinking in college, information on the physiological, psychological, and psychomotor effects of alcohol, risk and protective factors for college drinking, and identifying problem drinking in emerging adults. The booklet also provided parents with strategies for improving communication with their teen, information about how to teach their child assertiveness and drink refusal skills, and how to intervene if their child develops a drinking problem. Turrisi et al. implemented and evaluated their intervention with college-bound high school seniors the summer prior to entering college by comparing it to an assessment only condition. The results of their evaluation indicated that

intervention participants reported significantly lower drinking levels. A limitation of their evaluation is that participants were not randomly assigned to condition or assessed prior to the intervention. Their findings do, however, suggest parent interventions targeting emerging adults' drinking are feasible and may be an effective way to reduce college drinking and alcohol problems.

Ennett and colleagues (2001) asserted that of all the factors related to the family environment that have been examined as risk and protective factors for adolescent substance use, parent-child communication has received limited research attention (Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001). A criticism of prior research in this area is that the measures of parent-child communication tend to assess only the frequency with which communication about substance use took place, while similar work in the area of sexual behavior suggests the need to also examine the content, timing, and general family environment in which the communication occurs (Ennett et al., 2001). In order to fill in the gaps of prior research, Ennett et al. attempted to describe parent-child communication about tobacco and alcohol use and to determine whether and how communication influences adolescent initiation and escalation of these behaviors. To achieve these goals, a national sample of 537 adolescents aged 12 to 14 years were interviewed by phone once at baseline and then again approximately 1 year later. Measures included adolescent tobacco and alcohol use, parent-child communication, and other family characteristics, including parental tobacco and alcohol use, general parenting, and demographic characteristics. Results indicated that parents tended to focus their communication about tobacco and alcohol use around three domains: rules, consequences, and media. Baseline data revealed that parent-child communication was related to adolescent smoking but not to drinking, with parent

messages about rules significantly greater among adolescents who had ever smoked in their lifetime than among those who had never smoked. There was also a marginal relationship between messages about consequences and tobacco use with greater parent-child communication about consequences related to higher rates lifetime smoking. Further, their results indicated that parent-child communication did not predict initiation of tobacco or alcohol use. However, parent-child communication about rules and discipline marginally predicted ($p < .10$) the escalation of tobacco and alcohol use.

Elder and colleagues (2000) sought to identify predictors of tobacco and alcohol susceptibility and use in Latino migrant adolescents. In their sample of 660 Latino adolescents between the ages of 11 and 16 years who were enrolled in the Migrant Education Program, they ascertained several factors that significantly predicted susceptibility and use of tobacco and alcohol. Regarding tobacco use, adolescents were more susceptible to use with increased age, lower satisfaction with social support, less frequent communication with parents, lower self-standards against smoking, and less negative perceived anticipated outcomes for smoking (Elder et al., 2000). Actual tobacco use by adolescents was predicted by increased age, male gender, more positive outcome expectancies for smoking, and perceived less frequent communication with their parents (Elder et al., 2000). Predictors for susceptibility for alcohol use were similar to those identified to predict susceptibility for tobacco use. Elder et al. indicated that a greater susceptibility for alcohol use was reported by older adolescents, those with more friends who drank alcohol, adolescents with fewer self-standards for drinking and fewer negative attitudes toward the outcomes of drinking, and those who reported less satisfaction with support. Actual reported use of alcohol by adolescents was more likely if the adolescents were older, performed less well in school, had

friends who drank, lived in a household where people drank alcohol, held fewer negative attitudes toward alcohol, and reported less frequent communication with their parents (Elder et al., 2000). Of the risk and protective factors identified in their study, parent-child communication had the strongest protective effect. Therefore, results of this study suggest that increasing the frequency parent-child communication may be a feasible mechanism by which to decrease use of tobacco and alcohol in Latino migrant adolescents.

Based on the cross-sectional findings by Elder et al. (2000) discussed above, an intervention program was designed with the goal of preventing tobacco and alcohol use in Latino migrant adolescents (Litrownik et al., 2000). This intervention program was designed with intention of improving and maintaining healthy youth decision-making by targeting the factors identified as being related to tobacco and alcohol use directly (expected outcomes, use by peers, household use), as well as those related to more general social relationships including satisfaction with social support and parent-child communication (Litrownik et al., 2000). Furthermore, the study targeted high-risk adolescents who are typically not exposed to tobacco use prevention programs (e.g., low SES, Latino). The program, *Sembrando Salud*, included the three minimum components identified by the National Cancer Institute for tobacco use prevention: information about the effects of tobacco use, information about social influences on tobacco use, and training in refusal skills (Glynn, 1989) but also expanded on these recommendations by involving parents in the intervention. Additionally, great care was taken in designing the intervention to ensure that it took into account culture, language, and demands to acculturate in order to make it culturally sensitive. This included incorporating issues of *familismo* and *respeto* into the curriculum to help the adolescents learn tobacco and alcohol refusal skills without displaying disrespect toward their elders. In

addition, all sessions were led by bilingual, bicultural Mexican-Americans, many of whom were themselves former members of the Migrant Education Program. Litrownik et al. (2000) focused their paper on evaluating whether the intervention impacted parent-child communication as it was designed to do. The study design included an attention-control condition (first aid/home safety) to which outcome variables were compared. Post-intervention assessments were conducted within 2 months after the conclusion of the program. Results indicated that both parent and adolescents reported more frequent parent-child communication if they participated in the tobacco and alcohol use prevention program. This effect was, however, moderated by household size with the positive difference in parent-child communication decreasing as household size increased. While this was the only main effect revealed for parent perception of parent-child communication, adolescents reported decreased parent-child communication with increased age, higher levels of adolescent acculturation, and if they were male. The authors suggested that the participants in their tobacco and alcohol use prevention program from smaller households would be 5 to 10% less likely to use tobacco or alcohol in the future. Litrownik et al.'s study was limited by the short-term follow-up period (2 months post-intervention) which prevents conclusions about the long-term efficacy of the Sembrando Salud program.

Elder and colleagues (2002) conducted a longer term evaluation of Sembrando Salud. They compared the community-based tobacco/alcohol use-prevention program group to an attention-control condition (first aid/home safety) to determine if the program was effective in preventing cigarette and alcohol consumption. One and 2 year follow-ups revealed that there were no significant differences in tobacco or alcohol use between groups. Elder et al. (2002) suggested that the lack of intervention effects may have been due to the very low

baseline levels of smoking and drinking in the migrant youth participants. While no long-term intervention effects were found, acculturation of the youth participants did appear to affect their level of alcohol use. Adolescents determined to be less-accultured were less likely to report drinking in the past 30 days (Elder et al., 2002). The results of this study suggest that while involving parents in drug prevention programs is important in order to increase parent-child communication about substance use, more work is needed in order to identify which parental messages are most effective in preventing or reducing youth substance use.

Miller-Day (2002) attempted to determine if and how African American and Caucasian adolescents engaged in conversations about substance use with their parents. Further, she examined if there was a relationship between parent-adolescent conversations about substance use and adolescents' drug-resistance behavior. Participants consisted of 67 adolescents ranging in age from 11 to 17 recruited from several schools, churches, and community centers within an inner-city located in the mid south. The sample consisted of slightly more African American adolescents (60%) than Caucasian adolescents (40%). Results of this cross-sectional study indicated that the majority of adolescents (57%) had not engaged in an actual conversation about substance use with their parents. Moreover, this finding did not differ by ethnicity; African American youth and Caucasian youth reported talking with their parents about substance use at fairly equal rates (45% and 40.75, respectively). Miller-Day found that parent-child communication about substance use was marginally related to adolescent rejection of substance use offers with youth who reported accepting a drug offer more likely to have not communicated with one of their parents about the risks of substance use. This study merely examined whether parents engaged in

conversations about substance use with their child and did not attempt to describe the actual messages that parents relayed to their offspring.

In order to extend their prior research in the area of parent-offspring communication about drugs and drug use, Miller-Day and Dodd (2004) assessed the experiences of entry-level college students and their parents regarding parent-offspring communication about these topics. Their study examined narrative accounts to assess the content, form, and function of salient parent-offspring drug talks. The participants were recruited from an introductory course that served as a general education requirement for all students at a university in the northeastern United States. The authors state that their recruitment strategy resulted in a sample that reflected the wide-ranging diversity of the student population of the selected university; however, they neglected to report the actual demographics of their participants in their paper limiting the extension of their findings to all racial and ethnic groups in the U.S. A subsequent paper by the first author using the same recruitment method describes the sample as being 83% Caucasian (Miller-Day, 2008). Miller-Day and Dodd asked participants to ‘complete an on-line questionnaire that will ask you to share a story about a time when your parent(s) talked with you about alcohol, tobacco, or other drugs.’ Participants were also asked to contact at least one of their parents and ask them to participate in the study by sharing a time they had talked with their child about substance use and what strategies, other than direct conversations, they used to convey their expectations about drugs and drug use. A total of 151 parents and offspring participated in the study with a majority (71%) of the responding parents being mothers. The researchers were most interested in examining what offspring and parents considered their most significant conversations about alcohol and other drugs rather than the first or most recent parent-

offspring conversation. A descriptive model of parent-offspring communication about drugs was developed from the regular patterns in their observed data of the experiences of 75 parent-offspring dyads. This model describes the how, why, when, who, where, and what of parent-offspring communication about substance use. A typology of parent-offspring drug talks classified conversations on four dimensions. Communication was categorized as ongoing and integrated into everyday life or targeted at a specific event. Further, messages communicated parents' specific rules, attitudes, and expectations about drugs and drug use either via direct verbal statements or through indirect implied or nonverbal messages. Parents indicated reasons for initiating these talks as mostly relating to caring about offspring's health, safety, and well-being or 'out of necessity.' Talks were either reactive (i.e. following media stimulus or following personal stimulus) or proactive (i.e. preceding an event such as the start of college). Conversations were reported to have transpired only between mothers and offspring or only fathers and offspring, although the majority of such talks were reported to have taken place in the presence of other family members and friends who also participated. Mothers most often initiated these talks regardless of who was present. Parent-offspring communication about substance use most often occurred in the home or in the car. Parental messages often were aimed at establishing drugs as a problem, presenting evidence to support claims, or providing prescriptive or proscriptive information. Miller-Day and Dodd (2004) were successful in extending the research on parent-child communication about substance use by creating a descriptive model of the actual content, form, and purpose of these talks. While their study answered some questions regarding parent-child communication about substance use, others remained unanswered. In particular, what messages and communication approaches are most effective in preventing or reducing

offspring substance use? Further, what family characteristics determine how and which messages are communicated to offspring?

Miller-Day (2008) attempted to develop a typology of parental strategies used to deter children's substance use and then examined the effectiveness of these strategies on impacting actual substance use. Two studies were employed in order to accomplish these goals. In Study 1, she illustrated seven core parental strategies which a group of college-aged adults identified as being employed by their parents in order to deter them from alcohol, tobacco, and marijuana use within the past 4 years. These strategies identified in Study 1 included: (1) Encourage offspring to make their own decision about drug use by telling them to use their own judgment; (2) Parent discussed the issue and provided them with information about drugs; (3) Parent did not have a direct conversation about drugs but indirectly hinted or suggested an antidrug message; (4) No tolerance rule; (5) Punishment for use; (6) Parents never brought the issue up; and (7) Rewards for nonuse. Study 2 examined the relations of parental communication strategies, family communication patterns, and past 30 day use of alcohol, tobacco, and marijuana. Few strategies were related to reports of past 30 day substance use. Offspring report of parents threatened punishment for use was related to higher rates of alcohol and tobacco use in the past 30 days. Interestingly, results indicated that the only strategy to have a significant effect on all drug types was a "no tolerance rule" with offspring reporting the communication of such a rule also reporting lower rates of past month use of alcohol, tobacco, and marijuana. While these studies extend the understanding of parents' socialization of drug use norms, several limitations exist. The frequency of strategy use was not assessed and neither were differences in maternal and paternal strategy use. Also, moderators of strategy use, such as religiosity, were not measured and may have

impacted choice of strategy and later substance use by offspring (Miller-Day, 2008). Furthermore, the population was primarily Caucasian (83%) and reared in an intact biological family (88%) which limits the generalization of the findings to similar populations. Regardless of these limitations, the results of Miller-Day's (2008) studies suggest that drug prevention programs aimed at educating parents should emphasize the importance of establishing clear rules for nonuse.

Suárez and Galera (2004) identified the parent-child conversations regarding legal and illegal drugs in a small sample of 13 university students in Bogotá, Columbia through individual interviews. Results revealed a patriarchal culture context and expectations of the gender role. Additionally, three kinds of parent discourses that present divergences and agreements typical of the nuclear family emerged. Mothers and fathers communicated very different messages and the emotions within these messages often differed. Fathers tended to stress what "you should do" and their role of authority in the family, while mothers expressed feelings of care and tenderness. Furthermore, mothers often conveyed that they would feel disappointed, frustrated, and fearful if they were to use drugs and fathers expressed potential feelings of rage and shame, in addition to disappointment and understanding. Both mothers and fathers were identified as expressing negative views of individuals who use drugs and characterized such people as "depraved" and "bad" for not be able to control their use of drugs.

Potential Cultural Factors that may Influence Parental Messages

An array of cultural factors may influence the messages that Latino parents relay to their offspring regarding substance use. Recent qualitative work by Guilamo-Ramos and colleagues provides information about how Dominican and Puerto Rican mothers and their

adolescents identify parental control and warmth in their relationships (Guilamo-Ramos, Dittus, Jaccard, Johansson, et al., 2007). Their focus groups identified five essential Latino parenting practices: ensuring close monitoring of adolescents, maintaining warm and supportive relationships characterized by high levels of parent-adolescent interaction and sharing, explaining parental decisions and actions, making an effort to build and improve relationships, and differential parenting practices based on adolescents' gender. These parenting practices likely shape the content of and manner in which messages regarding substance use are relayed to youth. For instance, the findings of Guilamo-Ramos et al. suggest that Latino parents' messages regarding substance use would be expressed in a direct, rather than indirect, manner. The content would likely include explanations of the parents' viewpoint and allow for adolescents' to voice their opinions.

Messages regarding substance use are expected to differ by offspring gender as traditional norms discourage alcohol and other drug use among Latino women (Mexican American women in particular) and also label and severely stigmatize women who do use any amount or type of drug (Moore, 1994). The expectation of differing messages by gender is also supported by Guilamo-Ramos et al.'s findings on differential parenting based on gender. Mothers in their study attributed these gender differences to Latino cultural norms of male liberty and female submissiveness; mothers explained that boys should be raised with more freedom than girls.

A greater sense of social obligation may serve as a protective factor for Latinos. This hypothesis is supported by work of cultural psychologists and sociologists who have studied differences between collectivistic cultures and individualistic cultures. Latino cultural values are commonly accepted as collectivistic, whereas mainstream U.S. values are more

individualistic. Collectivist cultures emphasize positive group interrelationships, attending to others' needs, and conformity, while individualist cultures reinforce independence and the priority of personal goals and happiness relative to the group (Markus & Kitayama, 1991; Triandis, 1995). Stated more simply, collectivist cultures emphasize social roles and the well-being of the group, whereas individualist cultures emphasize personal freedom. These collectivistic values are likely conveyed to youth by their parents as a reason to abstain from drugs. Furthermore, parents who value familism may convey messages that encourage avoidance of substance use out of respect for parents and elders.

Religion has been identified as a protective factor against substance use for both adults and youth (e.g. Bachman, O'Malley, Schulenberg, Johnston, et al., 2002; Free, 1994; National Center on Addiction and Substance Use, 2001; Wallace & Bachman, 1991). For Latinos, in particular, religion, typically Catholicism, is a source of strength during periods of stress (De la Rosa & White, 2001). Marsiglia, Kulis, Nieri, and Parsai (2005) examined whether religiosity and religious affiliation had protective effects on the drug use behaviors and norms of preadolescents Latinos in the Southwest. Further, they were interested in acculturation as a mediator of the effect of religion. Their results indicated that religiosity was associated with lower lifetime alcohol, cigarette, and marijuana use and less frequent recent alcohol and cigarette use, but this effect operated more strongly in some religions (particularly Catholicism). Overall, the acculturation level of the youth was not a mediator of the effect of religion on reported drug use. Taken together, previous research suggests that Latino parents may employ religion as a component of messages regarding substance use.

All of these factors discussed as cultural factors that may potentially influence the content of messages relayed by Latino parents regarding alcohol, tobacco, and other drugs

are likely further affected by the parents' level of acculturation and ethnic identity. Therefore, it would be expected that the cultural content of parental messages will vary widely as a function of parental acculturation. Parents who are more acculturated may relay messages that mirror those of non-Hispanic Whites, whereas less acculturated parents may emphasize aspects that related to more traditional Hispanic values.

Purpose and Proposal

The purpose of this dissertation was to identify the messages that Latino parents communicate to their offspring regarding legal and illegal drugs. Previous studies have indicated that parent-offspring communication is protective against tobacco, alcohol, and other drug use. However, the majority of this research has failed to examine the specific messages that parents relay to their offspring about substance use. Furthermore, the little research that has been completed has focused almost exclusively on non-Hispanic Caucasians. To accomplish this goal, a mixed method design was employed with equal weight given to both qualitative and quantitative data. Study 1 included qualitative research methods and was conducted to facilitate item generation for a questionnaire assessing the extent to which Latino parents communicate identified messages about the use of tobacco, alcohol, and other drugs to their offspring. Using qualitative methods, I expected to find that the messages relayed by Latino parents regarding substance use were similar to messages previously identified by Miller-Day (2008). However, I also expected that specific Latino cultural messages regarding substance use would be identified by participants. Study 2 was a quantitative study employing the questionnaire developed through Study 1 and additional questionnaires to investigate links between parental substance use socialization messages, acculturation, religious commitment, familism, and participants' use of licit and

illicit drugs. The primary goal of Study 2 was to examine the initial psychometric properties of the developed questionnaire and reduce the length of the measure. Additionally, the study examined associations among demographic variables, parental messages about substance use, acculturation, religious commitment, familism, and emerging adults' use of legal and illegal drugs.

Study 1: Method

Participants

Emerging adults ($N = 7$; ages 18-21) participated in the focus groups. Participants of focus groups consisted of 5 females and 2 males, ages 18 to 21 ($M=19.57$, $SD=1.13$). All participants self-identified as Latino(a) on a demographic questionnaire and 5 also reported their Latino subgroup (2 Puerto Ricans, 1 Columbian, 1 Mexican-American, 1 Panamanian). All participants were enrolled as students at Virginia Commonwealth University, although recruitment included other local universities and community colleges (e.g. University of Richmond, J. Sergeant Reynolds Community College).

Procedures

Recruitment efforts at Virginia Commonwealth University included emails targeted to Latino student groups (e.g., Latino Student Association, VCU's Latino fraternity and sorority), emails to the Department of World Studies' listserv, flyers distributed at the Student Organization and Volunteer Opportunity (SOVO) Fair at the start of the fall 2009 semester, flyers posted in the VCU Wellness Center, and flyers posted on the main bulletin board on each floor of VCU's 11 dormitories (total of 147 flyers in the dorms). Interested participants contacted the study staff via email or phone to express interest in study participation. Eligible participants were college students between the ages of 18 and 25,

Latino, and English-speaking. Once eligibility criteria were confirmed, individuals were invited to participate in focus group interviews about parental communication about alcohol, tobacco, and other drug use.

Two focus groups were conducted in a conference room at Virginia Commonwealth University in the Fall of 2009 by clinical graduate students (including the primary investigator) with training and experience in qualitative data collection. Focus group facilitators also read and discussed materials detailing suggested a format for conducting focus group research. A total of 7 participants were recruited and attended a focus group session. Six additional participants were recruited but failed to attend the scheduled focus group. Each focus group was comprised of 3 to 4 Latino individuals and lasted about 1 ½ hours. Group One was facilitated by two researchers, one of whom was Latina and the other was non-Latina. Group Two was facilitated by one non-Latina researcher. All focus group facilitators were female and were familiar with Latino culture. Prior to the initiation of the focus group interviews, group facilitators reviewed the informed consent form with participants, answered all questions, and obtained written consent from each participant. Participants were then asked to discuss conversations that they have had with their parents about the use of alcohol, tobacco, and other drugs. Questions posed to guide the focus group conversations included: “What messages do you recall your parents giving you regarding the use of cigarettes? Alcohol? Other drugs?”; “What triggered these conversations?”; “Who else was present during these conversations? Did they also participate in the conversations?”; “What did your mothers say about drug and alcohol use? What did your fathers say?”; “Did your parents communicate the same or different messages to your siblings of the opposite sex?”

Focus groups were run based on the principles of Kruger and Casey (2002). Leaders summarized the discussion at key points as a member checking device, asked for clarification as needed to facilitate understanding of the discussion, and encouraged members to share differing points of view to deepen the dialogue and increase the likelihood of saturation (Lincoln & Guba, 1985). Each focus group interview was audio-taped and later transcribed by undergraduate research assistants. After the initial transcription was complete, additional undergraduate research assistants reviewed the typed transcript while listening to the focus group audio files to identify errors in the initial transcription process. Notes were also taken during each interview in the event that recording equipment malfunctioned and to provide summary points.

Focus group interviews were transcribed and the data were analyzed using the written transcripts and from the facilitators' notes. Qualitative data analysis begins with becoming extremely familiar with the data (Morse & Field, 1995). Morse and Field (1995) indicated that four cognitive processes are integral to analysis of all qualitative data: comprehension (understanding the data and making sense of it), synthesis (getting a "feel" for the data, or having sufficient understanding or grasp of the data to be able to make generalized statements about the participants), theorizing (systematic selection and "fitting" of alternative models to the data), and recontextualization (generalizing the emerging theory to other settings and populations). These four processes are essentially sequential. For example, a reasonable level of comprehension must be achieved by the researcher before being able to make generalized statements about the participants (or, synthesize), and a successful synthesis should precede formation of any new theory based on the data.

Transcripts were read and coded by the principal investigator of the study in order to identify emerging themes and constructs regarding parental messages about alcohol, tobacco, and other drug use. The content of participants' responses in the focus groups along with the facilitators' notes were systematically analyzed. A thematic analysis was conducted for identifying common themes and threads in participants' responses across the two focus groups. Themes are more difficult to identify since themes are often concepts that are indicated by the data rather than being concretely conveyed. They become easier to identify when the researcher steps back and considers what the participant is "trying to tell us" (Morse & Field, 1995). In Study 1, this approach to analyzing data for emerging themes and constructs was utilized. Due to time constraints between Study 1 and Study 2, a second coder was not employed.

Study 1: Results and Discussion

Themes of parental messages about alcohol, tobacco, and other drugs were identified through the analysis of these focus groups and included: punishment for use, no tolerance for use, personal and family-based examples of why use is bad, implied that using is bad without directly saying so, using would be disrespecting parents and the family, using could affect your future, taking safety precautions if you are going to use, use your own judgment, health consequences of use, and never directly addressed the topic. Several excerpts from focus group transcripts are included in Table 1. While participants did not describe specific messages about abstaining from substance use due to religious reasons, religion was discussed as a major influence within their families and as a deterrent from substance use. For instance, one male participant stated: "We have more of a, like, a traditional Catholic-Spanish culture which applies to all drugs, alcohol, and everything. Like, you really just,

especially for a female, you're basically on lock down until you're married." This quote also alludes to another theme that was discussed during both focus groups—gender differences in parental monitoring of substance use. More precisely, focus group members conveyed that gender differences in drinking norms and values were present in their families, with drinking being less acceptable for females. While females are permitted to drink, they tend to be more highly monitored even when they are of legal age as heavy drinking was unacceptable for females.

Themes which emerged from the focus groups were consistent with much of the previous findings of Miller-Day and colleagues (Miller-Day, 2008; Miller-Day & Dodd, 2004). Identical to the primarily Caucasian college student samples in Miller-Day's studies, Latino emerging adults in the current study conveyed that their parents communicated that they would not tolerate alcohol or other drug use and that punishments would be implemented if rules about substance use were broken. Further, participants reported that their parents educated them about the health (e.g., liver disease) and safety (e.g., drunk driving, risky sexual situations) risks of substance use as well as the potential legal and other future-oriented consequences of substance use (e.g., limited career options). These messages were also described in previous research (Miller-Day, 2008; Miller-Day & Dodd, 2004), as were parental messages focused on providing accounts of how their life or lives of friends and family members were affected by drugs or drug use. Not unlike the prior investigations, the current focus groups identified parents as expressing the desire for offspring to take safety precautions if they did use. For instance, one participant reported being told that it was preferable for her to get drunk at home, experience the hangover there, and avoid having to drive drunk. Some participants indicated that their parents either did not directly address

the issue of substance use or indirectly expressed their views. However, even though these individuals denied receiving specific messages on the use of alcohol, tobacco, or other drugs, they conveyed that they were clear on their parents' stance against substance use. The message that substance use should be avoided in order to prevent the disappointment of parents has not been a consistent finding in previous studies, but was a salient theme in the

Table 1.

Parental Messages Regarding Substance Use that Emerged from Focus Group Analysis

Message	Excerpt
Punishment for Use	<p>“Let’s just say because of what happened to my cousin, the whole incident when they found him passed out in the bathroom. Early that morning, my dad was like ‘If that ever happened to you, your allowance is cut, we’ll take your car away’...I mean everything would be taken away from me...”</p> <p>“My mother would take things away from me when it came to my punishment.”</p>
No Tolerance for Use	<p>“My brother was in high school, he came home one night drunk as all can be.... my mom actually took my brother and actually made him say where he was and what he did and um, and went to the party, saw the people who were at the party, called the cops, told their parents, and then took my brother to the base, because we’re military and got him a breathalyzer and blood test, and came home and beat his butt. And then, so, like I saw that and I was just like ‘I’m never doing drugs, I’m never getting caught if I do do drugs. I’m never coming home if I do do drugs.’ It was just kinda like ‘okay, mom takes drugs seriously.’”</p> <p>“My mom wouldn’t she has like zero tolerance when it comes to that.”</p>
Personal and Family-Based Examples	<p>“My father... he didn’t want me to become a drunk or a... an alcoholic. We have a lot of alcoholism that runs our family, people did die [IA] liver [IA] thirty-four. So he was very concerned and uh he asked that I tone it down, but he knew like there was no way from an early age they were gonna be able to control like consumption, but luckily I took the message to heart and slowed it down a lot.”</p> <p>“I had some family members on my mother’s side that still live in Puerto Rico, that would have issues with heroin, things like that the real hard stuff, the hardest of the hard and [IA] not necessarily not to do it because that was a death threat implied. That’s stupid don’t do that. But just telling you, you know, this is what happened to your family member that did this and this and this and this destructive lifestyle and [IA] whatever, whatever.”</p>

Table 1 (Continued)

<p>Implied that Substance Use was Bad without Directly Stating this</p>	<p>“And when we was younger, he used to do it a lot more...smoke his pipe, do his little liquor. And I was just watching him and I always thought it was so cool how he would be smoking cigars and everything. And I would have my little French fries at McDonald’s and I would pretend I was smoking a cigarette. I’d go...[makes puffing sound]. And I remember one time my dad walked in, he got so mad. Like, he started yelling and they started yelling at each other. He comes back and he said don’t do that...don’t do that...don’t do that...don’t do that.”</p>
<p>Using as Disrespectful to Parents and Family</p>	<p>“He came home drunk...she [mother] didn’t address it but he knew like that she was extremely like disappointed and I think it’s more so like the disappointment of ‘Crap, I got caught. I knew I shouldn’t have done that.’ You know, I knew my mom looks down on me for that or um or...and I was just like, okay I’d rather get hit or like get punished than have my mom come to me and be like ‘Look, you know that drugs are bad for you. You know that alcohol makes you do stupid stuff all that, but like for real I expected more from you.’ And that’s just kinda like ‘Okay, thanks.’ Walk away with my tail between my legs and just go cry or something.”</p> <p>“My dad it was mostly silence like he didn’t talk to me (laughs) and that meant like the end of the world to me like ‘ohh noo what did I do? He’s not talking to me.’ I’m like I’m a daddy’s little girl when it comes to him like I love my dad and adore him that if he rejects me and then I know I did something wrong.”</p>
<p>Effects on Your Future</p>	<p>“...when I go out she’s [mother] just always like don’t do anything you’re gonna regret cause you know anything that you can do has an impact on your life cause you’re older than 18 now you can go to jail so...”</p> <p>“Well she [mother] was just basically saying ‘you know you can really get ...in a lot of trouble. It’s just not the right kind of life you should live. [IA] You know you see a lot of people out there that can ruin bright futures through use of substances.’ And she tried to you know convey that to me. Said ‘you know when you’re young it happens and it’s understandable if it happens, but at the same time you have to be able to stay focused on what your trying to make out of yourself and not let the drugs make you who you are.’”</p>
<p>Condoned Use/Take Safety Precautions if You Do Use</p>	<p>“[They] said you know we’d rather you guys get drunk here and experience the hangover and all that the bad stuff that comes with it than you have to go out and try it and then try to drive home...”</p> <p>“...just be careful, be safe.”</p>

Table 1 (Continued)

Never Directly Addressed	“My parents, like hers, never really actually came out and said don’t drink, don’t drink and drive, don’t smoke marijuana, don’t do crack, don’t do any of that stuff. They never actually said it. I think in my household we knew not to do it.”
Use Your Own Judgment	<p>“My parents are very open about like what they consider okay and what they don’t consider. They actually have no trouble talking to me but [IA] um like alcohol use like they don’t like me drinking but then again they also like taught me how to do it...It is okay to drink, just know your limits...”</p> <p>“...[use] our own judgments and like you know they, they’re [IA] we’re old enough...”</p>
Health Consequences	“My parents, I mean they used to smoke. It’s just it’s just so bad for you that they’re really like you know, concerned about like our health really. More than just the social view of it.”

current investigation. Nearly all participants discussed the desire to avoid displeasing their parents and indicated that they would feel guilt and shame if their parents discovered drug use or excessive alcohol use. The most striking difference between the messages and themes identified via the current focus groups and the preceding research on parent-child communication about substance use is the emergence of religion as a deterrent of substance use. This finding extends previous inquiries on the risk and protective factors for substance use which identified religious beliefs as protective against use (e.g., Bachman et al., 2002, Kliewer & Murrell, 2007).

Scale Development

Results of the focus groups were used in conjunction with previous research completed by Miller-Day and colleagues (Miller-Day, 2002; Miller-Day & Dodd, 2004) as well as ongoing research by Kliewer and colleagues (Kliewer, Zaharakis, & Reid-Quiñones, 2009) to create a list of parental messages about alcohol, tobacco, and other drug use. Parental messages types identified in previous research that were not discussed in the focus groups conducted in Study 1 included: rewards for non-use, resisting peer pressure, legal reasons for non-use, and substance use's effects on personal safety. Additionally, values of Latino culture that previously have been linked to lower rates of drug use were incorporated into the list of parental messages, such as familismo, respeto, and religious beliefs. The values of familismo and respeto were indirectly conveyed by focus group participants; religion was discussed in relation to substance use as well as relative to other expectations for youth behavior. From this list of general parental messages about substance use, an initial item pool was generated. These items were reviewed by the co-chairs of this dissertation committee and an additional graduate student with experience researching and coding

parental messages about alcohol, tobacco, and other drug use. Feedback from these reviewers was considered and suggestions for revisions were implemented as deemed appropriate. Fifteen domains of messages were identified with five items within each domain, resulting in a 75-item questionnaire which is detailed in Table 2. The scale was constructed so that items were rated on a 5-point likert-type scale which consisted of the following response items: Strongly Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, Strongly Agree. Items within each domain included a mix of positively and negatively worded items.

Table 2.

Parental Messages Measure: Item Number and Content

No.	Content for Parental Messages Questionnaire Items by Subscale
Use Own Judgment	
1	My parents said they trusted me to make the right decision regarding alcohol, tobacco, or drug use.
16	My parents encouraged me to use my own judgment when it came to alcohol, tobacco, or drug use.
31	My parents encouraged me to know my own limits in regards to alcohol, tobacco, or drug use.
46	My parents encouraged me to think for myself about my alcohol, tobacco, or drug use.
61	My parents encouraged me to wait until I was legally old enough to judge for myself.
No Tolerance	
2	My parents said that they would not tolerate me using.
17	My parents indicated that would not help me out if I got in trouble due to alcohol, tobacco, or drug use.
32	My parents threatened to drug test me if they suspected that I was using.
47	My parents said that I was on my own if I got into trouble due to alcohol, tobacco, or drug use.
62	My parents said that using was not allowed in their house.
Hinted at Disapproval/Never Explicitly talked about it	
3	My parents hinted at their disapproval of alcohol, tobacco, or drug use, but never explicitly talked about it
18	My parents never explicitly told me where they stood on alcohol, tobacco, or drug use, but would make negative comments about other people's use.
33	My parents would refer to people who use alcohol, tobacco, or alcohol as being "stupid" but never explicitly told me that they didn't want me to use.
48	My parents never hinted about their opinions about alcohol, tobacco, or drug use,

clearly telling me how they felt.

- 63** My parents implied how they felt about alcohol, tobacco, or drug use, in their comments on things like movies or friends.
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Table 2 (Continued)

No.	Content for Parental Messages Questionnaire Items by Subscale
Provided Information on Health Consequences	
4	My parents talked to me about the long-term health risks of alcohol, tobacco, or drug use, like cancer and other diseases.
19	My parents provided me with written information, like pamphlets or books, about the negative health consequences of alcohol, tobacco, or drug use.
34	My parent(s) talked about the short-term health risks, like shortness of breath.
49	My parents talked to my about the impact using could have on my appearance, like having bad breath, stained fingers and bad smelling clothes and hair.
64	My parents did not share with me information about the health risks of using.
Threatened Punishment	
5	My parents threatened to take away my car if I used alcohol, tobacco, or drugs.
20	My parents threatened to make me support myself financially if I used alcohol, tobacco, or drugs.
35	My parents said that my privileges would be revoked if I used alcohol, tobacco, or drugs.
50	My parents never threatened punishment for using alcohol, tobacco, or drugs.
65	My parents threatened to 'ground me' if they caught me using alcohol, tobacco, or drugs.
Rewards for Non-Use	
6	My parents told me that they would support me financially if I stayed away from alcohol, tobacco, or drugs.
21	My parents said they would give me more freedom if I stayed away from alcohol, tobacco, or drugs.
36	My parents bribed with incentives (e.g. monetary rewards, trips, car) to not use alcohol, tobacco, or drugs.
51	My parents never offered me rewards for not using alcohol, tobacco, or drugs.
66	My parents told me they would let me take part in activities that I wanted to if I didn't use alcohol, tobacco, or drugs.
Never Addressed	
7	My parents never sought out opportunities to discuss with me their views on alcohol, tobacco, or drug use.
22	My parents never brought up the issue of alcohol, tobacco, or drug use.
37	My parents did not seem to care whether or not I used alcohol, tobacco, or drugs.
52	My parents regularly discussed using alcohol, tobacco, or drugs with me.
67	My parents talked with me about using alcohol, tobacco, or drugs only once or twice, but never besides those times.

Table 2 (Continued)

No.	Content for Parental Messages Questionnaire Items by Subscale
Resist Peer Pressure	
8	My parents told me to not listen to anybody who uses alcohol, tobacco, or drugs.
23	My parents encourage me to avoid peers who use alcohol, tobacco, or drugs because they would just pressure me to use.
38	My parents told me that true friends would not pressure me to use alcohol, tobacco, or drugs.
53	My parents told me to 'just say no' to peers or anyone who tried to pressure me to use alcohol, tobacco, or drugs.
68	My parents never talked with me about my peers trying to get me to use alcohol, tobacco, or drugs.
Effects on the Future	
9	My parents stressed that using alcohol, tobacco, or drugs could prevent me from getting a good job in the future.
24	My parents said that using alcohol, tobacco, or drugs may result in legal troubles that would limit my future.
39	My parents said that choices that I make when I am young, like using alcohol, tobacco, or drugs, would alter my life forever.
54	My parents didn't talk with me about the impact that using alcohol, tobacco, or drugs could have on my future.
69	My parents said that if I used alcohol, tobacco, or drugs I wouldn't be able to go to college.
Shared Personal or Family-Based Examples	
10	My parents told me about friends or family who messed up their life (e.g., lost jobs or got divorced) or health (e.g., cancer or death) because of their alcohol, tobacco, or drug use.
25	My parents shared with me their personal experiences and how they regretted past choices to use drugs.
40	My parents pointed out people in the neighborhood that had negatively altered their lives because of alcohol, tobacco, or drug use as reasons to abstain.
55	My parents did not share their experiences with using or talk with me about family or friends who have used alcohol, tobacco, or drugs.
70	My parents shared stories with me about family and friends experiences with using alcohol, tobacco, or drugs.
Disrespecting Parents/Family	
11	My parents said that I would be disrespecting them if I used alcohol, tobacco, or drugs.
26	My parents said that if I used alcohol, tobacco, or drugs it would reflect badly on them.
41	My parents stressed that if I used alcohol, tobacco, or drugs it would be an embarrassment to them.
56	My parents never told me that using alcohol, tobacco, or drugs would be embarrassing or disrespectful to them.
71	My parents told me that other adults in our community would look badly on them if I used alcohol, tobacco, or drugs.

Table 2 (Continued)

No.	Content for Parental Messages Questionnaire Items by Subscale
Religious Beliefs	
12	My parents used religious involvement to help convey their anti-use message, like encouraging me to participate in church youth group activities aimed at preventing alcohol, tobacco, or drug use.
27	My parents said that using alcohol, tobacco, or drugs was against our religion
42	My parents cited scriptures from our religion to support their anti-use stance.
57	My parents never told me that alcohol, tobacco, or drug use was against our religion.
72	My parents said that using alcohol, tobacco, or drugs would make me less of a Christian/Muslim/Jew/etc.
Condoned Use	
13	My parent(s) used alcohol, tobacco, or drugs with me.
28	My parent(s) allowed me to use alcohol, tobacco, or drugs at home because they felt they could at least supervise me while I was using.
43	My parent(s) said that they knew that I was going to do what I wanted to do regardless of how they felt and just accepted my use (of alcohol, tobacco, or drugs).
58	My parents did not condone my using alcohol, tobacco, or drugs at home or elsewhere.
73	My parents condoned my use of alcohol, tobacco, or drugs.
Legal Reasons	
14	My parents said that laws about using alcohol, tobacco, or drugs are meant to be obeyed.
29	My parents stressed that I should not do things that are illegal, like using alcohol, tobacco, or drugs.
44	My parents said that I could go to jail if I broke the laws about using alcohol, tobacco, or drugs.
59	My parents didn't talk with me about laws related to using alcohol, tobacco, or drugs.
74	My parents said that if I was going to use alcohol or tobacco, I should at least wait until I was of legal age.
Safety	
15	My parents told me that using alcohol, tobacco, or drugs could alter my senses, coordination, and my ability to make clear decisions.
30	My parents warned me that alcohol, tobacco, or drug use may lead to unwanted things like rape.
45	My parents warned me that alcohol, tobacco, or drug use could lead to a person becoming a danger not only to themselves but also to other individuals.
60	My parents didn't talk to me about how using alcohol, tobacco, or drugs could impact my safety and decision-making.
75	My parents warned me that using alcohol, tobacco, or drugs could put me in unsafe situations.

Study 2: Method

Participants

Following the first study, an additional sample of Latino emerging adults ($N = 224$) was recruited from Virginia Commonwealth University, other Virginia colleges, and community organizations with primarily Latino members. This sample was utilized to examine the psychometric properties of the questionnaire developed through Study 1 and to assess the associations between parental messages and substance use outcomes. Two participants produced significant missing data on the parental message items; therefore, their data was excluded from all analyses resulting in a total sample of 222. To be eligible, participants must have been between the ages of 18 and 25, Latino, and English-speaking. All study participants identified their ethnicity as being “Hispanic or Latino.” Additionally, as can be seen in Table 3 below, 50.9 percent of the sample identified their race as “other.” When given the opportunity to describe their race, 65.5 percent of these participants (33.3 percent of the entire sample) wrote in either “Hispanic,” “Latino(a),” or their families’ Latino country of origin. Nearly three quarters of sample (72.5 percent) reported that they were born in the U.S.

Procedures

Recruitment efforts at Virginia Commonwealth University and other Virginia universities included emails targeted to Latino student groups (e.g., Latino Student Association, VCU's Latino fraternity and sorority), department list serves, international student list serves, and other list serves with high concentrations of Latino subscribers. Flyers were also posted on VCU's Monroe Park and Medical Campuses. Participants then contacted the study staff via email or phone calls to express interest in study participation. The sample consisted primarily of current undergraduate students enrolled in a bachelor degree program (88.3 percent). Primarily college students were sought for Study 2 for reasons of procedural feasibility and because high levels of alcohol and substance use on college campuses have been increasingly recognized as a public health concern (Gledhill-Hoyt, Lee, Strote, & Wechsler, 2000). Furthermore, studies examining the protective effect of parent-child communication in preventing substance use among college students have not included Latinos.

The data were obtained from a confidential self-report assessment battery that was administered via a paper-based questionnaire. Eligible participants provided written informed consent and were then provided with the paper-based assessment battery. The assessment battery took an average of 45 minutes to complete. Participants received \$25 cash as compensation for their participation in the study. Additionally, two pizza party recruitment events were held in conjunction with Latino student organizations; Virginia Commonwealth University's Latino Student Association and George Mason University's Hispanic Student Association. Participants who attended these pizza party recruitment

events received pizza and soda while completing the survey in addition to \$25 cash for their participation.

Measures

Demographics. Participants reported on their age, gender, race, ethnicity, nativity status, generational status, educational level, marital status, employment status, and religious background. They were also asked to report on their parents' nativity status and estimated family income. Demographic variables are presented in Table 3.

Table 3.

Summary of Study Participant Demographics (N=222)

Demographic	<i>n</i>	%
Gender		
Female	137	61.7
Male	85	38.3
Race^a		
White	60	27.0
Black	21	9.5
Native American	16	7.2
Asian	4	1.8
Native Hawaiian or other Pacific Islander	3	1.4
Other	113	50.9
Country of Birth		
United States	161	72.5
Other	61	27.5
Mother's Country of Birth		
United States	39	17.6
Other	183	82.4
Father's Country of Birth^a		
United States	39	17.8
Other	180	81.1

Table 3 (Continued)

Demographic	<i>n</i>	%
College Status^a		
Freshman	29	13.5
Sophomore	48	22.3
Junior	64	29.8
Senior	55	25.6
Graduate/Professional Student	13	6.0
Non-degree Seeking Student	3	1.4
Other	3	1.4
First in Family to Attend College^a		
Yes	89	40.5
No	131	59.5
Marital Status		
Single, never been married	217	97.8
Married	5	2.3
Employment Status		
Unemployed	96	43.2
Part-time	102	45.9
Full-time	24	10.8

Table 3 (Continued)

Demographic	<i>n</i>	%
Estimated Family Income (annual) ^a		
< \$25,000	32	15.1
\$25,000-\$50,000	62	29.2
\$50,000-\$75,000	43	20.3
\$75,000-\$100,000	33	15.6
\$100,000-\$125,000	16	7.5
\$125,000-\$150,000	9	4.2
\$150,000-\$175,000	5	2.4
\$175,000-\$200,000	5	2.4
Over \$200,000	7	3.3
Religious Background ^a		
Catholic	144	66.1
Protestant or other Christian	49	22.5
No religious background	17	7.8
Other	8	3.7
Age ^a	214	<i>Mean</i> = 21; <i>SD</i> = 1.69; Range = 18-25

^aThe remaining frequency is due to missing data.

Parental Messages. As discussed in the results for Study 1, the messages identified in Study 1 were used to create a measure with items assessing parental messages regarding alcohol, tobacco, and other drug use. The psychometric properties of this measure were

examined in this second study. Respondents were asked to “Recall your interactions with your parents through adolescence and up to this current point and answer the following questions based on what you recall from those years up until now. ‘During this time, my parent(s)/guardian(s) did or said the following regarding the use of alcohol, tobacco, marijuana, or other drugs.’” Respondents were then asked to identify the extent to which they agree that their parents conveyed each message. Responses were measured on an interval scale ranging from 1 to 5 (1 = strongly disagree, 5 = strongly agree).

Acculturation. The acculturative status of the participant was assessed using the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II; Cuéllar, Arnold, & Maldonado 1995). The ARSMA-II is a 30-item instrument developed to assess the acculturation process through an orthogonal multidimensional approach. It does so by measuring cultural orientation toward Mexican and Anglo culture independently. The ARSMA-II is capable of generating the four subscales: United States Orientation (Assimilation), Other Country Orientation (Separation), Both Countries Orientation (Integration), and Neither Country Orientation (Marginalization). Reported internal reliability coefficients ranged from .86 to .88. The United States Orientation and Other Country Orientation subscales were utilized in the current study and reliability analyses revealed internal consistency alphas of .69 and .85, respectively. Consistent with previous research using the ARSMA-II in various Latino samples, items were reworded to measure acculturation across diverse Latino subgroups rather than solely Mexican-Americans.

Familism. Participants’ level of familism (bearing toward the welfare of one’s own family) was measured using the familism subscale of the Mexican American Cultural Values Scale for Adolescents and Adults (Knight et al., 2010). This scale consists of 16 items which

are rated on a scale from 1 (*not at all*) to 5 (*completely*). Higher scores indicate higher levels of familism. Reliability analyses of the current sample produced an internal consistency alpha coefficient of .93.

Religiosity. Participants' level of religiosity was assessed with the Religious Commitment Index-10 (Worthington, Wade, Hight, Ripley, et al., 2003). The RCI-10 is a 10-item self-report measure that is consistent with Worthington's (1988) model of religious values in counseling. It was constructed to be a brief screener for assessing religious commitment. Items are rated on a 5-point scale ranging for "Not at all true of me" to "Totally true of me." Items are summed to form a total religious commitment score. Reliability coefficients for a religiously diverse sample of college students ranged from .92 to .98 for specific religious groups and was .95 for the overall sample (Worthington, 1988). Reliability analyses of the current sample produced an internal consistency alpha coefficient of .95.

Drug Use. Participants' lifetime and past 30 day frequency of self-reported alcohol, tobacco, and illicit drug use was assessed via a modified version of the CORE Alcohol and Drug Survey (CADS; Presley, Meilman, & Leichliter, 1998). The CADS was developed in the late 1980's by the U.S. Department of Education and advisors from several universities and colleges. It includes items assessing age of use initiation, past 30 day use, and locations of use. Presley et al. (1998) reported Cronbach alpha reliability estimates ranging from .70 to .94. and indicated that the CADS demonstrated acceptable content-related validity (inter-rater agreement for item inclusion = .90). The current study utilized items assessing age of first use, past year use, and past month use for the following substances: cigarettes, alcohol, marijuana, cocaine, amphetamines, sedatives, hallucinogens,

opiates, inhalants, designer drugs, steroids, and other illegal drugs. CADS items measuring recent binge drinking (5 or more drinks in one sitting) and average drinks per week also were included. Several survey items were recoded in order to facilitate data analyses. The items assessing age of first use included a response of “never” which allowed for the creation of a dichotomous variable indicating whether the participant had ever used the particular substance. Subsequently, a “total number of other drugs used” variable was computed by adding the number of “yes” responses to the “ever used” variables for cocaine, amphetamines, sedatives, hallucinogens, opiates, inhalants, designer drugs, steroids, and other illegal drugs.

Drug Use Severity. Problems associated with participants' drug use was assessed with the Drug Abuse Screening Test-20 (DAST-20; Skinner, 1982). The DAST-20 is a 20-item self-report instrument designed to identify individuals who are abusing drugs. DAST-20 items cover a variety of consequences related to drug use without being specific about the drug. Items are score 0 = *No* and 1 = *Yes*. It yields an index score of the degree of problems related to drug use and misuse. A score of 16 or higher is considered to indicate a very severe abuse or dependency condition. Internal consistency estimates of the DAST-20 range from .74 to .95 depending on the characteristics of the sample (Yudko, Lozhina, & Fouts, 2007). Skinner (1982) produced the highest internal consistency coefficient alphas (.92 and .95) when administering the DAST-20 on 223 volunteers seeking treatment for drug and alcohol problems. The lowest internal consistency (.74) was measured by Skinner and Goldberg (1986) when the DAST-20 was administered to 105 narcotic users. The DAST-20 is a highly face-valid instrument, which makes it susceptible to faking good (Yudko, Lozhina, & Fouts, 2007). The DAST-20 displays acceptable criterion validity when scores

on the DAST total score are compared to scores on other measures of drug or alcohol use. For instance, El-Bassel and colleagues revealed a significant positive correlation between the DAST and the MAST (measure of problems related to drinking) total scores ($r = .59$ in a sample of 176 union members) (El-Bassel, Schilling, Schinke, Orlandi, et al. 1997). Reliability analyses of the current sample produced an internal consistency alpha coefficient of .95.

Study 2: Results and Discussion

Principal Components Analysis

The parental message measure was examined using Principal Components Analysis (PCA). PCA was chosen over other forms of exploratory factor analyses (EFA) due to a primary goal of data reduction; PCA reduces the measured variables into smaller sets of variables, referred to as components (Tabachnick and Fidell, 2007). The original form measure administered in the current study was 75 items in length which can be cumbersome and is not practical to administer in the context of briefer studies. Additionally, PCA provides some initial information on the structural underpinnings of the measure. Confirmatory factor analyses (CFA) were not conducted at this stage of measure development, as they are more appropriately employed after the factor structure is identified through EFA techniques in order to confirm that the factor structure holds up in various sample types and to model how the measure's factors are related to other outcomes.

Factorability of the correlation matrices was calculated using a Kaiser-Meyer-Olkin measure of sampling adequacy of .88 and Bartlett's Test of Sphericity, $\chi^2(276, N=200) = 7703.36, p < .0001$, both indicated that the data were sufficiently amenable to PCA. Solutions with up to 20 components had eigenvalues greater than 1 and met the Kaiser-

Guttman retention criteria (Benter & Bonnet, 1980; Kaiser, 1974). However, since some consider Kaiser's criterion an arbitrary standard that often overestimates the number of factors (e.g., Floyd & Widaman, 1995), eigenvalues were also examined using Cattell's scree plot (Cattell, 1966) and the point at which there was a notable drop in values was discerned. Inspection of the scree plot of eigenvalues associated with component structures showed an 'elbow' at the six to eight component solutions. Up to six to eight components explained most of the variance in the 75-item Parental Messages Questionnaire, and the addition of further components explained relatively small additional amounts of variance. However, examination of the rotated component matrix suggested that a 6 component model best fit the data. Specifically, after removing items with low communalities and those with complex loadings, the 7 and 8 component models included at least one component comprised of two or fewer items. After deciding on the 6 component solution, additional data reduction steps were taken in order to eliminate items not strongly loading on any of these 6 components.

Additionally, one must make a decision on the type of rotation, orthogonal or oblique. Orthogonal rotations constrain factors to be uncorrelated and oblique rotations permit correlations among factors. Tabachnick and Fidell (2007, p. 646) asserted that "Perhaps the best way to decide between orthogonal and oblique rotation is to request oblique rotation [e.g., direct oblimin or promax from SPSS] with the desired number of factors and look at the correlations among factors...if factor correlations are not driven by the data, the solution remains nearly orthogonal. Look at the factor correlation matrix for correlations around .32 and above. If correlations exceed .32, then there is 10% (or more) overlap in variance among factors, enough variance to warrant oblique rotation unless there are compelling reasons for orthogonal rotation." I examined the correlations of the factors when an oblique rotation

(oblimin) was employed and the factors did not demonstrate correlations. Therefore, in line with the recommendations of Tabachnick and Fidell (2007), I conducted an orthogonal rotation using varimax.

In line with Costello and Osborne's (2005) recommendations, the communalities of variables after extraction were examined for values less than .50 as these variables are recommended to be removed and the PCA re-run until all post-extraction communalities are .50 or greater. The first iteration of the PCA revealed that 44 items did not demonstrate post-extraction communalities of .50 or greater; therefore, these items were removed and the PCA was re-run. The second iteration of the PCA revealed two additional items for removal due to low communalities. As all communalities were .50 or above at the third iteration of the PCA, the rotated component matrix was then examined to identify variables for removal due to a complex loading (i.e., a loading of $> .40$ onto more than one component and loadings difference between components was $\leq .10$), not loading onto any component with at least a .40 value, or loading onto a component with fewer than 3 variables. This resulted in one item being removed before a fourth iteration of the PCA was completed. The PCA was run again resulting in all communalities at or above .50 and three additional items identified as demonstrating complex structure. These items were removed on the fifth iteration of the PCA conducted, which revealed a satisfactory solution and included 24 items. Examination of the fifth PCA results indicated that all variables demonstrated post-extraction communalities of .50 or greater and simple structure loading (i.e., loaded onto only one component at or above .40 or, if it loaded onto two components, the difference between loadings was $> .10$). Furthermore, all components were comprised of at least 3 variables. The resulting components, items, and component loadings are presented in Table 4 below.

An examination of the resulting components' regression weights confirmed that these 6 components were independent of one another. Table 5 provides a summary of the components and the corresponding parental message questionnaire item numbers.

Table 4

Rotated Component Matrix – Varimax Rotation

Item	Component					
	1	2	3	4	5	6
My parents threatened to take away my car if I used alcohol, tobacco, or drugs.	.812	.206	.067	-.027	.053	.183
My parents told me that they would support me financially if I stayed away from alcohol, tobacco, or drugs.	.786	.129	.032	.129	.066	.138
My parents threatened to make me support myself financially if I used alcohol, tobacco, or drugs.	.707	.224	-.038	.222	.262	.096
My parents said they would give me more freedom if I stayed away from alcohol, tobacco, or drugs.	.674	.190	.162	.202	.249	-.019
My parents said that my privileges would be revoked if I used alcohol, tobacco, or drugs.	.622	.134	.230	.469	.114	.171
My parents threatened to 'ground me' if they caught me using alcohol, tobacco, or drugs.	.594	.191	.134	.314	.092	-.003
My parents said that using alcohol, tobacco, or drugs was against our religion	.129	.843	.138	.202	.071	.112
My parents said that using alcohol, tobacco, or drugs would make me less of a Christian/Muslim/Jew/etc.	.151	.820	-.099	.141	.057	.235
My parents cited scriptures from our religion to support their anti-use stance.	.218	.814	-.006	.136	.034	.024
My parents used religious involvement to help convey their anti-use message, like encouraging me to participate in church youth group activities aimed at preventing alcohol, tobacco, or drug use.	.295	.736	-.008	.067	.212	.102
My parents never told me that alcohol, tobacco, or drug use was against our religion. (<i>r</i>)	.130	.670	.317	.218	.099	-.088
My parents didn't talk with me about laws related to using alcohol, tobacco, or drugs. (<i>r</i>)	.146	.056	.831	.030	.189	.021

Table 4 (Continued)

Item	Component					
	1	2	3	4	5	6
My parents didn't talk to me about how using alcohol, tobacco, or drugs could impact my safety and decision-making. (<i>r</i>)	.025	.040	.812	.082	.169	.177
My parents did not share with me information about the health risks of using. (<i>r</i>)	.163	.011	.776	.091	-.018	.105
My parents didn't talk with me about the impact that using alcohol, tobacco, or drugs could have on my future. (<i>r</i>)	-.024	.080	.730	-.095	.065	.296
My parents said that if I used alcohol, tobacco, or drugs it would reflect badly on them.	.196	.212	.150	.798	.229	.136
My parents stressed that if I used alcohol, tobacco, or drugs it would be an embarrassment to them.	.294	.249	.022	.793	.174	.170
My parents told me that other adults in our community would look badly on them if I used alcohol, tobacco, or drugs.	.242	.257	-.106	.660	.110	.226
My parents encourage me to avoid peers who use alcohol, tobacco, or drugs because they would just pressure me to use.	.117	.138	.096	.169	.825	.160
My parents said that using alcohol, tobacco, or drugs may result in legal troubles that would limit my future.	.239	.130	.193	.232	.731	.232
My parents stressed that using alcohol, tobacco, or drugs could prevent me from getting a good job in the future.	.282	.108	.178	.093	.639	.325
My parents warned me that using alcohol, tobacco, or drugs could put me in unsafe situations.	.023	.058	.250	.146	.271	.753
My parents said that choices that I make when I am young, like using alcohol, tobacco, or drugs, would alter my life forever.	.166	.195	.186	.194	.128	.717
My parents warned me that alcohol, tobacco, or drug use could lead to a person becoming a danger not only to themselves but also to other individuals.	.266	.069	.229	.183	.291	.651
Percent of explained variance	11.1	10.0	10.7	6.8	7.0	8.1
Initial eigenvalue	16.68	5.55	3.46	2.97	2.51	2.14

Note. Reverse scored items are indicated with an (*r*); bold indicate the component on which the item loads.

After reviewing the content of the remaining items for each component, it was noted that component 1 generally referred to parents taking action in response to their offspring's use or non-use of substances in the form of rewards and punishments. This 6-item component, which accounted for 11.1 percent of the variance, was comprised of items that were initially developed for the "Threaten punishment" and "Rewards for non-use" subscales. Component 1 can be described as a Rewards and Punishments component.

Component 2 (10.0 percent of the variance) was comprised of all 5 of the items originally developed for the Religious Beliefs subscale. Component 3 (4 items; 10.7 percent of the variance) was comprised of items were initially members of several of the original subscales—Effects on Future, Legal Reasons, Safety, and Provided Information on Health Consequences. However, closer examination of the actual items revealed that they were all negatively worded in the direction of "My parents didn't talk with me about..." or "My parents did not share with me..." The resulting component appeared to represent items measuring a passive parental approach and can be described as Never Addressed.

Component 4 (3 items; 6.8 percent of the variance) was comprised of items that were items originally members of the Disrespectful to Parents/Family subscale. Component 4 can be described as Respecting Parents. Component 5 (3 items; 7.0 percent of the variance) was comprised of items which were originally developed for the Avoiding Peer Pressure and Effects on Future subscales. The resulting component can be described as Focus on Yourself. Component 6 (3 items; 8.1 percent of the variance) was comprised of items that were initially members of two subscales—Safety and Effects on Future. Close examination suggested that the items loading onto this component can be described as Negative Consequences of Use.

Table 5

Component-Based Scale Descriptions and Corresponding Parental Messages Items with the Highest Loadings.

Component number and description	Parental Messages Questionnaire items
Component 1 Rewards and Punishment	Q5, Q6, Q20, Q21, Q35, Q65
Component 2 Religious Beliefs	Q12, Q27, Q42, Q57, Q72
Component 3 Never Addressed	Q54, Q59, Q60, Q64
Component 4 Respecting Parents	Q26, Q41, Q71
Component 5 Focus on Yourself	Q9, Q23, Q24
Component 6 Negative Consequences of Use	Q39, Q45, Q75

It is interesting to note that rewards and punishments loaded onto the same scale despite the fact that these items were written to measure distinct messages. This makes conceptual sense in retrospect as both constructs embody underlying parenting values and rules regarding the application of consequences, both positive and negative, for offspring behavior. The retention of the entire Religious Beliefs subscale is remarkable and could be reflective of the significant role of religion within Latino families. While a Never Addressed subscale remained after the PCA, it is notable that the items comprising the current component scale were not the items included in the originally developed Never Addressed subscale. Rather, they are items that were created for other subscales but were negatively worded and intended to be reverse-coded when scoring the subscales. The Respecting

Parents component appears to reflect the Latino cultural value of respeto. While respeto was not directly noted as a parental anti-drug message in the Study 1 focus groups, it was alluded to and appears to be a theme that reliably occurs in parent-child conversations about substance use. In contrast to the preceding components which stress reasons external from the offspring, both the Focus on Yourself and Negative Consequences of Use components reflect parents encouraging avoidance of substance use for the offspring's well-being.

Notably, several of the originally developed subscales did not produce any items with component loadings on the final PCA. These included the Sharing Personal or Family-based Examples, Use Your Own Judgment, No Tolerance, and Condoned Use subscales. The Hinted at Disapproval/Never Explicitly Addressing subscale produced 1 item loading onto Component 4.

Reliability of the six components (based on the final 24-items from the Principal Components Analysis) was assessed using Cronbach's alpha coefficient estimates. The coefficients for each component are illustrated in Table 6 along with a brief description of each component. Further analysis of the alpha coefficient reliability intercorrelations and correlation of the 24-item total scale are presented in Table 7. Examination of Pearson's correlation revealed that each subscale was positively correlated with every other subscale and the total score, except for the Never Addressed subscale as this scale was reverse coded and was negatively correlated with all subscales and the total score. This result is desirable and indicates that each of the subscales represents a component of parental messages about substance use.

Table 6

Reliability Analysis of the 24-Item Parental Messages Measure (N=200)

Subscale	Subscale Description	Number of Items	Alpha Coefficient
Rewards & Punishment	Reflects parents communicating rewards for non-use and punishment for use	6	.87
Religious Beliefs	Reflects parents sharing religious beliefs as reasons for non-use of substances	5	.87
Never Addressed	Reflects parents not directly talking about safety, legal, future, or health risks of substance use	4	.86
Respecting Parents	Reflects parents conveying that substance use would be disrespectful to them and the family	3	.85
Focus on Yourself	Reflects parents communicating avoidance of peer pressure to use and to consider the impact of substance use on future opportunities	3	.80
Negative Consequences of Use	Reflects parents stressing the negative consequences of substance use, like getting into unsafe situations and alter life paths.	3	.80
Total		24	.92

Table 7

Pearson's Correlation Coefficients for 6 Subscales and the Total Score of the 24-Item

Parental Message Measure

	1	2	3	4	5	6	Total	Mean	SD	Range
1 Rewards & Punishments	1							17.20	6.79	6-30
2 Religious Beliefs	.51**	1						13.09	5.84	5-35
3 Never Addressed	-.26**	-.19*	1					8.25	3.86	4-20
4 Respecting Parents	.61**	.53**	-.19*	1				9.70	3.62	3-15
5 Focus on Yourself	.54**	.37**	-.36**	.52**	1			11.97	2.88	3-15
6 Negative Consequences of Use	.45**	.34**	-.51**	.51**	.62**	1		12.28	2.89	3-15
7 Total of 24-Item Parental Messages Q	.85**	.77**	-.13+	.80**	.67**	.59**	1	71.54	16.29	27-109

+ $p < .10$, * $p < .01$, ** $p < .001$.

Relation of Parental Messages to Demographic Variables

Correlations of continuous variables and parental message subscales are presented in Table 8. Age was significantly related to three subscales of parental messages about substance use—Religious Beliefs, Focus on Yourself, and Negative Consequences of Use, as well as the measure Total score, with younger participants reporting higher levels of these types of messages. Additionally, there was a marginal, but not significant, trend for younger participants to report higher levels of messages on the Rewards and Punishments and Respecting Parents subscales. As seen in Table 8, participants' reported level of religious commitment as measured by the RCI-10 was significantly and positively related to most variables examined. In regard to the RCI-10's relation to parental messages, greater reported religious commitment was significantly associated with higher scores on the following subscales of the parental message questionnaire: Rewards and Punishments, Religious Beliefs, Respecting Parents, as well as the Total Score. There was a marginal trend for higher levels of religious commitment to be associated with greater reported messages on the Focus on Yourself subscale. Higher reported levels of familism as measured by the Familism subscale of the Mexican American Cultural Values Scale for Adolescents and Adults were significantly related to higher scores on all subscales of the Parental Messages Questionnaire except for the Never Addressed subscale which was inversely related to familism. Acculturation levels assessed by the ARSMA-II were also correlated with parental messages about substance use. As Latino orientation increased, so did the endorsement of parental substance use messages regarding Rewards and Punishments, Religious Beliefs, Respecting Parents, Focus on Yourself, and Negative Consequences of Use. There was also a marginal, but not significant, trend for stronger Latino orientation to be associated with

lower reported scores on the Never Addressed subscale. Scores on the Anglo Orientation subscale were not significantly correlated with any parental substance use messages.

Table 8

Correlations among Parental Message Subscales and Hypothesized Influencers of Parental Messages

	1	2	3	4	5
1. Age	1				
2. Religious Commitment	-.21**	1			
3. Familism	.01	.22**	1		
4. Latino Orientation	.01	.18**	.22**	1	
5. Anglo Orientation	-.07	.14*	.03	.05	1
6. Rewards & Punishments	-.12+	.17*	.19**	.17*	.10
7. Religious Beliefs	-.14*	.34**	.19**	.23**	-.06
8. Never Addressed	.09	-.07	-.16*	-.13+	-.04
9. Respecting Parents	-.12+	.16*	.24***	.21**	.05
10. Focus on Yourself	-.24***	.11+	.16*	.17*	-.01
11. Negative Consequences of Use	-.15*	.09	.24***	.14*	-.04
12. Parental Messages Total	-.17*	.25***	.22**	.22**	.01

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Independent samples *t*-tests were conducted to examine if there were differences in the frequency of which parental messages were conveyed based on participant gender and parents' country of origin (see Tables 9, 10 and 11). Males and females did not report significantly different rates of parental substance use messages suggesting that in the current

sample parents tended to deliver messages about the use of tobacco, alcohol, and other drugs evenly regardless of gender. This finding is counter to my initial hypothesis and is inconsistent with prior research of Guilamo-Ramos and colleagues (2007) who demonstrated that Latino mothers employ differential parenting practices based on their adolescents' gender. Specifically, their research revealed that Latino mothers explained gender differences in their parenting style to Latino cultural norms of male liberty and female submissiveness which suggest that boys should be raised with more freedom than girls. Given these prior findings, I expected that the general parenting practices of Latino parents would shape the content of messages regarding substance use. Thus, parents, mothers in particular, were expected to relay different messages based on their youth's gender. However, while the current findings may be interpreted to indicate that parents tend to relay the same messages about substance use regardless of the gender of their offspring, it is possible that the manner in which these messages were relayed differed by gender. For instance, mothers may relay similar messages about the use of alcohol, tobacco, and other drugs to their offspring, but it is possible that they reiterate these messages to female offspring through the use of warnings and lectures much more frequently than they do to their male offspring. Alternatively, the results of the current study may be reflective of a more highly acculturated sample than that of previous related research. Mother's country of origin was significantly related to the total score on the Parental Message Measure as well as several subscales, including Religious Beliefs and Focus on Yourself. There was a trend approaching significance for messages related to Respecting Parents, Negative Consequences of Use, and Rewards and Punishments to be associated with mother's country of birth. Participants whose mothers who were not born in the United States reported higher levels of

messages focusing on religious beliefs and the effects of substance use on the future as well as a higher level of messages about substance use in general compared to participants whose mothers were born in the U.S. Interestingly, father's country of origin was not significantly related to any of the parental messages about substance use subscales or the total score. It is interesting that mother's country of origin was related to differences in levels of several parental messages about drugs, but father's country of origin did not significantly relate to any of the domains of parental messages. Participants were instructed to answer the questionnaire based on interactions with their parents, but were not asked to identify which parent delivered the majority of the messages about substance use. These preliminary results suggest that mothers who are born in foreign countries may hold more traditional beliefs and as result may be more likely to communicate certain types of messages to their offspring, specifically messages expressing their value on religion and respeto.

Table 9

Differences in Parental Messages by Participant Gender

	Male (<i>n</i> = 85) <i>M</i> (<i>SD</i>)	Female (<i>n</i> = 136) <i>M</i> (<i>SD</i>)	t-value
Rewards & Punishments	12.03 (6.83)	10.68 (6.72)	1.44
Religious Beliefs	9.93 (5.78)	8.57 (5.84)	1.70
Never Addressed	4.31 (3.56)	4.22 (4.05)	0.18
Respecting Parents	6.72 (3.56)	6.70 (3.67)	0.05
Focus on Yourself	9.06 (2.45)	8.91 (3.13)	0.39
Negative Consequences of Use	9.34 (2.61)	9.24 (3.06)	0.25
Parental Messages 24-Item Total Score	50.41 (15.82)	47.59 (14.53)	1.36

Note. Data from one participant was missing on this variable.

Table 10

Differences in Parental Messages by Mother's Country of Origin

	U.S. (n =38) <i>M (SD)</i>	Other (n = 183) <i>M (SD)</i>	t-value
Rewards & Punishments	9.40 (6.71)	11.57 (6.76)	-1.80
Religious Beliefs	7.28 (5.24)	9.46 (5.90)	-2.11*
Never Addressed	4.82 (3.91)	4.14 (3.84)	0.99
Respecting Parents	5.68 (3.62)	6.91 (3.60)	-1.92+
Focus on Yourself	8.08 (3.09)	9.15 (2.81)	-2.10*
Negative Consequences of Use	8.50 (2.93)	9.44 (2.86)	-1.84+
Parental Messages 24-Item Total Score	43.68 (13.39)	49.70 (15.21)	-2.26*

Note. Data from one participant was missing on this variable.

* $p < .05$, + $p < .10$

Table 11

Differences in Parental Messages by Father's Country of Origin

	U.S. (n =37) <i>M (SD)</i>	Other (n = 181) <i>M (SD)</i>	t-value
Rewards & Punishments	10.51 (6.83)	11.19 (6.74)	-0.56
Religious Beliefs	9.20 (5.31)	9.02 (5.98)	0.17
Never Addressed	4.98 (4.01)	4.12 (3.81)	1.26
Respecting Parents	6.30 (3.18)	6.77 (3.74)	-0.72
Focus on Yourself	8.37 (3.39)	9.08 (2.78)	-1.22
Negative Consequences of Use	8.53 (3.23)	9.41 (2.81)	-1.72+
Parental Messages 24-Item Total Score	47.14 (14.59)	48.77 (15.18)	-0.61

Note. Data from three participants was missing on this variable.

+ $p < .10$

Reported Substance Use and Relations among Parental Messages about Substance Use

Nearly half (48.4%) of the Latino emerging adults in the current study had ever smoked cigarettes, about one third (34.4%) had smoked cigarettes in the past year, and almost one fifth (18.6%) had smoked in the past month. These rates are similar to those reported by other recent studies of college-age smoking (e.g., Cranford, Eisenberg, Serras, 2009; Moran, Wechsler, & Rigotti, 2004; Wechsler, Lee, & Rigotti, 2001). The majority of the sample (90.0%) has drunk alcohol in their lifetime with 76.9 percent reporting alcohol use in the past month and 59.7 percent endorsing at least one binge drinking episode in the past two weeks. The rate of recent binge drinking was slightly higher than Cranford, Eisenberg, and Serras' (2009) recent finding of 51.1 percent in their study examining the prevalence of substance use behaviors in college students. Less than half (46.6%) of the current sample had ever used marijuana with only 15.9 percent reporting past month use. The rates of lifetime and past month marijuana use mirror the frequencies reported by other studies examining college students (Cranford, Eisenberg, & Serras, 2009). One fifth (19.8%) of participants endorsed the use of one or more other drugs. Amphetamines were the most frequently used other drug (12.6%), followed by sedatives (9.5%), hallucinogens (7.7%), designer drugs (e.g., ecstasy; 6.8%), cocaine (6.3%), inhalants (4.1%), opiates (2.7%), and steroids (1.4%). Four and a half percent of participants endorsed using other illegal drugs that were not specified by the survey.

The associations of reported cigarette, alcohol, marijuana, and other drug use with parental messages about substance use were examined in sixteen separate regression equations. For each regression equation, the participant's gender as well as scores on the RCI-10, Familism measure, and Latino Orientation subscale of the ARSMA were entered in

the first step to control for their effects. Additionally, age was included in the first step of all regressions except those predicting age of initiation of use. The six parental message subscales that emerged from the PCA were entered at the second step. All regression equations that examined the age of first use of the respective substance included only participants who had indicated ever using that substance. Multivariate outliers were assessed using Cook's Distance global measure of influence (Cook, 1977). Once outliers were identified, the regression was re-run after removing the identified outlier cases from the analysis.

Regression analyses with cigarette use. Table 12 presents the hierarchical logistic regression results predicting whether the participant has ever smoked cigarettes from parental messages about substance use and controls. As seen in the table, with respect to demographic variables in the first step, males reported higher rates of ever smoking cigarettes and were almost twice as likely as females to have ever smoked cigarettes. Additionally, participants who reported higher levels of religious commitment were less likely to have ever smoked cigarettes. The addition of parental messages at step 2 revealed that higher reported rates of parental messages focused on rewards and punishments predicted participants' reports of ever using cigarettes. Additionally, there was a marginal, but not significant, trend indicating that participants who reported parents conveying more messages about the negative consequences of use were less likely to have ever smoked cigarettes.

The hierarchical linear regression results predicting age of first cigarette use from parental messages and controls are presented in Table 13. As indicated in the table, in regard to demographic variables entered at step 1, there was a trend toward significance for males to report an earlier age of first cigarette use. This trend became significant at step 2 after

parental messages about substance use were entered. Furthermore, the addition of the variables at step 2 resulted in the following message types predicting age of first cigarette use: Rewards and Punishments, Religious Beliefs, Focus on Yourself (marginal) and Negative Consequences of Use. Receiving greater messages about religious reasons to not use and the negative consequences of use was associated with later age of first cigarette use; whereas, higher reported messages stressing rewards and punishments for use was related to an earlier age of first cigarette use. There was a marginal, but not significant, trend for greater reported parental messages encouraging offspring to focus on their future and avoid peer pressure to be associated with an earlier age of first cigarette use. The differences in mean levels of significant parental message subscales are displayed in Figures 1 thru 4 below. While participants who indicated that they had never smoked cigarettes were not included in the regression equation predicting age of initiation, they are incorporated in the corresponding figures. Additionally, a marginal trend emerged for higher reported Latino Orientation to be associated with earlier age of first cigarette use.

Table 12

Logistic Regression Analysis Examining Lifetime Cigarette Use

Predictor	<i>B</i>	<i>SE</i>	Odds Ratio
Step 1			
Age	.09	.09	1.09
Gender (0 = female, 1 = male)	.59	.30	1.80*
Religious Commitment	-.04	.02	.97*
Familism	.00	.02	1.00
Acculturation - Latino Orientation	-.01	.01	.99
Step 2			
Age	.09	.09	1.10
Gender (0 = female, 1 = male)	.51	.31	1.67+
Religious Commitment	-.04	.02	.96*
Familism	.00	.02	1.00
Acculturation – Latino Orientation	-.01	.01	.99
Rewards & Punishments	.09	.03	1.09**
Religious Beliefs	-.02	.03	.98
Never Addressed	.01	.05	1.01
Respecting Parents	.03	.06	1.03
Focus on Yourself	.02	.08	1.02
Negative Consequences of Use	-.13	.08	.88+

+ $p < .10$, * $p < .05$, ** $p < .01$.

Table 13

Hierarchical Regression Analysis Predicting Age of Cigarettes Use Initiation

	<i>B</i>	<i>SE B</i>	β
Step 1			
Gender (0 = female, 1 = male)	-.55	.29	-.19+
Religious Commitment	.00	.02	.02
Familism	.00	.02	.05
Acculturation - Latino Orientation	-.01	.01	-.11
Step 2			
Gender (0 = female, 1 = male)	-.85	.28	-.30**
Religious Commitment	.00	.02	.01
Familism	.01	.02	.04
Acculturation – Latino Orientation	-.02	.01	-.18+
Rewards & Punishments	-.07	.03	-.33*
Religious Beliefs	.07	.03	.28*
Never Addressed	.02	.04	.06
Respecting Parents	.07	.05	.18
Focus on Yourself	-.13	.07	-.26+
Negative Consequences of Use	.23	.08	.46**

Note: ID 28 and 164 were identified as outliers and removed.

$R^2 = .22$, $F(10, 91) = 2.53$, $p < .05$.

+ $p < .10$, * $p < .05$, ** $p < .01$.

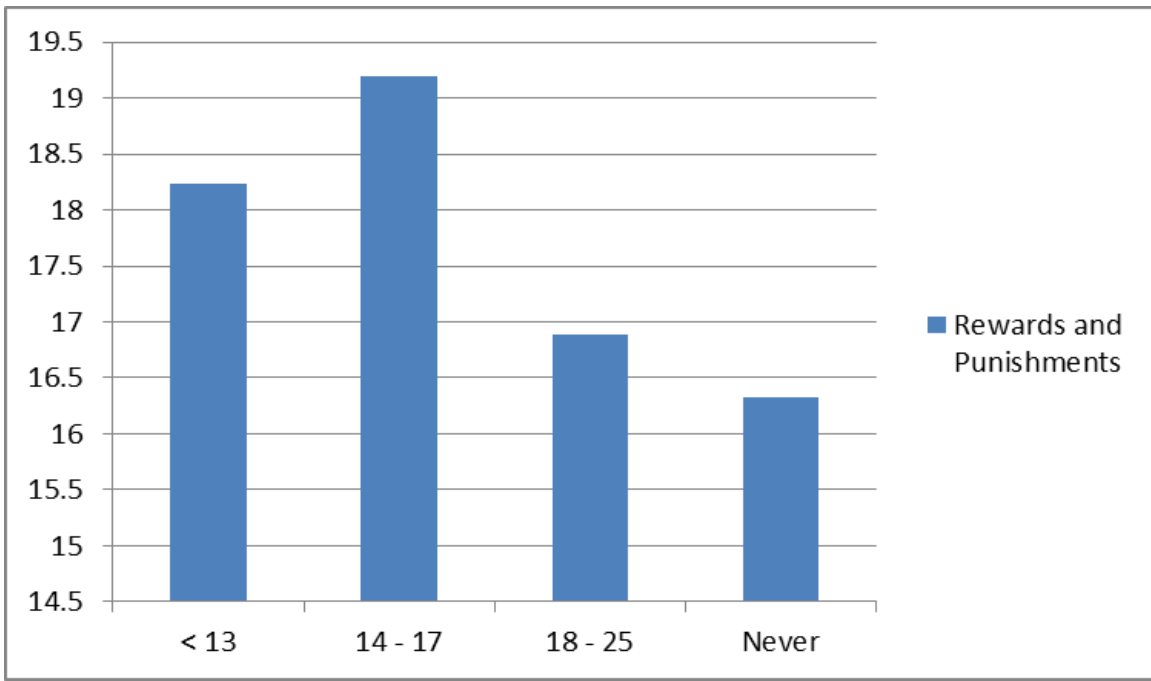


Figure 1. Mean levels of parental messages on the Rewards and Punishments subscale by age of cigarette use initiation.

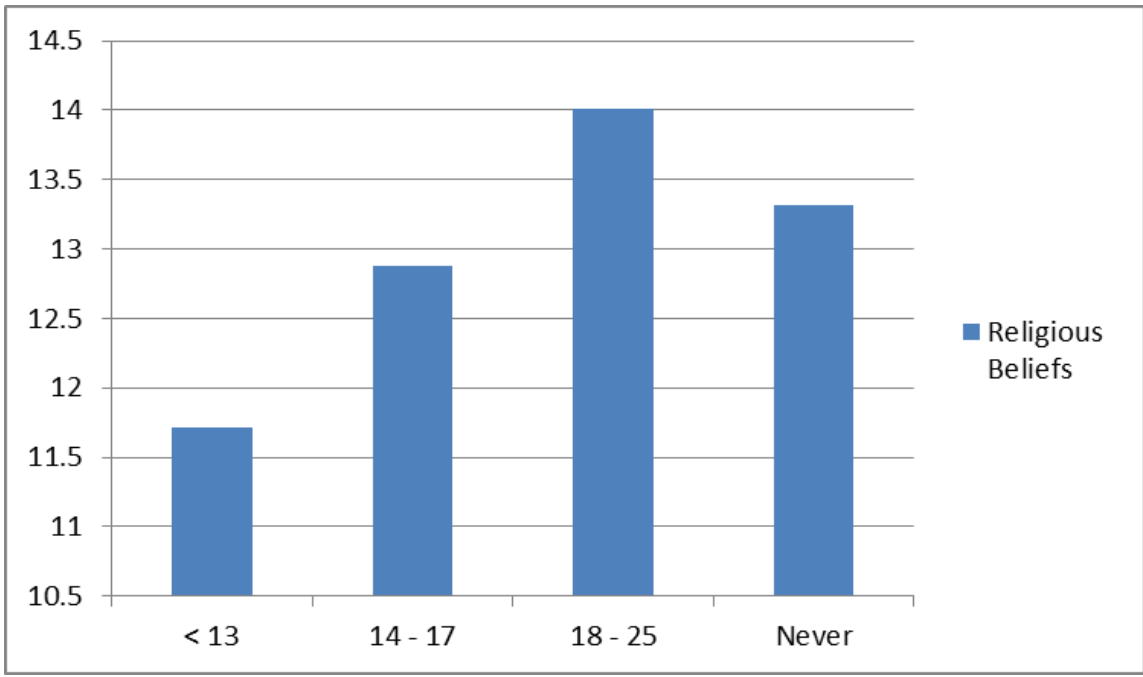


Figure 2. Mean levels of parental messages on the Religious Beliefs subscale by age of cigarette use initiation.

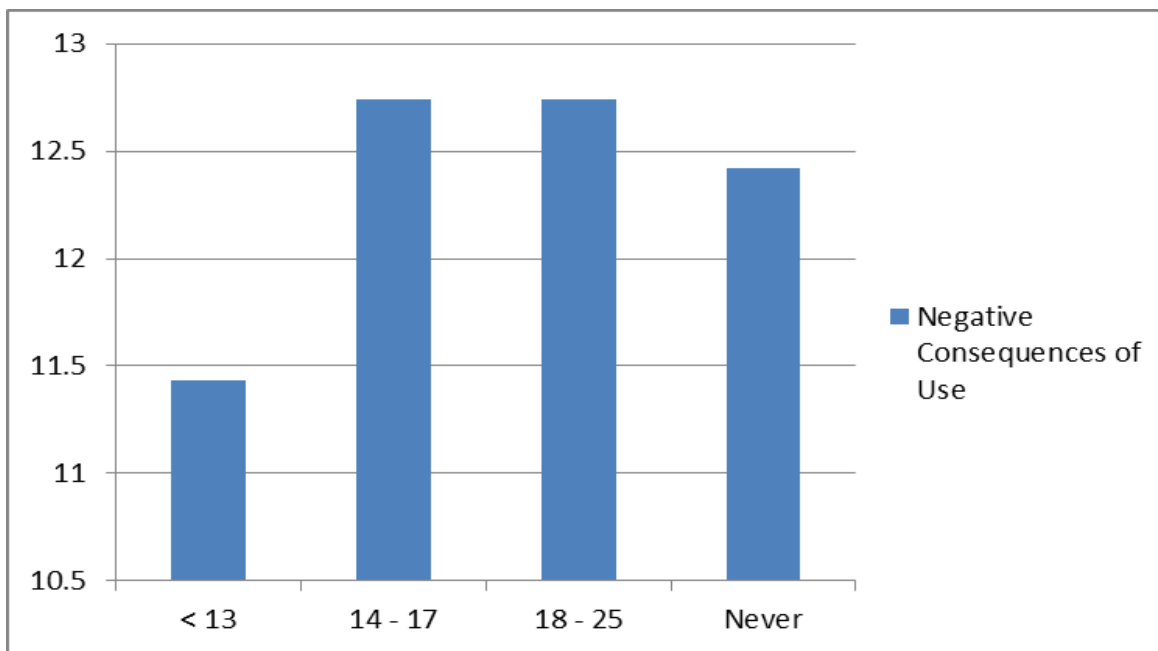


Figure 3. Mean levels of parental messages on the Negative Consequences of Use subscale by age of cigarette use initiation.

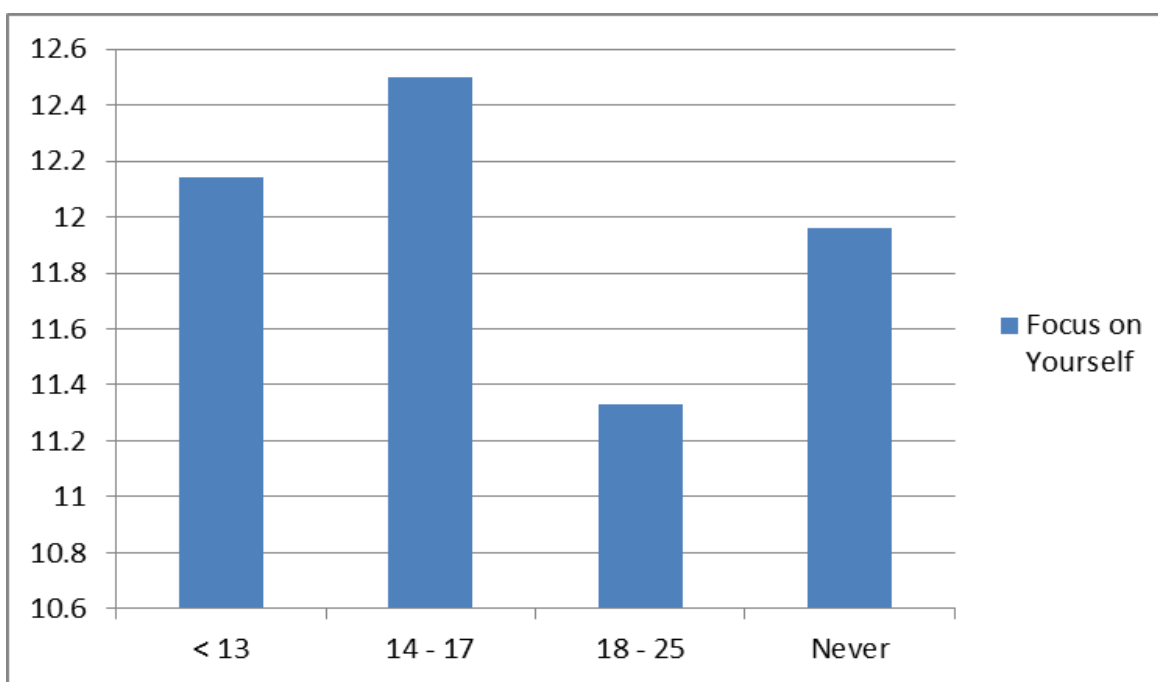


Figure 4. Mean levels of parental messages on the Focus on Yourself subscale by age of cigarette use initiation.

Table 14 presents hierarchical linear regression results predicting past year cigarette use from parental messages and controls. Step 1 indicated that male gender and higher levels of reported familism were associated with higher levels of reported past year cigarette use, whereas religious commitment was inversely related to past year cigarette use. Parental messages were added to the model at step 2 and the model remained significant. At this point, gender marginally predicted past year cigarette use while religious commitment and familism continued to emerge as significant predictors. However, no parental messages about substance use were associated with past year cigarette use.

Past month cigarette use was examined in relation to parental messages and controls; results for this hierarchical linear regression are presented in Table 15. Similar to past year cigarette use, step 1 revealed that greater reported past month smoking was associated with younger male gender and lower levels of religious commitment. In addition, younger participants reported higher levels of past month smoking than older participants. While the overall model remained significant, step 2 indicated that parental messages were not predictive of past month cigarette use frequencies.

Table 14

Hierarchical Regression Analysis Predicting Past Year Cigarette Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	-.11	.08	-.10
Gender (0 = female, 1 = male)	.62	.26	.16*
Religious Commitment	-.04	.01	-.22**
Familism	.03	.01	.14*
Acculturation - Latino Orientation	-.01	.01	-.04
Step 2			
Age	-.10	.08	-.09
Gender (0 = female, 1 = male)	.50	.26	.13+
Religious Commitment	-.04	.01	-.25**
Familism	.03	.01	.14*
Acculturation – Latino Orientation	-.01	.01	-.05
Rewards & Punishments	.03	.03	.11
Religious Beliefs	.03	.03	.09
Never Addressed	.06	.04	.12
Respecting Parents	-.01	.05	-.03
Focus on Yourself	.06	.06	.10
Negative Consequences of Use	-.08	.06	-.13

$R^2 = .13, F(11, 197) = 2.60, p < .01.$

+ $p < .10$, * $p < .05$, ** $p < .01$.

Table 15

Hierarchical Regression Analysis Predicting Past Month Cigarette Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	-.11	.05	-.16*
Gender (0 = female, 1 = male)	.37	.16	.16*
Religious Commitment	-.02	.01	-.19**
Familism	.01	.01	.08
Acculturation - Latino Orientation	.00	.01	-.01
Step 2			
Age	-.10	.05	-.16*
Gender (0 = female, 1 = male)	.31	.16	.14*
Religious Commitment	-.02	.01	-.23**
Familism	.01	.01	.07
Acculturation – Latino Orientation	.00	.01	-.04
Rewards & Punishments	.01	.02	.09
Religious Beliefs	.02	.02	.12
Never Addressed	.01	.02	.02
Respecting Parents	.02	.03	.07
Focus on Yourself	.00	.04	.01
Negative Consequences of Use	-.06	.04	-.15

Note: ID 193 was identified as an outlier and removed.

$R^2 = .11$, $F(11, 195) = 2.25$, $p < .05$; * $p < .05$, ** $p < .01$.

Regression analyses with alcohol use. Table 16 presents the hierarchical logistic regression examining predictors of participants' lifetime rates of alcohol use. As seen in the table, with respect to demographic variables in the first step, older participants were more likely to have ever used alcohol. Furthermore, participants who reported higher levels of religious commitment were less likely to have ever consumed alcohol. There was a marginal, but not significant, trend for participants who reported higher levels of familism to be more likely to have ever drunk alcohol. The addition of parental messages at step 2 revealed that there was a marginal, but not significant, trend for participants who reported receiving greater messages from their parents encouraging them to focus on themselves and their future to be more likely to have ever drunk alcohol. Age and religious commitment remained as significant predictors of ever using alcohol at step 2. However, there was no longer a marginal trend for familism to predict lifetime alcohol use, whereas lower Latino orientation on the ARSMA-II predicted a greater likelihood of lifetime alcohol use.

Table 17 presents hierarchical linear regression results predicting age of first alcohol use from parental messages and controls. Step 1 indicated that male gender was marginally predictive of younger age of first alcohol use. A trend that did not reach significance was also observed for higher levels of religious commitment to be related to later initiation of alcohol use. Step 2 included parental messages about use and revealed that messages about the negative consequences of substance use were associated with later age of first alcohol use while messages focused on abstaining out of respect for parents was marginally associated with an earlier age of alcohol use initiation (See Figures 5 and 6, respectively). Moreover, after accounting for the influence of parental messages, religious commitment was no longer associated with age of first alcohol use.

Table 16

Logistic Regression Analysis Predicting Lifetime Alcohol Use

Predictor	<i>B</i>	<i>SE</i>	Odds Ratio
Step 1			
Age	.90	.25	2.47**
Gender (0 = female, 1 = male)	-.12	.54	.89
Religious Commitment	-.05	.03	.95*
Familism	.04	.02	1.04+
Acculturation - Latino Orientation	-.03	.02	.97
Step 2			
Age	.98	.27	2.67**
Gender (0 = female, 1 = male)	-.10	.61	.90
Religious Commitment	-.06	.03	.94*
Familism	.04	.02	1.04
Acculturation – Latino Orientation	-.04	.02	.96*
Rewards & Punishments	-.05	.06	.95
Religious Beliefs	.06	.06	1.06
Never Addressed	-.02	.09	.98
Respecting Parents	.05	.11	1.05
Focus on Yourself	.25	.15	1.28+
Negative Consequences of Use	-.19	.14	.83

+ $p < .10$, * $p < .05$, ** $p < .001$.

Table 17

Hierarchical Regression Analysis Predicting Age of Alcohol Use Initiation

	<i>B</i>	<i>SE B</i>	β
Step 1			
Gender (0 = female, 1 = male)	-.31	.20	-.11
Religious Commitment	.02	.01	.12
Familism	.01	.01	.07
Acculturation - Latino Orientation	.00	.01	-.05
Step 2			
Gender (0 = female, 1 = male)	-.33	.20	-.12+
Religious Commitment	.01	.01	.11
Familism	.01	.01	.09
Acculturation – Latino Orientation	.00	.01	-.05
Rewards & Punishments	-.03	.02	-.14
Religious Beliefs	.03	.02	.14
Never Addressed	.00	.03	-.01
Respecting Parents	-.06	.04	-.17+
Focus on Yourself	-.03	.05	-.07
Negative Consequences of Use	.13	.05	.26*

$R^2 = .10, F(10, 184) = 1.99, p < .05.$

+ $p \leq .10$, * $p < .05$.

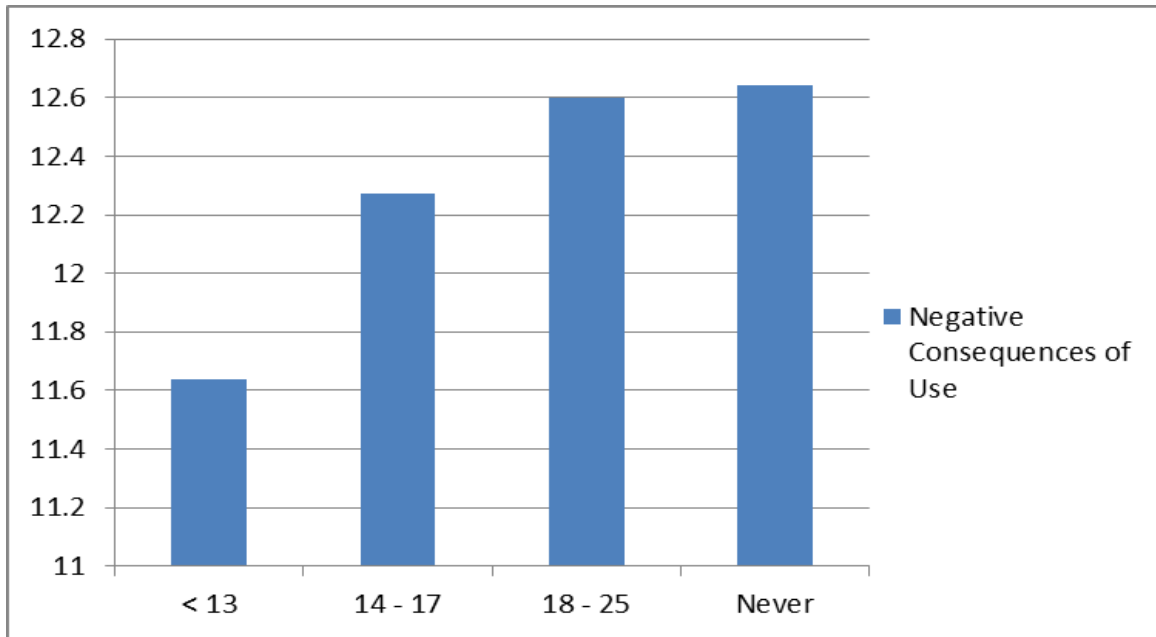


Figure 5. Mean levels of parental messages on the Negative Consequences of Use subscale by age of alcohol use initiation.

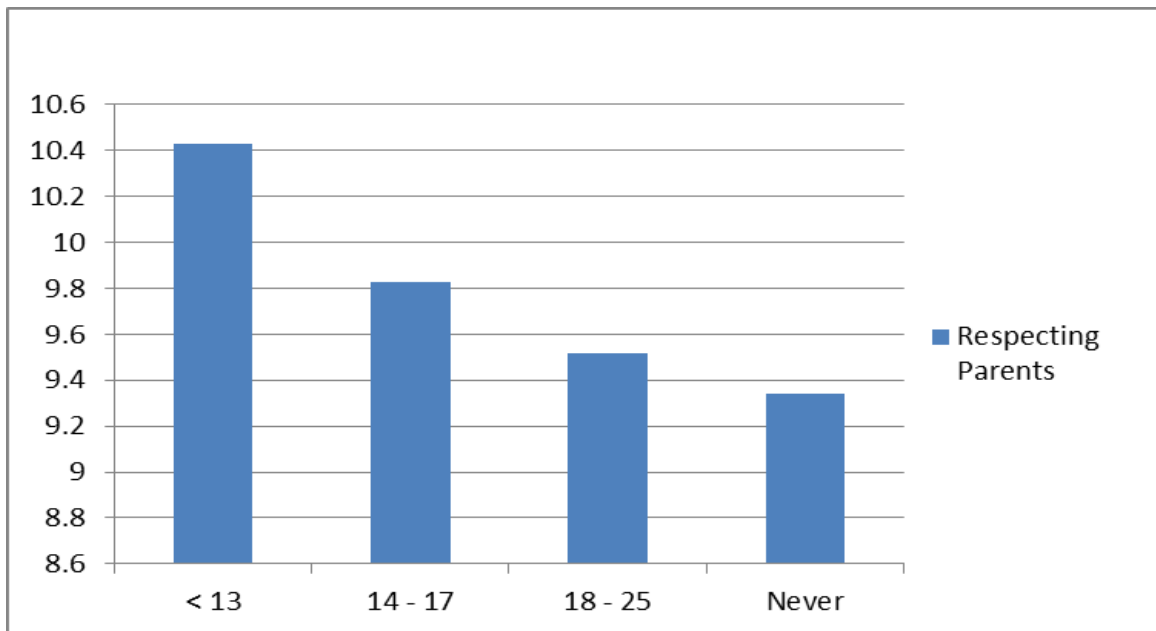


Figure 6. Mean levels of parental messages on the Respecting Parents subscale by age of alcohol use initiation.

The results of the hierarchical linear regression examining past year alcohol use are presented in Table 18. Step 1 included demographic control variables and revealed that older age, male gender, lower levels of Latino orientation, and higher levels of familism were associated with greater reported past year alcohol use. Once parental messages were entered at step 2, the overall model remained significant and the demographic variables age, gender, Latino orientation, and familism remained as significant predictors of past year alcohol use. In regard to the influence of parental messages on alcohol use, fewer reported messages focused on the negative consequences of use significantly predicted greater past year drinking. In addition, there was a marginal trend for lower religious commitment and greater reported messages stressing the nonuse of substances in order to respect parents to be associated with higher levels of past year drinking.

Table 19 presents the results of the hierarchical linear regression predicting past month alcohol use from demographic controls and parental messages about substance use. Similar to previous regression models examining alcohol use, older age was significantly related to greater reported use of alcohol. Furthermore, step 1 of the regression indicated that lower levels of religious commitment and higher levels of familism were associated with greater past month alcohol use. The addition of parental messages at step 2 revealed that the model remained significant despite the fact that parental messages did not significantly predict past month alcohol use. Age, religious commitment, and familism remained significant predictors at step 2 while lower levels of Latino orientation emerged as a marginal predictor of greater past month alcohol use.

Table 18

Hierarchical Regression Analysis Predicting Past Year Alcohol Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	.42	.08	.36***
Gender (0 = female, 1 = male)	.58	.26	.14*
Religious Commitment	-.02	.01	-.08
Familism	.03	.01	.17*
Acculturation - Latino Orientation	-.02	.01	-.15*
Step 2			
Age	.42	.08	.35***
Gender (0 = female, 1 = male)	.55	.26	.13*
Religious Commitment	-.02	.01	-.12+
Familism	.03	.01	.15*
Acculturation – Latino Orientation	-.03	.01	-.19**
Rewards & Punishments	.00	.03	-.01
Religious Beliefs	.03	.03	.10
Never Addressed	-.01	.04	-.02
Respecting Parents	.10	.05	.17+
Focus on Yourself	.04	.06	.05
Negative Consequences of Use	-.14	.06	-.19*

$R^2 = .25, F(11, 197) = 5.93, p < .001.$

+ $p \leq .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 19

Hierarchical Regression Analysis Predicting Past Month Alcohol Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	.13	.06	.16*
Gender (0 = female, 1 = male)	.21	.18	.08
Religious Commitment	-.02	.01	-.18*
Familism	.02	.01	.16*
Acculturation - Latino Orientation	-.01	.01	-.10
Step 2			
Age	.15	.06	.19**
Gender (0 = female, 1 = male)	.16	.19	.06
Religious Commitment	-.03	.01	-.22**
Familism	.02	.01	.14+
Acculturation – Latino Orientation	-.01	.01	-.13+
Rewards & Punishments	.00	.02	-.01
Religious Beliefs	.03	.02	.11
Never Addressed	.03	.03	.08
Respecting Parents	.04	.04	.10
Focus on Yourself	.07	.05	.14
Negative Consequences of Use	-.07	.05	-.14

$R^2 = .15, F(11, 197) = 3.15, p < .01.$

+ $p < .10$, * $p < .05$, ** $p < .01$.

Table 20 presents regression results predicting the average number of alcoholic drinks per week from demographic controls and parental messages. As indicated in the table, older age and male gender were significant predictors of greater consumption of alcoholic drinks per week. Additionally, there was a marginal trend for higher levels of familism to be associated with a higher average of alcoholic drinks per week. At step 2, parental messages were added to the model and messages stressing the negative consequences of substance use emerged as a significant predictor of average alcoholic beverages per week. Participants who indicated that their parents communicated higher levels of messages focused on the negative consequences of use reported consuming a lower average number of alcoholic drinks per week. Overall, the model remained significant at step 2 and the demographic variables associated with average alcoholic drinks per week at step 1 were significant at step 2.

Recent binge drinking, defined as 5 or more alcoholic drinks in one sitting in the past two weeks, was examined the hierarchical linear regression presented in Table 21. As seen in the table, at step 1 male gender and lower levels of religious commitment were positively associated with greater reported levels of recent binge drinking. In addition, there was a marginal trend for older participants to report higher rates of recent binge drinking. While the overall model remained significant with the addition of parental messages at step 2, no additional variables emerged as significant predictors of recent binge drinking.

Table 20

Hierarchical Regression Analysis Predicting Average Alcoholic Drinks per Week

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	.06	.02	.25***
Gender (0 = female, 1 = male)	.11	.05	.15*
Religious Commitment	.00	.00	-.10
Familism	.01	.00	.12+
Acculturation - Latino Orientation	.00	.00	-.06
Step 2			
Age	.05	.02	.25**
Gender (0 = female, 1 = male)	.12	.05	.16*
Religious Commitment	.00	.00	-.11
Familism	.00	.00	.12+
Acculturation – Latino Orientation	.00	.00	-.08
Rewards & Punishments	-.01	.01	-.13
Religious Beliefs	.00	.01	.00
Never Addressed	-.01	.01	-.08
Respecting Parents	.02	.01	.15
Focus on Yourself	.02	.01	.13
Negative Consequences of Use	-.03	.01	-.25*

$R^2 = .16, F(11,192) = 3.42, p < .001.$

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 21

Hierarchical Regression Analysis Predicting Recent Binge Drinking

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	.10	.06	.12+
Gender (0 = female, 1 = male)	.47	.19	.16*
Religious Commitment	-.03	.01	-.21**
Familism	.01	.01	.10
Acculturation - Latino Orientation	-.01	.01	-.07
Step 2			
Age	.11	.06	.14+
Gender (0 = female, 1 = male)	.46	.19	.16*
Religious Commitment	-.03	.01	-.23**
Familism	.01	.01	.08
Acculturation – Latino Orientation	-.01	.01	-.10
Rewards & Punishments	-.02	.02	-.08
Religious Beliefs	.02	.02	.08
Never Addressed	.00	.03	.00
Respecting Parents	.05	.04	.12
Focus on Yourself	.04	.05	.09
Negative Consequences of Use	-.06	.05	-.12

$R^2 = .13, F(11, 197) = 2.78, p < .01.$

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Regression analyses with marijuana use. Table 22 presents the results of the hierarchical logistic regression examining reported lifetime marijuana use. As illustrated in the table, step 1 revealed that higher levels of religious commitment and higher Latino orientation predicted a lower likelihood of lifetime marijuana use. At step 2, these variables remained significant and several parental messages emerged as predictors of lifetime marijuana use. Participants who reported that their parents reported greater levels of messages focused on the negative consequences of substance use and lower levels of messages conveying the message to focus on yourself and your future were less likely to have ever used marijuana than participants whose parents utilized fewer messages about the negative consequences of use and more messages about focusing on yourself and your future. Additionally, there was a marginal trend for participants who reported greater parental messages about the rewards and punishments for use to be more likely to have ever used marijuana.

Table 23 presents the results of the hierarchical linear regression predicting age of first marijuana use from parental messages about substance use and demographic controls. Step 1 of the model did not reveal any significant demographic predictors of age of initiation of marijuana use. Parental messages were added at step 2 and several significant predictors of age of marijuana use initiation emerged. Greater reported levels of parental messages stressing rewards and punishments were associated with early initiation of marijuana use while higher level of messages focused on the negative consequences of substance use were associated with delayed initiation of marijuana use (See Figures 7 and 8, respectively). Additionally, a marginal trend for familism to be negatively associated with age of first marijuana use emerged at step 2.

Table 22

Logistic Regression Analysis Predicting Lifetime Marijuana Use

Predictor	<i>B</i>	<i>SE</i>	Odds Ratio
Step 1			
Age	.08	.09	1.09
Gender (0 = female, 1 = male)	.31	.31	1.36
Religious Commitment	-.03	.02	.97*
Familism	.02	.02	1.02
Acculturation - Latino Orientation	-.04	.01	.96**
Step 2			
Age	.13	.10	1.14
Gender (0 = female, 1 = male)	.23	.33	1.26
Religious Commitment	-.04	.02	.96*
Familism	.01	.02	1.01
Acculturation – Latino Orientation	-.05	.01	.95**
Rewards & Punishments	.06	.03	1.06+
Religious Beliefs	-.03	.03	.97
Never Addressed	.04	.05	1.04
Respecting Parents	.08	.07	1.08
Focus on Yourself	.17	.08	1.18*
Negative Consequences of Use	-.22	.09	.80*

+ $p < .10$, * $p \leq .05$, ** $p < .001$.

Table 23

Hierarchical Regression Analysis Predicting Age of Marijuana Use Initiation

	<i>B</i>	<i>SE B</i>	β
Step 1			
Gender (0 = female, 1 = male)	-.30	.23	-.14
Religious Commitment	.01	.01	.08
Familism	-.01	.01	-.10
Acculturation - Latino Orientation	.01	.01	.06
Step 2			
Gender (0 = female, 1 = male)	-.38	.23	-.17+
Religious Commitment	.01	.01	.12
Familism	-.02	.01	-.16
Acculturation – Latino Orientation	.00	.01	.00
Rewards & Punishments	-.06	.02	-.35*
Religious Beliefs	-.01	.02	-.03
Never Addressed	.01	.03	.05
Respecting Parents	.01	.05	.02
Focus on Yourself	-.04	.06	-.11
Negative Consequences of Use	.21	.07	.53**

Note: ID 28 and 164 were identified as outliers and removed.

$R^2 = .18$, $F(10, 87) = 1.92$, $p \leq .05$.

+ $p \leq .10$, * $p < .05$, ** $p < .01$.

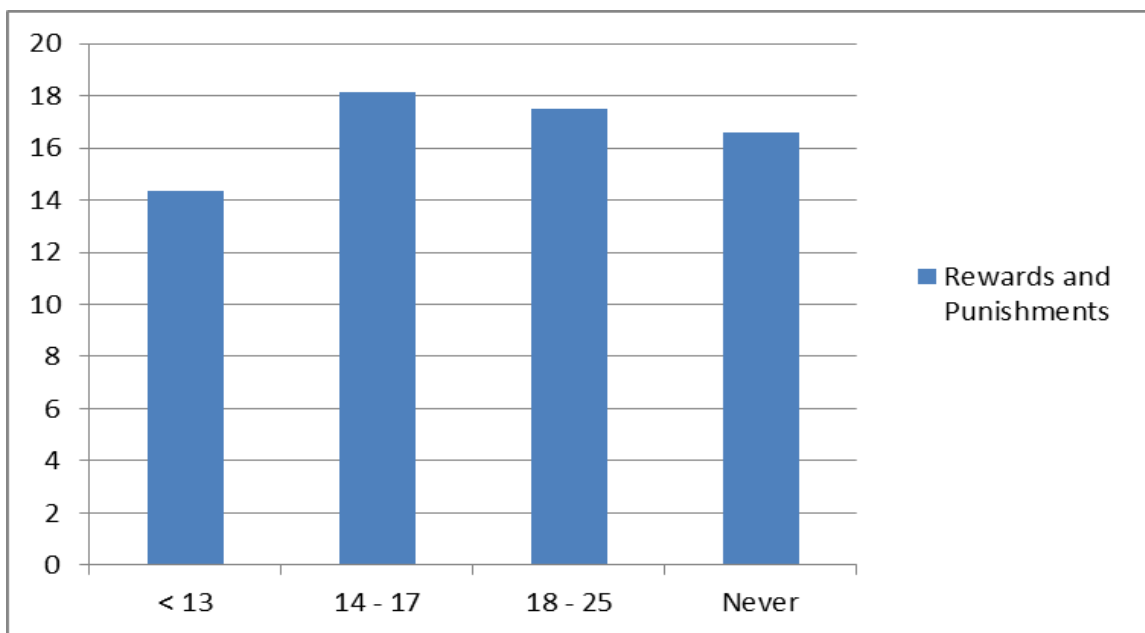


Figure 7. Mean levels of parental messages on the Rewards and Punishments subscale by age of marijuana use initiation.

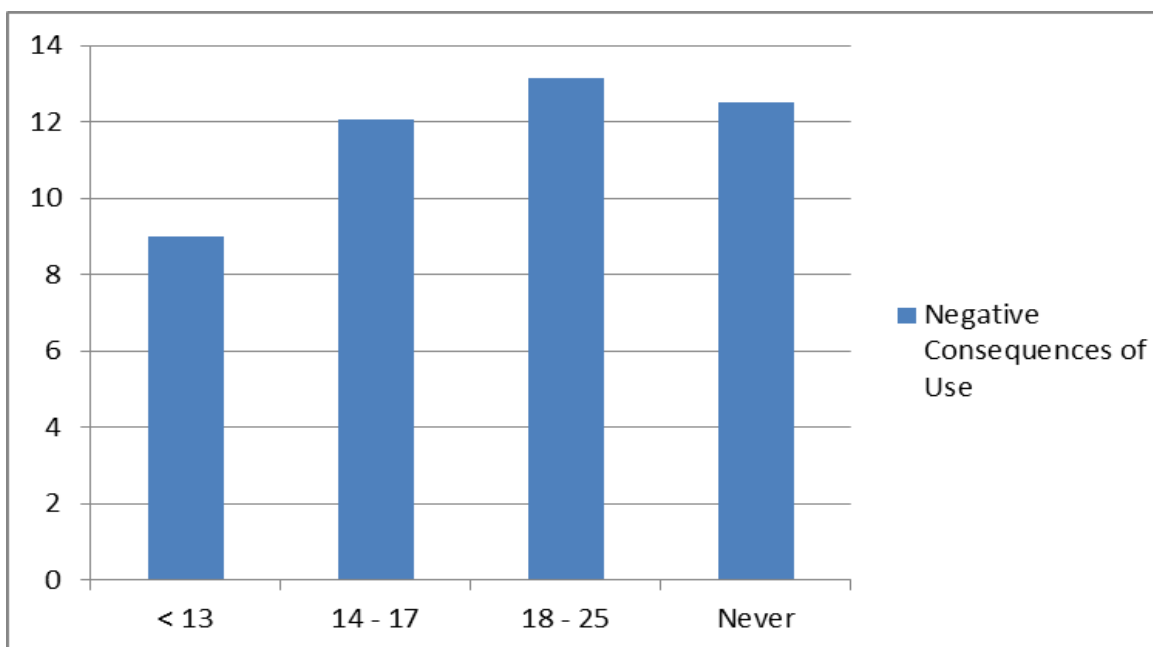


Figure 8. Mean levels of parental messages on the Negative Consequences of Use subscale by age of marijuana use initiation.

Predictors of past year marijuana use were examined with a hierarchical linear regression that is presented in Table 24. As indicated in the table, in regard to demographic variables entered at step 1, higher levels of Latino orientation were significantly associated with lower rates of reported past year marijuana use. Furthermore, there was a marginal trend for younger age, male gender, and lower religious commitment to be related to greater past year marijuana use. While the model remained significant, the addition of parental messages at step 2 did not reveal additional predictors of past year marijuana use and the marginal trend for age to be associated with use disappeared.

Table 25 presents the hierarchical linear regression results for the model examining predictors of past month marijuana use from parental messages and demographic controls. While the model was not significant, step 1 revealed that, of the demographic variables included, younger participants reported significantly higher rates of past month marijuana use. Parental messages were added at step 2 but none significantly predicted past month marijuana use. In regard to demographic variables at this step, younger age and lower levels of Latino orientation were marginally related to higher past month marijuana use.

Regression analyses with drugs other than tobacco, alcohol, or marijuana.

Predictors of the total number of other drugs ever used (excluding tobacco, alcohol, or marijuana) were examined using a hierarchical linear regression and the results are presented in Table 26. As seen in the table, none of the demographic variables entered in step 1 were significantly related to the total number of other drugs ever used. Parental messages were entered at step 2 and revealed a significant association between messages about rewards and punishments and negative consequences of use and total number of other drugs ever used. Participants who reported higher levels of parental messages conveying the negative

consequences of substance use reported using significantly fewer other drugs than participants whose parents conveyed fewer of these messages. Furthermore, participants whose parents communicated more messages focused on rewards and punishments related to substance use reported higher other drug use. Also, while not significant, marginal trends emerged for higher levels of religious commitment and greater Latino orientation to be related to lower rates of other drug use.

Regression analyses predicting problems associated with drug use. Predictors of the severity of problems associated with drug use were examined using a hierarchical linear regression and results are displayed in Table 27. The overall model was not significant and it did not indicate that parental messages about substance use were predictive of the number of problems related to drug use. However, reported levels of religious commitment were inversely associated with negative consequences of drug use.

Table 28 provides an overall summary of the associations between parental messages regarding substance use and the substance use outcomes reported above.

Table 24

Hierarchical Regression Analysis Predicting Past Year Marijuana Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	-.13	.07	-.13+
Gender (0 = female, 1 = male)	.44	.23	.13+
Religious Commitment	-.02	.01	-.14+
Familism	.01	.01	.08
Acculturation - Latino Orientation	-.02	.01	-.16*
Step 2			
Age	-.12	.07	-.12
Gender (0 = female, 1 = male)	.41	.24	.12+
Religious Commitment	-.02	.01	-.14+
Familism	.01	.01	.06
Acculturation – Latino Orientation	-.02	.01	-.18*
Rewards & Punishments	.03	.02	.12
Religious Beliefs	-.01	.03	-.05
Never Addressed	.02	.04	.05
Respecting Parents	.07	.05	.14
Focus on Yourself	.03	.06	.05
Negative Consequences of Use	-.07	.06	-.12

$R^2 = .12, F(11, 198) = 2.35, p < .05.$

+ $p \leq .10$, * $p < .05$.

Table 25

Hierarchical Regression Analysis Predicting Past Month Marijuana Use

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	-.02	.01	-.15*
Gender (0 = female, 1 = male)	.03	.03	.08
Religious Commitment	.00	.00	-.10
Familism	.00	.00	.10
Acculturation - Latino Orientation	.00	.00	-.11
Step 2			
Age	-.02	.01	-.13+
Gender (0 = female, 1 = male)	.03	.03	.07
Religious Commitment	.00	.00	-.12
Familism	.00	.00	.09
Acculturation – Latino Orientation	.00	.00	-.12+
Rewards & Punishments	.00	.00	.07
Religious Beliefs	.00	.00	.01
Never Addressed	.00	.00	-.02
Respecting Parents	.00	.01	.03
Focus on Yourself	.00	.01	.05
Negative Consequences of Use	-.01	.01	-.07
$R^2 = .06, F(11, 196) = 1.13, p = \text{n.s.}$			

+ $p \leq .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 26

Hierarchical Regression Analysis Predicting Lifetime Number of Illicit Drugs Used

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	.01	.01	.10
Gender (0 = female, 1 = male)	.02	.03	.05
Religious Commitment	.00	.00	-.11
Familism	.00	.00	-.02
Acculturation - Latino Orientation	.00	.00	-.11
Step 2			
Age	.02	.01	.11
Gender (0 = female, 1 = male)	.01	.03	.02
Religious Commitment	.00	.00	-.13+
Familism	.00	.00	-.02
Acculturation – Latino Orientation	.00	.00	-.14+
Rewards & Punishments	.01	.00	.29**
Religious Beliefs	.00	.00	-.03
Never Addressed	.00	.01	-.02
Respecting Parents	.00	.01	-.02
Focus on Yourself	.01	.01	.06
Negative Consequences of Use	-.02	.01	-.21*

$R^2 = .34, F(11, 198) = 2.36, p < .01.$

+ $p \leq .10$, * $p < .05$, ** $p < .01$.

Table 27

Hierarchical Regression Analyses Predicting DAST Total Score

	<i>B</i>	<i>SE B</i>	β
Step 1			
Age	-.01	.01	-.07
Gender (0 = female, 1 = male)	.05	.04	.10
Religious Commitment	.00	.00	-.17*
Familism	.00	.00	-.02
Acculturation - Latino Orientation	.00	.00	.05
Step 2			
Age	-.01	.01	-.05
Gender (0 = female, 1 = male)	.05	.04	.09
Religious Commitment	-.01	.00	-.18*
Familism	.00	.00	-.03
Acculturation – Latino Orientation	.00	.00	.03
Rewards & Punishments	.00	.00	.11
Religious Beliefs	.00	.00	.00
Never Addressed	.00	.01	.05
Respecting Parents	.00	.01	.03
Focus on Yourself	.01	.01	.10
Negative Consequences of Use	-.01	.01	-.12
$R^2 = .06, F(11, 182) = 2.32, p = .37$. DAST = Drug Abuse Screening Test.			

* $p < .05$.

Table 28

Summary of Associations between Parental Messages regarding Substance Use and Substance Use Outcomes

Messages	Substance Use Outcomes							
	Lifetime Cigarette Use	Age of Initiation - Cigarette Use	Past Year Cigarette Use	Past Month Cigarette Use	Lifetime Alcohol Use	Age of Initiation - Alcohol Use	Past Year Alcohol Use	Past Month Alcohol Use
Rewards & Punishments	Higher Use	Earlier Age of Initiation	--	--	--	--	--	--
Religious Beliefs	--	Later Age of Initiation	--	--	--	--	--	--
Never Addressed	--	--	--	--	--	--	--	--
Respecting Parents	--	--	--	--	--	Earlier Age of Initiation(m)	Higher Use (m)	--
Focus on Yourself	--	Earlier Age of Initiation(m)	--	--	Higher Use (m)	--	--	--
Negative Consequences	Lower Use	Later Age of Initiation	--	--	--	Later Age of Initiation	Lower Use	--

Note. (m) indicates a marginal association

Table 28 (Continued)

Messages	Substance Use Outcomes							
	Average Drink Per Week	Recent Binge Drinking	Lifetime Marijuana Use	Age of Marijuana Use Initiation	Past Year Marijuana Use	Past Month Marijuana Use	Lifetime Other Illicit Drug Use	DAST Total Score
Rewards & Punishments	--	--	Higher Use (m)	Earlier Age of Initiation	--	--	Higher Use	--
Religious Beliefs	--	--	--	--	--	--	--	--
Never Addressed	--	--	--	--	--	--	--	--
Respecting Parents	--	--	--	--	--	--	--	--
Focus on Yourself	--	--	Higher Use	--	--	--	--	--
Negative Consequences	Fewer Drinks Per Week	--	Lower Use	Later Age of Initiation	--	--	Lower Use	--

Note. (m) indicates a marginal association. DAST = Drug Abuse Screening Test.

In summary regression analyses revealed that parental messages about substance use were differentially related to the lifetime rates of cigarette, alcohol, marijuana, and other illicit drug use, as well as to age of substance use initiation. Not all parental messages had protective effects. Below I review the parental messages that were consistently associated with less substance use or later onset of use, then move to a discussion of messages that were associated with greater rates of substance use and/or earlier initiation of use. These differential associations with outcome highlight the importance of considering the content of messages about substance use and not merely the frequency of communication.

Negative Consequences of Use

As discussed earlier, the items comprising the Negative Consequences of Use component focused on avoiding substance use because of the possibility of being exposed to unsafe situations, becoming a danger to self and others, and the lifelong consequences that use can have. After accounting for the influences of demographics, familism, Latino orientation, religious commitment, and other messages parents conveyed about substance use, Latino emerging adults who reported receiving more messages about the negative consequences of substance use were slightly less likely to have ever smoked cigarettes, were less likely to have used alcohol in the past year and reported drinking fewer drinks per week. They also were less likely to have ever used marijuana and reported using fewer illicit drugs other than tobacco, alcohol, or marijuana in their lifetime. Participants whose parents conveyed more messages regarding the negative consequences of substance use also delayed the initiation of cigarette, alcohol, and marijuana use.

The finding that messages about negative consequences of use were associated with delayed substance use initiation is particularly important. For instance, LaBrie and colleagues found that early alcohol initiation (use before age 15) was more strongly associated with binge drinking in college and more positive alcohol perceptions than later initiation (LaBrie, Rodrigues, Schiffman, & Tawalbeh,

2007). Likewise, Grant and Dawson (1997) revealed that earlier youth initiation of alcohol use was related to a greater likelihood of developing alcohol dependence and related problems in adulthood. Additionally, while the majority of the sample has consumed alcohol (90 percent), those whose parents communicated more messages about the negative consequences of substance use reported lower frequency and quantity of drinking.

Interestingly, the current findings on the association between parental messages about the negative consequences of substance use and reported rates of offspring substance use contradict the earlier results of Ennett and colleagues (2001). While I found that parental messages stressing the negative consequences of alcohol, tobacco, and other drug use was related to later age of cigarette, alcohol, and marijuana initiation in addition to lower lifetime use, Ennett et al. revealed that such messages were associated with higher rates of lifetime smoking. Conversely, the current results are supported by the findings of Turrissi, Jaccard, Taki, Dunnam, and Grimes (2001), who indicated that when parents were educated about binge drinking and how to convey information about drinking risks prior to their offspring starting college these freshman reported lower drinking levels and fewer alcohol related negative consequences.

Religious Beliefs

Items comprising the Religious Beliefs component focused on the clear use of religious faith and values (e.g., drug use is against our religion, cited scripture to support anti-use stance) to deter youth from substance use. Latino college students who indicated that their parents conveyed higher levels of messages containing religious beliefs as reasons for avoiding substance use delayed the use of cigarettes.

Despite expectations about the significant role of religion, particularly Catholicism, in Latino culture, parental messages stressing religious beliefs as reasons to abstain from substance use were not related to any additional substance use outcomes in the current sample. A potential explanation for the

lack of significant findings in relation to this message type is that controlling for the participant's level of religious commitment in the analyses accounted for a majority of the variance in substance use that also may have been explained by parents conveying anti-use messages in terms of religious beliefs. Religious commitment was associated with less use and delayed onset of use for nearly all of the outcomes examined, and was the most consistent predictor in all of the models. This finding mirrors that of Kliewer and Murrell (2007), who found in a study with Central American youth that a personal relationship with God was the single most protective factor against substance use.

Rewards and Punishments

The Rewards and Punishments component was comprised of items that described parents as communicating rewards (e.g., financial support, greater privileges) for nonuse of alcohol, tobacco, and other drugs and punishments (e.g., take away financial supports or car, grounding) for use. Parental messages communicating rewards and punishments demonstrated a clear-cut relation to higher lifetime use rates of cigarettes and marijuana as well as earlier age of initiation for both substances. This message was also tied to using a greater number of other drugs through emerging adulthood.

While the current study did not reveal associations between parental messages stressing rewards and punishments and recent alcohol, tobacco, or marijuana use, Miller-Day's (2008) investigation of a college sample indicated that parents threatened punishment for use was related to higher rates of alcohol and tobacco use in the past 30 days. Taken together, these two studies suggest that rewards for nonuse and punishments for use may not be the most effective parental messages for preventing or reducing offspring substance use during emerging adulthood. Rewards for nonuse and punishments for use of substances may potentially be a reactive parenting response conveyed after parents have discovered that their youth is using cigarettes, alcohol, or marijuana. However, this assertion cannot be supported by the current study due to the cross-sectional nature of the data collection. Ennett et al. (2001) baseline results were consistent with the current findings; they revealed

that adolescents whose parents reported utilizing higher levels of communication about the rules of substance use reported higher rates of lifetime smoking. Furthermore, their longitudinal analysis of parental messages about rules regarding use indicated that communication about rules and discipline marginally predicted the escalation of tobacco and alcohol use. The work of Ennett and colleagues provides some initial evidence for the predictive effects of parental substance use messages; however, their study focused on a restricted risk period (ages 12 to 14 years) and consisted of only one follow up point at one year. Future studies that use longitudinal designs with more than two data points and/or a wider age range or experimental designs may be able to tease out the temporal ordering of these effects.

Focus on Yourself

The Focus on Yourself component consisted of items stressing the need to avoid peer pressure and the effect that substance use can have on future opportunities. Parental messages aimed at encouraging youth to focus on their future and avoid peer pressure were weak indicators of substance use. These messages were positively associated with significantly greater lifetime rates of marijuana use. Furthermore, Focus on Yourself messages were marginal predictors of several other substance use outcomes. Latino college students who reported receiving higher levels of such messages tended to initiate cigarette use at an earlier age and were more likely to report higher lifetime rates of alcohol.

Similar to results with the Rewards and Punishments component, the cross-sectional design of the current study makes it difficult to interpret the processes that link greater messages encouraging offspring to focus on their future and avoid peer pressure with more negative substance use outcomes. Additional research is needed that can provide a better understanding of when and why parents choose to convey this type of message. For instance, Miller-Day's (2008) findings propose that it is the combination of parents being both able to clearly and directly communicate their intolerance of drug

use and being open with their children on a variety of topics that leads to children who are less likely to use drugs.

Respecting Parents

Items comprising the Respecting Parents component conveyed the message that substance use by offspring reflects badly on and embarrasses parents. Respecting Parents messages did not demonstrate any significant associations with substance use outcomes; although, two alcohol outcomes were marginally associated with such messages. Participants who endorsed higher levels of messages stressing the need to avoid substance use in order to respect parents were slightly more likely to first use alcohol at an earlier age and also endorsed more frequent past year alcohol consumption.

The messages focused on discouraging substance use by suggesting that such behavior would be disrespectful or embarrassing for parents appeared to reflect that Latino value of familism and was expected to result in more positive substance use outcomes. However, results surprisingly revealed that these messages were associated with trends toward earlier use of alcohol and heavier past year alcohol use—the opposite direction that would have been expected given the role of familism. Given the direction of the associations, Respecting Parents seems to suggest a similar reactive use as it was related with more negative alcohol outcomes (marginally). Future research is needed to clarify the correlates of this particular message, and whether this message precedes or follows adolescent substance use.

Never Addressed

The Never Addressed component was comprised of items that reflected an absence of parental communication about their views on substance use. Interestingly, this component was not uniquely related to any substance use outcomes in the current sample. Latino emerging adults who endorsed higher levels of parents not directly addressing the substance use issues did not demonstrate poorer substance use outcomes. This finding is consistent with that of Miller-Day and Kam (2010) who

examined the relation of indirect parental messages about alcohol use to positive alcohol expectancies and recent alcohol use among fifth and sixth graders. They did not observe a significant relationship between these constructs; however, it should be noted that unlike the current study, Miller-Day and Kam's (2010) investigation was comprised of one item measuring indirect parent-child communication about alcohol.

Summary of Parental Message Findings

Select parental messages were strongly associated with the substance use patterns of Latino emerging adults while some messages did not appear to relate or marginally related to substance use. Furthermore, not all parental messages about substance use were related to more favorable substance use outcomes. Negative Consequences of Use and Rewards and Punishments were the most robust predictors of outcomes and illustrate the above statements well. Negative consequences for use was a consistent predictor of more desirable substance use outcomes, including lower lifetime prevalence rates, later age of initiation, and lower rates of illicit drug use. Conversely, rewards for non-use and punishments for use were strongly associated with less positive outcomes, like higher lifetime prevalence rates and earlier age of initiation.

Parental messages about substance use did not appear to be associated equally with all substance use outcome types. Parental messages were most predictive of lifetime prevalence rates and age of initiation. However, they did not appear to heavily influence the frequency of past year or past month cigarette, alcohol, and marijuana use. This finding suggests that parental messages about substance use might be more impactful during adolescence when youth are making initial decisions about experimenting with cigarettes, alcohol, and marijuana. Nonetheless, parental messages about substance use do continue to impact some recent alcohol use behaviors among Latino emerging adults, including past year alcohol use and average number of drinks consumed per week. I should note that although I included all the parental message subscales simultaneously in models predicting substance

use and age of initiation of use, it is possible that distinct combinations of messages (clusters or latent classes) might have yielded different findings. Additionally, Miller-Day (2008) revealed that the only parental message type to have a significant, positive impact on recent alcohol, tobacco, and marijuana use was a “no tolerance rule,” yet, the current PCA results did not support the retention of the parental message items communicating this message. Future investigations may consider retaining these items for further examination of their influence on recent substance use.

General Discussion

The current study had several aims. First, I sought to identify messages about substance use Latino parents commonly convey to their offspring. This was a first step in developing a questionnaire to assess the frequency of these messages. Next, I assessed the psychometric properties and factor structure of this newly developed questionnaire. Subsequently, I examined associations of parental message subtypes with substance use outcomes within a sample of Latino emerging adults in order to determine how the messages related to positive outcomes.

The messages about substance use that I identified in focus groups with Latino college students were both similar to and different from messages identified with largely Caucasian college samples (cf., Miller-Day, 2008). For example, messages about no tolerance for use, hinting/implying that use was bad, providing information on the negative consequences of use, punishment for use, and never directly addressing the issue were similar across the present study and previous research by Miller-Day (2008). In contrast, consistent messages about disrespecting parents and religious reasons for non-use were unique to the present study. This finding may reflect a greater sense of family obligation and the stronger role of religion in daily life within Latino culture. By identifying the most salient and effective parental messages about substance use, we can incorporate these into prevention programs to more effectively reduce and delay substance use.

Previous research examining the associations between parent-child communication about substance use and youth substance use outcomes has focused almost exclusively on the frequency and openness of communication and has failed to investigate the more complex model of communication that has been proposed in recent studies (e.g., Miller-Day & Dodd, 2004, Miller-Day, 2008). In addition, research that has focused on specific messages conveyed by parents has been limited and has produced conflicting results. Further, moderators of specific message use, such as religiosity, have not been measured in previous investigations and can impact choice of message content and, as alluded by the current study, later substance use by offspring.

The initial reliability and validity information on the measure is promising. The six subscales each have good internal consistency, and are correlated in meaningful ways with at least some substance abuse outcomes. The fact that some messages (e.g., negative consequences of use) were associated with later initiation of substance is important, as early substance use initiation is a potent risk factor for dependency in adolescence and adulthood (Grant & Dawson, 1997; LaBrie et al., 2007). Furthermore, the examination of self-reported substance use of Latino emerging adults with the measure developed in the current study also indicates that parent-child communication about substance use continues to be important even through emerging adulthood. This finding is significant for prevention work given that previous research has established that emerging adulthood is the period of life during which drug use typically increases (e.g., Bachman et al., 1996).

While the focus of the present study was to elucidate the associations between parental messages and substance use among Latino emerging adults, it also produced intriguing results in regard to cultural variables that were included as controls. Specifically, the opposing findings of the relation between reported substance use and Latino cultural orientation versus substance use and familism are paradoxical. Although Latino cultural orientation and familism were positively correlated in the current study, they were differentially related to substance use outcome variables.

Higher levels of Latino cultural orientation reliably were related to more positive substance use outcomes, including lower lifetime rates of alcohol use, marijuana, and other drugs, less past year and past month alcohol or marijuana use, and less lifetime use of other drugs. This finding regarding the protective role of Latino cultural orientation confirms and extends prior research which established that a strong cultural orientation was associated with less substance use among Latino adolescents (Casas et al., 1998). Arnett (2005) asserted that substance use may be an aspect of identity explorations in several respects, one of which is particularly salient for Latino emerging adults. Arnett described identity formation as confusing and difficult and contended that some emerging adults may use drugs as a way of relieving their identity confusions. Identity formation for Latino emerging adults not only includes explorations in the areas of love, work, and worldviews faced by nonminority emerging adults, but also encompasses ethnic identification. The current study revealed that lower levels of Latino cultural orientation were related to higher lifetime prevalence rates as well as recent substance use. This finding may be explained by prior research by Szapocnik and Kurtines (1989) who found that increasing levels of acculturation were related to conflicts in identity formation.

Conversely, higher levels of familism were associated marginally with higher reported past year cigarette use, greater past year and past month alcohol use, and a higher average number of alcoholic drinks per week. These results demonstrate that Latino cultural orientation and familism may be tapping different dimensions of a related construct—at least in the context of substance use. An alternate explanation is that familism and Latino cultural orientation might interact such that higher levels of both familism and Latino cultural orientation are protective against substance use while higher levels of familism and lower levels of Latino cultural orientation increase the risk for substance use during emerging adulthood.

Arnett (2005) suggested that a key feature of emerging adulthood is its self-focused quality which results in a decreased level of social control by parents. This may explain the lack of many

significant results regarding the influence of parental substance use messages on recent cigarette, alcohol, and marijuana use in the current study. Additionally, the self-focused quality of emerging adulthood may clarify the results concerning the associations of familism with recent substance use behaviors given familism's strong focus on the family as the primary source of support, loyalty, and solidarity (Cauce & Domenech-Rodríguez, 2002). Previous research on the role of familism in substance use behaviors of Latino youth has focused on adolescents and failed to examine this construct in emerging adulthood. For instance, while Ramirez and colleagues (2004) found that higher levels of familism was associated with reduced likelihood of current marijuana use, their sample was limited to adolescents.

The current study confirms and extends previous investigations regarding the role of religiosity on substance use behaviors among Latinos. For instance, prior research has indicated that spirituality is protective against marijuana and hard drug use among a sample of predominately Latino adolescents (Hodge et al., 2001) and that attendance at religious services was inversely related to drug use in a study of Latino eighth graders (Wallace, 1999). The current study revealed that higher levels of religious commitment among Latino emerging adults was related to lower lifetime use of tobacco, alcohol, marijuana, and other drugs as well as decreased frequency of recent tobacco and alcohol use. These results mirror those of Marsiglia, Kulis, Nieri, and Parsai (2005) who examined the influence of religiosity and religious affiliation on substance use behaviors in a sample of preadolescent Latinos. The current findings strengthen the case for religiosity as a protective factor against substance use. While the other studies referenced above are limited by the fact that religious affiliation and attendance measured in youth may more likely express their parents' spirituality than the adolescent's, the current study examined religious commitment in a sample of Latino emerging adults who have greater autonomy over their religious choices.

Study Limitations and Strengths

The current study had a number of important limitations. First, the sample size of focus groups in Study 1 was smaller than initially anticipated. However, despite this restricted sample size, the focus group discussions produced a wide range of responses that were able to be coded for parental messages about substance use. Nonetheless, the current study was unable to reach saturation of themes as a consequence of the small sample. Coding of the transcripts also was limited by the use of only one coder, which prohibited any examination of coding reliability. In addition to a small sample size, the focus groups consisted primarily of females and a restricted age range (18 to 21 years old). Furthermore, all focus group participants were U.S. born. It would be expected that immigration status may affect parental messages about substance use; however, the restricted sample prohibited the examination of this relation and likely constrained results.

Second, the resulting questionnaire did not assess parental messages about various substances separately. Instead, it collapsed parental messages about the use of legal (e.g., cigarettes and alcohol) and illegal (e.g., marijuana) drugs into one measure. This may explain why some messages did not appear to significantly predict substance use outcomes in the current study. The actual effects of parental communication about substance use may have been obscured by this lack of substance specificity of the items.

Third, the study employed self-report measures. Participants self-reported their substance use history, which may have resulted in inaccurate reporting due to social desirability. However, the likelihood of this may have been reduced by the anonymous nature of the survey. Youth report of parental messages about substance use is limited in that parents may have conveyed more messages than were endorsed by participants. However, one could argue that the messages recalled by participants were the most salient ones and, therefore, the most influential on substance use outcomes.

Further, aside from reports of parental messages about substance use, measures of parenting were not assessed. Specifically, previous research has implicated other dimensions of the parent-child relationship (e.g., openness of communication, parenting style) that can influence adolescent outcomes, including substance use. For instance, parenting processes such as parental monitoring or knowledge of adolescents' friends and activities, parental control, and warmth or conflict have predicted later levels adolescent substance use (Dishion, Nelson, & Bullock, 2004; Duncan, Duncan, Biglan, & Ary, 1998; Fletcher, Steinberg, & Williams-Wheeler, 2004). In addition, parents' own substance use history was not assessed. These factors likely interact with parental messages to influence offspring substance use.

The employment of a college-student sample is another limitation of the current study. It is conceivable that Latino emerging adults who are seeking higher education may differ in family background and values than Latino emerging adults who are not currently enrolled in college. However, it is notable that a little less than half (40.5%) of the current sample were first-generation college students.

The study's cross-sectional design prevents causal conclusions to be drawn from the influence of parental messages about substance use to the actual substance use outcomes of Latino emerging adults. Future studies should attempt to assess youth and their parents in early adolescence and follow them across the risk periods of adolescence and emerging adulthood. It would be critical to measure parental substance use messages as well as youth reported substance use rates at all data collection points.

Despite these limitations, there are several important strengths of the current study. First, the study addressed a current gap in the literature by seeking to identify specific messages that parents convey about the use of legal and illegal substances. Secondly, the associations of these messages and substance use outcomes were examined which permits some initial hypotheses to be drawn about the

effectiveness of the identified messages in preventing or delaying substance use. Thirdly, the study focuses on Latino emerging adults and parents—the fast growing segment of the population, but largely underrepresented in the psychological literature.

Directions for Future Research

The research conducted via these two studies are among the first steps in identifying substance use prevention messages that are both effective and culturally sensitive. There are number of logical next steps in this area of research. One set of research objectives focus on the parental message questionnaire developed and described in the current paper, while the other involves more extensive investigation of the relation between parental messages about substance use and resulting youth substance use.

In regard to the questionnaire developed in the current study, additional qualitative work should be conducted in order to determine if other parental messages about substance use were not identified due to the restricted sample size. Furthermore, these qualitative efforts should include a wider range of Latinos (e.g., adolescents, non-college students, non-English speaking) as well as other minority populations that are often underrepresented in psychological research. Other methodologies, such as ethnographies and semi-structured interviews, should be employed in addition to focus groups. These future examinations should seek to illuminate other characteristics of parent-child communication about substance use like communication style. Moreover, inquiries should attempt to distinguish between messages that parents relay about various substances and resulting measurements ought to maintain any such difference. Once the measure is revised, future research needs to apply confirmatory factor analyses to strengthen the validity of the hypothesized subscales from this version as well as any additional scales that are identified in subsequent studies. As the measure is further refined, it should be administered to larger, more diverse samples in order to increase generalizability.

Research should then shift to focus on further clarifying the processes through which the associations between parental substance use messages and actual substance use outcomes develop. Specifically, longitudinal studies are necessary to reveal the direction of the associations. Stated differently, do certain parental messages result in particular substance use outcomes or does offspring substance use result in specific parental messages regarding substance use? Such questions can only be addressed via longitudinal research methods that permit the assessment of both offspring substance use and parental messages about substance use at multiple time points. These studies need to include other important variables such as parents' own substance use and measures of the family climate in order to gain a full picture of the socialization processes involved in adolescent substance use.

It is important to assess the timing of parent-child communication about alcohol, tobacco, and other drugs when examining the parental messages as predictors of substance use outcomes. If messages come after the initiation of use, they will likely be less effective than if they preceded the initial onset of use. Additionally, future research should identify what messages are most salient and effective at preventing substance use at different developmental stages. Youth within early adolescence may benefit from distinct parental messages that may not result in favorable substance outcomes if communicated to a late adolescent or emerging adult.

These research efforts would culminate in prevention studies that would educate parents about effective messages to prevent and/or delay substance use by their offspring. Additionally, these preventive interventions would tailor messages to be culturally appropriate. Optimistically, this line of research will assist in reducing the negative consequences of youth substance use.

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Appendix 1A:

Study 1 Consent Form

**Virginia Commonwealth University
Parent-Child Communication about Substance Use:
Experiences of Latino Emerging Adults
Consent for Participation in Focus Groups**

Why am I being asked?

You are being asked to participate in a research study designed to learn more about the messages that Latino parents communicate to their offspring about legal and illegal drugs. About 40 Latinos aged 18 to 25 years old are being asked to participate.

What am I being asked to do?

If you agree, we will ask you to take part in a group discussion with other Latino college students led by our study staff. The discussion will last about 90 minutes. The purpose of these focus groups is to get your input on the messages communicated by your parents regarding substance use. We are specifically interested in: 1) identifying the messages that parents communicate to their offspring, 2) identifying the context of these messages, and 3) identifying the frequency with which messages are communicated.

What are the potential risks and benefits of participation?

The risks to participating in this study are minimal. The most likely risk is that something said during the group discussion may make you feel uncomfortable. You can choose to limit or discontinue participation at any time. If you do feel uncomfortable, a member of our study staff will be glad to talk to you and address your concerns. In addition, we can also provide a referral (for example, to a counselor) if needed. Although we will assist in providing any referral that is needed, Virginia Commonwealth University or your health insurance may not provide compensation for these services.

You may not receive any direct benefit from participating in this group discussion. However, you may enjoy the opportunity to discuss your opinions and contribute to information about the important role of fathers in the lives of youth.

What will I receive for participating?

There is no payment for participation, but we will serve you refreshments during the focus group that you participate in. Additionally, you will be entered in a lottery with all study participants for the chance to win \$100.

What alternatives to participation do I have?

Your alternative to participation is to not participate in the study.

What about privacy and confidentiality?

The focus group discussion and all of the information that you give us will be kept private. We cannot guarantee that other members of the group will keep the information you share private, but we will ask them to do so. The only exception to keeping your information private is if we believe that a minor is in danger, we are required by law to report it.

We will tape record the focus groups to help us keep track of all that is said. Study staff will go back and listen to the tape recording and type up the discussion. To protect confidentiality, we will ask all focus group members to use initials only or an alias so that no names are recorded. The tapes and the notes will be stored in a locked cabinet. After the information from the tapes is typed up, the tapes will be destroyed. A data and safety monitoring plan is established in place to ensure that only those people who are conducting the research have access to the data. What you tell us will be combined with what everyone else says and shared only in summary format with others.

VCU and other authorized agencies may review research records and the consent form signed by you. When results of the research are published or discussed, no information will be included that will reveal your identity.

Voluntary participation and withdrawal

Your participation is completely voluntary. You can choose whether to take part in the focus group or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. If you decide to participate, you can choose not to answer any question for any reason.

Who should I contact if I have questions?

If you have a question or concern about the research, you can contact Mrs. Kathryn Reid-Quñones, the primary researcher and doctoral student at VCU, at (804) 828-3629 or kreid@vcu.edu. You may also contact: Dr. Wendy Kliewer

(804) 828-1793
 wkliewer@vcu.edu
 810 West Franklin Street
 P.O. Box 842018

If you have questions about your rights as a research subject, you may contact the Office for

Research Subjects Protection at the address and phone number below:

Virginia Commonwealth University
 Bio-Tech Park, Building One
 800 East Leigh Street, Suite 114
 P.O. Box 980568
 Richmond, VA 23219-0568
 Telephone: 804-828-0868

Consent

I have read this consent form and understand the information about the study. All my questions about the study and my participation in it have been answered. I agree to participate in this study. I have been given a copy of this form.

Participant name printed

Participant signature

Date

Signature of person conducting consent discussion/Witness

Date

Project Director's signature (if different from above)

Date

Appendix 1B:

Study 2 Consent Form

Talking about Cancer in Latino Families

PARTICIPANT INFORMATION AND CONSENT FORM

VCU IRB NO.: 12929

INVESTIGATORS: Drs. Rosalie Corona, Joann Bodurtha, John Quillin, and Ms. Kathryn Reid-Quiñones

SPONSOR: American Cancer Society Institutional Research Grant

This consent form may contain words that you do not understand. Please ask the study staff to explain any words that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

What is the purpose of this study?

We are interested in learning about your experiences in talking to your family about risk behaviors and your family's health history, and how these discussions affect what you think, feel, and do.

You are being asked to participate because you are between the ages of 18 and 25, and Latino.

What will I be asked to do if I agree to participate?

If you agree to be in this study, you will be asked to complete a packet of questionnaires. You can complete the questionnaires in a private location where you feel comfortable. For example, you can come to our offices at Virginia Commonwealth University, or we can meet in another private location like a public library.

The questionnaires will include topics such as:

- How you feel talking to your family members about health-related topics like cancer, genetic testing, and other cancer-related risk behaviors;
- What you have talked to your family about with respect to cancer risk behaviors, and cancer prevention;
- Risk behaviors, including substance use, tobacco use;
- Family communication about tobacco and other substance use (e.g., alcohol);
- Questions about your age, gender, religious affiliation, your family's country of origin, language preferences, etc.

The packet of questionnaires will not have your name on it. The questionnaire will take approximately 45-60 minutes to complete.

What are the potential risks and benefits of taking part in this study?

Some of the questions may make you feel uncomfortable. You can choose not to answer any question for any reason and can stop the interview at any time without penalty. If you become upset and would like to speak with someone about it, the researchers will provide you with the names of counselors to contact so you can get help in dealing with these issues. Although we will assist in providing any referral that is needed, Virginia Commonwealth University or your health insurance may not provide compensation for these services. A potential benefit of this study is that by answering these questions, you may help us learn how to help young adults talk to their family about health and cancer-related risk factors.

What will I receive for participating in this study?

We want to thank individuals who complete the surveys for the time and energy it took. So, at the end of the survey you will receive \$25.00.

Will what I say be kept private and confidential?

The data from this project is being collected for research purposes. All of the information that you provide will be kept private. Nothing that you tell us will be shared with anyone. All information you provide will be coded with an identification number (ID number). Your name and your ID number will not be kept together with any of the information you provide. All study material, including the questionnaire responses, will be kept in a locked file cabinet in the faculty or research office of the Principle Investigator. All data will be entered into a computer database and will be password protected. The computer files will be kept on a password protected computer. VCU may review research records and the consent form signed by you.

We will not identify you in any reports that we write. Instead, we will describe findings in terms of groups of individuals. After the research is complete, we will destroy all the information that identifies you, including your questionnaires. Any information that is obtained in connection with this study, and that can be identified with you will remain confidential.

Is my participation voluntary?

You can choose whether to be in this study or not. Your participation is voluntary. In order to be in the study, however, you have to agree to participate. If you volunteer to be in the study, you may withdraw at any time with no consequences of any kind. You may also refuse to answer any question and still remain in the study.

Who should I contact if I have questions?

If you have a question at any time, call Dr. Rosalie Corona at (804) 828-8059 or the study staff at (804) 827-4450.

You may also feel free to contact the Office for Research Subjects Protection at the address and phone number below:

Virginia Commonwealth University
 Bio-Tech Park, Building One
 800 East Leigh Street, Suite 114
 P.O. Box 980568
 Richmond, VA 23219-0568
 Telephone: (804) 828-0868

Consent

Signing your name below shows that you agree to be in the study. If there is any part of the form that is unclear to you, be sure to ask questions about it. Do not sign the form until you get answers to all of your questions.

I have read this consent form and understand the information about the study. All my questions about the study and my participation in it have been answered. My signature says that I am willing to participate in this study.

 Participant name printed

 Participant signature

 Date

 Printed Name of Person Conducting Informed Consent Discussion/Witness

 Signature of Person Conducting Informed Consent Discussion/Witness

 Date

 Investigator Signature (if different from above)

 Date

Appendix 2A:
DEMOGRAPHICS

1. Are you...

₁ Male

₂ Female

2. What is your date of birth?

_____/_____/_____
mm dd yyyy

3. What best describes your highest level of education?

₁ Attended some grade school but did not go to high school

₂ Attended some high school but didn't graduate

₃ Graduated from high school

₄ Attended some college, vocational, or trade school but didn't graduate

₅ Graduated from a two-year college, vocational, or trade school

₆ Graduated from a four-year college

₇ Attended some graduate or professional school after college

₈ Earned a graduate degree (Masters, Ph.D., M.D., J.D., etc.)

4. If you are currently enrolled in college, are you a...

₁ Freshman

₂ Sophomore

₃ Junior

₄ Senior

₅ Graduate/Professional

₆ Non-degree seeking student

₇ Other _____

5. If you attended or are attending college, were you the first person in your family to attend college?

₁ Yes

₂ No

6. Are you...

₁ Single, never been married

₂ Married

₃ Living as married or living with a domestic partner

₄ Legally separated

₅ Divorced

₆ Widowed

₇ Other _____

7. Are you...

₁ Employed or self-employed **full time** (more than 35 hours per week)

₂ Employed or self-employed **part time** (less than 35 hours per week)

₃ Unemployed

8. Were **you** born in the United States?

₁ Yes

₂ No, I was born in _____

9. Was your **mother** born in the United States?

₁ Yes

₂ No, my mother was born in _____

10. Was your **father** born in the United States?

₁ Yes

₂ No, my father was born in _____

11. Are you of Hispanic or Latino origin?

₁ Yes

₂ No

12. The Hispanic/Latino question is about ethnicity, not race. Please continue to answer the following question by marking one or more boxes to indicate what you consider your race to be:

₁ American Indian or Alaska Native

₂ Asian

₃ Black or African American

₄ Native Hawaiian or other Pacific Islander

₅ White

₆ Other: _____

13. Please estimate your family's household income

₁ Less than \$25,000 per year

₂ \$25,000 - \$50,000 per year

₃ \$50,000 - \$75,000 per year

₄ \$75,000 - \$100,000 per year

₅ \$100,000 - \$125,000 per year

₆ \$125,000 - \$150,000 per year

₇ \$150,000 - \$175,000 per year

₈ \$175,000 - \$200,000 per year

₉ More than \$200,000 per year

14. What is your religious background?

₁ Protestant or Other Christian

₂ Catholic

₃ Jewish

₄ Buddhist

₅ Hindu

₇ Muslim

₈ No religious background

₉ Other _____

Appendix 2B:

CORE ALCOHOL AND DRUG SURVEY

Instructions: The next questions ask about your use of alcohol, tobacco products, and illegal drugs. Remember that your name is not on the survey and that your answers are private and will not be shared with anyone.

1. Think back over the last two weeks. How many times have you had five or more drinks* at a sitting?
 *A drink is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink.

- ₁ None
- ₂ Once
- ₃ Twice
- ₄ 3 to 5 times
- ₅ 6 to 9 times
- ₆ 10 or more times

2. Average number of drinks* you consume in a week: _____

3. At what age did you **first** use...

	Never	Under 10 yrs	10-11 yrs	12-13 yrs	14-15 yrs	16-17 yrs	18-20 yrs	21-25 yrs
a. Cigarettes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
b. Tobacco, snuff or dip, such as Redman, Levi Garret, Beechnut, Skoal, Skoal Bandits, or Copenhagen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
c. Cigars, cigarillos, or little cigars	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
d. Hooka, shisha, or narghile (glass waterpipe)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
e. Alcohol (beer, wine, liquor) *other than a few sips	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
f. Marijuana (pot, hash, hash oil)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
g. Cocaine (crack, rock, freebase)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
h. Amphetamines (diet pills, speed)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
i. Sedatives (downers, ludes)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈

	Never	Under 10 yrs	10-11 yrs	12-13 yrs	14-15 yrs	16-17 yrs	18-20 yrs	21-25 yrs
j. Hallucinogens (LSD, PCP)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
k. Opiates (heroin, smack, horse)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
l. Inhalants (glue, solvents, gas)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
m. Designer drugs (ecstasy, MDMA)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
n. Steroids	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
o. Other illegal drugs	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈

4. Within the **last year** about how often have you used....

	Did Not Use	Once per Year	6 Times per Year	Once a Month	Twice a Month	Once a Week	Twice a Week	Every Day
a. Cigarettes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
b. Tobacco, snuff or dip, such as Redman, Levi Garret, Beechnut, Skoal, Skoal Bandits, or Copenhagen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
c. Cigars, cigarillos, or little cigars	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
d. Hooka, shisha, or narghile (glass waterpipe)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
e. Alcohol (beer, wine, liquor) *other than a few sips	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
f. Marijuana (pot, hash, hash oil)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
g. Cocaine (crack, rock, freebase)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
h. Amphetamines (diet pills, speed)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
i. Sedatives (downers, ludes)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
j. Hallucinogens (LSD, PCP)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
k. Opiates (heroin, smack, horse)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
l. Inhalants (glue, solvents, gas)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
m. Designer drugs (ecstasy, MDMA)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
	Did Not	Once per	6 Times per	Once a	Twice a	Once a	Twice a	Every Day

	Use	Year	Year	Month	Month	Week	Week	
n. Steroids	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈
o. Other illegal drugs	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈

5. During the **past 30 days** on how many days did you have...

	0 Days	1-2 Days	3-5 Days	6-9 Days	10-19 Days	20-29 Days	All 30 Days
a. Cigarettes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
b. Tobacco, snuff or dip, such as Redman, Levi Garret, Beechnut, Skoal, Skoal Bandits, or Copenhagen	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
c. Cigars, cigarillos, or little cigars	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
d. Hooka, shisha, or narghile (glass waterpipe)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
e. Alcohol (beer, wine, liquor) *other than a few sips	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
f. Marijuana (pot, hash, hash oil)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
g. Cocaine (crack, rock, freebase)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
h. Amphetamines (diet pills, speed)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
i. Sedatives (downers, ludes)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
j. Hallucinogens (LSD, PCP)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
k. Opiates (heroin, smack, horse)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
l. Inhalants (glue, solvents, gas)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
m. Designer drugs (ecstasy, MDMA)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
n. Steroids	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇
o. Other illegal drugs	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇

Appendix 2C:

DRUG ABUSE SCREENING TEST

6. **Instructions:** These questions refer to the **past 12 months**. Please answer "YES" or "NO." "N/A" should only be used if you have not ever used drugs.

	YES	NO	N/A
a. Have you used drugs other than those required for medical reasons?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b. Have you abused prescription drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c. Do you abuse more than one drug at a time?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d. Can you get through the week without using drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e. Are you always able to stop using drugs when you want to?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f. Have you had "blackouts" or "flashbacks" as a result of drug use?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
g. Do you ever feel bad or guilty about your drug use?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
h. Do your parents (boyfriend/girlfriend/partner/spouse or other family members) ever complain about your involvement with drugs ?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
i. Has drug abuse created problems between you and your parents (or boyfriend/girlfriend/partner or other family members,)?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
j. Have you lost friends because of your use of drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
k. Have you neglected your family because of your use of drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
l. Have you been in trouble at school or work because of drug abuse?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
m. Have you lost a job because of drug abuse?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
n. Have you gotten into fights when under the influence of drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
o. Have you engaged in illegal activities in order to obtain drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
p. Have you been arrested for possession of illegal drugs?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
q. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs ?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
r. Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding, etc.)?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
s. Have you gone to anyone for help for a drug problem?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
t. Have you been involved in a treatment program specifically related to drug use ?	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Appendix 2D:

**MEXICAN AMERICAN CULTURAL VALUES SCALE FOR ADOLESCENTS AND ADULTS
- FAMILISM SUBSCALE**

Instructions: The next statements are about what people may think or believe. Please indicate your opinion about these and remember there are no right or wrong answers.

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
1. Parents should teach their children that the family always comes first.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. Children should be taught that it is their duty to care for their parents when their parents get old.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. Children should always do things to make their parents happy.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. Family provides a sense of security because they will always be there for you.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. If a relative is having a hard time financially, you should always help them out if you can.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. When it comes to important decisions, the family should seek advice from close relatives.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
7. It is always important to be united as a family.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
8. It is important to have close relationships with aunts/uncles, grandparents and cousins.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
9. Older kids should take care of and be role models for their younger brothers and sisters.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
10. Children should be taught to always be good because they represent the family.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
11. Holidays and celebrations are important because the whole family comes together.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
12. Parents should be willing to make great sacrifices to make sure their children have a better life.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
13. A person should always think about their family when making important decisions.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
14. It is important to work hard and do your best because your work reflects on the family.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
15. A person should share his/her home with relatives if they need a place to stay.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
16. It is important for family members to show their love and affection to one another.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Appendix 2E:

ACCULTURATION RATING SCALE FOR MEXICAN AMERICANS-II

	Not At All	Very Little or	Moderately	Much or Very Often	Extremely often or Almost Always
1. I speak Spanish.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. I speak English.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. I enjoy speaking Spanish.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. I associate with Anglos.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. I associate with Latinos	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. I enjoy listening to Spanish language music.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
7. I enjoy listening to English language music.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
8. I enjoy Spanish language TV.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
9. I enjoy English language TV.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
10. I enjoy English language movies.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
11. I enjoy Spanish language movies.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
12. I enjoy reading (e.g., books) in Spanish.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
13. I enjoy reading (e.g., books) in English.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
14. I write (e.g. letters) in Spanish.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
15. I write (e.g. letters) in English.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
16. My thinking is done in the English language.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
17. My thinking is done in the Spanish language.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
18. My contact with Latin America has been.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
19. My contact with the USA has been.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
20. My father identifies or identified himself as Latino	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

	Not At All	Very Little or Not Very Often	Moderately	Much or Very Often	Extremely often or Almost Always
21. My mother identifies or identified herself as Latina	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
22. My friends, while I was growing up were of Latino origin.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
23. My friends, while I was growing up were of Anglo origin.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
24. My family cooks foods from Latin American countries.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
25. My friends now are of Anglo origin.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
26. My friends now are of Latino origin.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
27. I like to identify myself as an Anglo American.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
28. I like to identify myself as Latino American.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
29. I like to identify myself as a Latino	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
30. I like to identify myself as an American.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Appendix 2F:

RELIGIOUS COMMITMENT INVENTORY – II

Instructions: We're almost finished. We just have a few questions left. Now I'd like to ask you about your religion or spirituality. How true is each of the following statements for you?

	Not At All True of Me	Some- what True of Me	Moder- ately True of Me	Mostly True of Me	Totally True of Me
1. I often read books and magazines about my faith.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
2. I make financial contributions to my religious organization.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
3. I spend time trying to grow in understanding of my faith.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
4. Religion is especially important to me because it answers many questions about the meaning of life.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
5. My religious beliefs lie behind my whole approach to life.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
6. I enjoy spending time with others of my religious organization.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
7. Religious beliefs influence all my dealings in life.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
8. It is important to me to spend periods of time in private religious thought and reflection.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
9. I enjoy working in the activities of my religious organization.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
10. I keep well informed about my local religious group and have some influence in its decisions.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Vita

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