

2009-01-01

The Relation of Alcohol Expectancies to Alcohol Consumption and Alcohol-Related Problems Among College Students

Michelle Nicholle Greco

University of Texas at El Paso, texasgrL2324@yahoo.com

Follow this and additional works at: https://digitalcommons.utep.edu/open_etd



Part of the [Public Health Education and Promotion Commons](#)

Recommended Citation

Greco, Michelle Nicholle, "The Relation of Alcohol Expectancies to Alcohol Consumption and Alcohol-Related Problems Among College Students" (2009). *Open Access Theses & Dissertations*. 2694.

https://digitalcommons.utep.edu/open_etd/2694

THE RELATION OF ALCOHOL EXPECTANCIES TO ALCOHOL
CONSUMPTION AND ALCOHOL-RELATED PROBLEMS AMONG COLLEGE
STUDENTS

MICHELLE NICHOLLE GRECO

Department of Health Promotion

APPROVED:

Joe Tomaka, Ph.D., Chair

Sharon E. Thompson, MPH, Ph.D., CHES

Theodore Cooper, Ph.D.

Patricia D. Witherspoon, Ph.D.
Dean of the Graduate School

Copyright
by
Michelle Nicholle Greco
2009

Dedication

My dearest Scott, without your patience, understanding, and most of all love, the completion of this thesis would not have been possible. Thank you for listening to me talk about my thesis in every conversation, giving me neck massages to ease the tension, and brewing me coffee late at night to keep me sane.

“But those who hope in Jesus Christ will renew their strength. They will soar on wings like eagles; they will run and not grow weary, they will walk and not be faint.”

~Isaiah 40:31

“Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream which, fulfilled, can be translated into benefit for everyone and greater strength for our nation.” ~JFK

THE RELATION OF ALCOHOL EXPECTANCIES TO ALCOHOL
CONSUMPTION AND ALCOHOL-RELATED PROBLEMS AMONG COLLEGE
STUDENTS

by

MICHELLE NICHOLLE GRECO, BS

THESIS

Presented to the Faculty of the Graduate School of
The University of Texas at El Paso
in Partial Fulfillment
of the Requirements
for the Degree of

MASTER OF SCIENCE

Department of Health Promotion

THE UNIVERSITY OF TEXAS AT EL PASO

December 2009

Acknowledgements

I owe my deepest gratitude to Dr. Joe Tomaka, whose encouragement, guidance and support from beginning to end enabled me to develop an understanding of this subject. Your countless hours of time spent teaching me and answering ALL my questions (even though I was not living in the same city) will always be appreciated. You have played an invaluable role in my development as a graduate student and have helped me prepare for a career in Health Science. I would also like to thank Dr. Sharon Thompson and Dr. Theodore Cooper for all of their time and insight.

I would like to thank my parents for their support throughout the years of my education. Your endless words of encouragement and faith in me over the years have helped me to achieve many goals I have set for myself. Thank you for teaching me to value education and instilling in me good work ethics, values, and morals.

Lastly, I would like to thank Dr. Michael Kelly for being my mentor and pushing me to step outside of my comfort zone. I really appreciate you taking me under your wing and helping me figure out what exactly I wanted to do in the Health Science field. The day I started the internship under your department was the day I knew I wanted to push myself beyond the goals I had already set for myself. Thank you for opening my eyes to new things and new experiences.

Abstract

The purpose of the present study was to examine the relationships among positive and negative alcohol expectancies and alcohol consumption and alcohol-related problems in a sample of Hispanic, predominantly Mexican-American, college students. It was hypothesized that positive expectancies would be positively related to alcohol consumption and alcohol-related problems and that negative expectancies would be negatively related to alcohol consumption and alcohol related problems. Little is known and understood about the role of positive *and* negative expectancies in Hispanic college students and even less is known about how expectancies relate to alcohol related *problems* in this population.

This study was a secondary analysis of data previously collected from participants in an alcohol risk reduction program conducted on the UTEP campus (i.e., the BASICS Program). Measures used in this study included the Alcohol Use Disorders Identification Test (AUDIT), The Comprehensive Effects of Alcohol Questionnaire (CEAQ), The Rutgers Alcohol Problem Index (RAPI), and the Daily Drinking Questionnaire (DDQ).

Results showed that both positive and negative expectancies in a sample of Hispanic College Students were positively associated with alcohol-related problems. Findings that positive alcohol expectancies, such as Sociability and Liquid Courage, which are positively associated with alcohol-related problems are consistent with the literature presented in this study.

Implications of this study suggest that interventions designed to lower drinking might focus on high expectancies in Sociability, Liquid Courage, and Risk/Aggression. Programs that help reduce alcohol consumption should tailor programs that focus on changing expectancies in inexperienced drinkers, and try other methods like Motivational Interviewing for moderate to heavy drinkers with greater likelihood of alcohol-related problems.

Table of Contents

Acknowledgements	v
Abstract	vi
Table of Contents	vii-viii
List of Tables	ix
List of Figures	x
Chapter 1: Introduction	1
Chapter 2: Literature Review	5
2.1: Social Learning Theory.....	5
2.2: Environmental Influences	6
2.3: Personal Factors	7
2.4: Social Learning Theory & Alcohol Expectancies	8
2.5: Alcohol Expectancies Among Hispanic College Students	11
Chapter 3: Methods	16
3.1: Overview.....	16
3.2: Participants.....	17
3.3: Measures.....	17
3.4: Procedures	18
3.5: Intervention Session & Sixth Month Follow-Up.....	20
Chapter 4: Results.....	21
4.1: Overview of Data Analysis.....	21
4.2: Descriptive Statistics	22
4.3: Zero Order Associations	24
4.4: Multiple Regression Analysis.....	28
4.5: Gender Differences & Moderator Analysis.....	32
Chapter 5: Discussion	34

5.1: Summary of Findings.....	34
5.2: Implications.....	38
5.3: Limitations	39
5.4: Future Research.....	40
5.5: Summary & Conclusions	40
References	42-46
Appendix A: AUDIT	47-48
Appendix B: RAPI.....	49
Appendix C: CEAQ.....	50-54
Curriculum Vita	55

List of Tables

Table 1: Descriptive Statistics for Main Study Variables and Comparisons by Gender	23
Table 2: Correlations Among Main Study Variables.	27
Table 3: Regression Equations for Drinking-Related Variables.	30-31

List of Figures

Figure 1.0: Modeled Events.....	6
---------------------------------	---

Chapter 1: Introduction

Alcohol use has become a serious concern and a major public health problem in the United States (National Center for Health Statistics, 2007). Current drinking is defined as a person having at least 12 drinks or more in a lifetime and at least one drink in the past year (Schoenborn & Adams, 2001). Under this definition, sixty-five percent of all U.S. adults ages 18-44 are current drinkers, and fifty percent of all U.S. Hispanics are current drinkers (National Center for Health Statistics, 2007).

In 2006, 17,602 people died in alcohol-related motor vehicle accidents (National Highway Traffic Safety Administration, 2000) and thirty-eight percent of all motor vehicle accident fatalities were alcohol-related. Out of the thirty-eight percent of alcohol related fatalities, 9,924 people were drivers under the influence of alcohol (Traffic Safety Facts-Crash Stats, 2008). Excessive alcohol use is now the third highest lifestyle-related cause of death for people in the United States each year (Alcohol & Public Health, 2008).

Alcohol abuse costs American society \$136 billion and 65,000 lives annually (Alcohol & Public Health, 2008). According to Cohen (1997), 12 million American undergraduates drink 4 billion cans of beer a year, averaging 55 six-packs a piece. They also spend more on alcoholic beverages than they do on textbooks and soft drinks combined (Cohen, 1997).

The prevalence of alcohol use and misuse on college campuses is greater than the general population at large and college students have been identified as the population most at risk for alcohol-related problems, based primarily on the pattern and level of alcohol consumption displayed (Evans & Dunn, 1995). In one study of over

3,000 college students, 80% of the students drank, 50% of the students experienced problems related to their drinking, and 49% of the students reported driving while intoxicated (Evans & Dunn, 1995).

Young adults ages 18-25 have the highest rates of risky drinking behavior and 40% of young adults who attended college campuses admitted to binge drinking (NHSDA, 2001). According to the National Institute on Alcohol Abuse and Alcoholism, more than 1,400 college students (ages 18-24) die annually in alcohol-related events, primarily motor vehicle accidents. Among 18-24 year olds, binge drinking and drinking while driving have significantly increased since 1998 (Hingson, Heeren, Winter, & Wechsler, 2005). The number of people in this age bracket who reported driving while intoxicated increased from 2.3 million to 2.8 million people from 1998 to 2001 in the United States.

Binge drinking is a risk factor for alcohol-related consequences. Binge drinking is defined as the pattern of drinking that brings a person's blood alcohol concentration (BAC) to .08 grams percent or above (NIAAA Newsletter, 2004). This BAC is usually reached when men consume five or more drinks and women four or more drinks in about two hours. In a national survey, a significant percentage of American college students reported binge drinking "frequently"; they also reported experiencing high levels of alcohol-related consequences (Wechsler & Dowdall, 1998).

Binge drinkers not only generate problems for themselves, but also create problems for others on campus. Binge drinking is associated with elevated risks for various alcohol-related educational, interpersonal, health, and safety problems for the individual drinker (Wechsler & Dowdall, 1998). Frequent binge drinkers are eight or

more times as likely to miss class, fall behind on homework assignments, forget what they did or where they were, get hurt or injured, and cause damage to property (Wechsler & Dowdall, 1998). Regarding the impact on others, binge drinking among college students has also been associated with higher incidences of arguments and fights with friends, unplanned sexual activity, sexual and physical assaults, date rape, physical injury, criminal mischief, property damage, and trouble with police (Turrisi, Hughes, & Wiersma, 2000). In 1997, secondhand binge effects were reported which included study or sleep interruptions, taking care of a drunken student, and being insulted or humiliated (Wechsler & Dowdall, 1998).

Although young adults ages 18-25 have the highest drinking rates, this pattern of drinking usually declines after graduation (O'Malley, 1996). The transition to adult roles after graduation of formal education is accompanied with a decline in problematic drinking (O'Malley, 1996). As young adults assume more responsibilities such as marriage, parenthood, and employment, they tend to engage in heavy drinking less often as they become more aware of the consequences associated with such use (O'Malley, 1996). In this context, heavy drinking is defined as men consuming an average of 2 or more drinks in one day. For women, heavy drinking is defined as consuming an average of more than 1 drink in a day (Alcohol, 2008). In some cases, however, binge drinking and heavy drinking remain lifelong patterns and can lead to diagnosis of alcohol abuse and dependence (Schulenberg, O'Malley, Bachman, Wadsworth, & Johnston, 1996). A wide variety of factors have been linked to binge drinking among college students. Some of those factors include race, gender, ethnicity,

family history of alcoholism, alcohol beliefs, and living situations (Strano, Cuomo, & Venable, 2004).

Beliefs, values, and expectations are consistently related to binge drinking. For example, students who engage in binge drinking tend to value parties, socializing, and athletics more than their counterparts who do not drink. Social and environmental contexts also play an important role in students' excessive drinking behavior (Strano, Cuomo, & Venable, 2004). Students frequently drink in a context of social enhancement, which helps them to have a good time with peers and gain peer approval (Beck, Arria, Calderia, Vincent, O'Grady, & Wish, 2008).

This study assessed one type of alcohol-related beliefs, alcohol expectancies, and their association with several alcohol-related outcomes including risk levels, consumption patterns and problems, in a sample of Hispanic college students. The Literature Review section (below) includes a discussion of expectancy theory as well as a discussion of the literature relating expectancies to consumption patterns and problems in college students. The section concludes with the rationale and hypothesis for the current study

Chapter 2: Literature Review

2.1 *Social Learning Theory*

According to Bandura's (1997) Social Learning Theory, most the time, what we learn does not necessarily involve performing an action and receiving a reward, but in fact we learn by watching and listening to others. By observing others, through what he called vicarious learning, we learn to do the things that produce positive outcomes and steer clear of actions that have negative consequences in return. Although Bandura recognized the importance of the behavioral consequences experienced by individuals as determinants of future actions, he also recognized that direct experience with such consequences was not necessary for learning, and that we could learn such associations from observing the consequences experienced by others (Simons-Morton, Greene, & Gottlieb, 1995).

There are two intrapersonal factors in the Social Learning Theory (SLT) which Bandura labels as personal factors and behavioral factors. Personal factors are mainly associated with prior history in the form of knowledge and attitudes that are significant to the present issue and behavioral factors are mainly associated with the individual's ability to apply self-control as they determine how they are going to respond to the current situation (Simons-Morton, Greene, & Gottlieb, 1995). Feedback from the environment is a third factor in the SLT, but it does not hold the dominant position in determining behavior. However, behavioral consequences experienced by the individual are strong determinants of future actions.

2.2 Environmental Influences

In SLT, the environment plays a major role in shaping behavior and there are three major processes in which the environment has influence: reinforcement of behavior, observational learning, and the vicarious reinforcement individual's experience (Simons-Morton, Greene, & Gottlieb, 1995). Reinforcement in the form of rewards and punishments plays a big role in determining future behavior by shaping expectations for anticipated consequences of behavior. Moreover, an individual's interpretation of the anticipated consequences are often more important than the actual consequences of the behavior. For example, the mere anticipation of becoming ill from drinking can be a sufficient condition for the avoidance of the behavior itself.

Observational learning is defined as one learning a behavior (or a behavioral outcome) by watching someone else perform the behavior at hand (Simons-Morton, Greene, & Gottlieb, 1995). Bandura observed that people do not learn very much by observing unless they attend to and perceive accurately the important features of the behavior being modeled. Figure 1.0 shows how a modeled behavior can initiate observational learning (Simons-Morton, Greene, & Gottlieb, 1995).

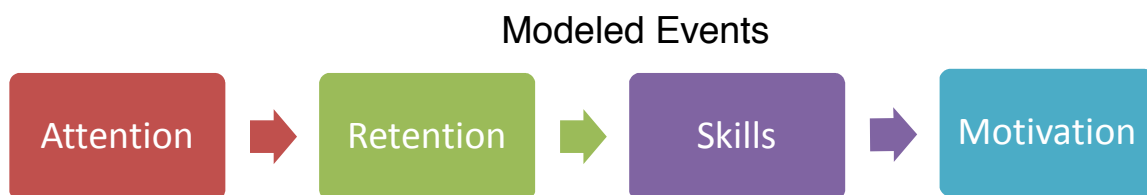


Figure 1.0

For example, a modeled behavior can spark the learner's attention, the learner will then retain the information observed, acquire the skills to perform the behavior, and provide

vicarious reinforcement (Simons-Morton, Greene, & Gottlieb, 1995). Observational learning can be used to explain many emotional and motivational responses to a particular behavior.

2.3 Personal Factors

According to SLT, when people move toward making a decision about a behavior, they base that decision on their knowledge of facts, concepts, skills they possess, beliefs, and attitudes toward the behavior. Once they have made a decision regarding the behavior, that decision will immediately have consequences that will impact the "historical self-structure" (Simons-Morton, Greene, & Gottlieb, 1995), meaning, that the decision will ultimately affect the person in a positive or negative manner and that decision will impact other choices later on.

Outcome expectations are defined as the result or consequence a person foresees from making a decision on a particular behavior (Simons-Morton, Greene, & Gottlieb, 1995). For example, a person may believe that alcohol consumption makes him or her more relaxed and sociable. As described above, such expectations result from direct past experiences, observations of others, and available information about the behavior in question (Simons-Morton, Greene, & Gottlieb, 1995). Outcome expectancies, in contrast, are defined by the values one places on the outcome of the behavior (Simons-Morton, Greene, & Gottlieb, 1995). Expectancies can be positive or negative. For example, if a person drinks alcohol to become more social, and she values that effect (i.e., the effect is rewarding), then she is more likely to drink in the future, because she both expects and has placed a positive value on the outcome. Similarly, if a person avoids drinking because of the expectancy that it will make them

sick, the person will most likely not drink in the future because of the value placed on the outcome. These decisions are based on the beliefs of what the outcome will be and beliefs concerning how pleasing these outcomes are to the person (Simons-Morton, Greene, & Gottlieb, 1995).

The Social Learning Theory provides an explanation of human behavior and it identifies the strong influence that positive and negative consequences, and their expectation, can have on a person engaging in a behavior. People learn many things from observation, but watching specific actions of other people have a greater impact on the chosen behavior (Simons-Morton, Greene, & Gottlieb, 1995). Observations and personal experiences given by the environment lead to the placing of values, developing of knowledge, building of skills, and the formation of self-efficacy (Simons-Morton, Greene, & Gottlieb, 1995).

Over the years, many studies have shown the link between alcohol outcome expectancies and alcohol use (Jones, Corbin, & Fromme, 2001). Self-reported drinking behavior is significantly and positively associated with positive expectancies and inversely associated with negative expectancies (Jones, Corbin, & Fromme, 2001). Frequency and quantity of drinking are strongly associated with expectancies. For example, heavier drinkers report higher positive expectancies than lighter drinkers who do not drink frequently.

2.4 Social Learning Theory and Alcohol Expectancies

Alcohol expectancies also contribute to the initiation and continuation of alcohol use and abuse (NIAAA's Vision: At the Threshold of the New Millennium, New Successes, 2005). As described above, alcohol-expectancy theory has roots in

Bandura's Social Learning Theory (Jones, Corbin, & Fromme, 2001). According to Jones, Corbin, & Fromme (2001), expectancies are defined as people having certain expectations for reinforcement for the outcome of performing a behavior in question. Thus, if I study hard for an exam (behavior), I will expect to get a good grade (pleasant outcome).

Alcohol consumption is explained by individuals having certain expectations for the specific effects of alcohol or for situations involving drinking; then drinking to experience the rewards and fulfill the expectation they have set. For example, if an introverted person thinks that drinking alcohol makes him/her more social, a rewarding experience for him, he will drink in hopes of achieving that reward (i.e., he will fulfill that expectation).

Like other expectancies, alcohol expectancies can be either positive or negative. Positive alcohol expectancies include increased sociability, tension and stress reduction, enhanced sexuality, and greater general confidence (Fromme, Stroot, & Kaplan, 2003). An example of a positive expectancy was provided above, where people think the more alcohol they consume the friendlier they would become. In addition to enhanced sociability, people also hold positive expectancies for regarding alcohol's ability to reduce stress and tension and enhance sexual performance. Negative expectancies include anticipation of cognitive and behavioral impairment, increased risk taking and aggression, and potential for negative self-perception (Fromme, Stroot, & Kaplan, 2003). An example of a negative expectancy would be the person thinking she/he may become ill if she/he consumes many alcoholic drinks. In

theory, positive expectancies should tend to promote alcohol consumption, whereas negative expectancies should deter such consumption.

Positive expectancies have received the most attention in the literature due to interest in predicting alcohol consumption and the development of specific measures (e.g., the Alcohol Expectancy Questionnaire) that were designed to assess only positive expectancies (Jones, Corbin, & Fromme, 2001). Specifically the AEQ assesses (positive global changes in experience, sexual enhancement, social and physical pleasure, assertiveness, tension reduction, and arousal/interpersonal power) (Brown, Christiansen, & Goldman, 1987). Research utilizing the Alcohol Expectancy Questionnaire has shown that the more positive the person's expectancies are about alcohol, the more heavily the person will drink (Fromme & D'Amico, 2000). For example, the stronger a person's belief that drinking alcohol will help reduce tension (a reward), then the more the person is likely to consume.

Although positive expectancies are more commonly studied, evidence also shows the importance of negative expectancies in influencing drinking behavior (Jones, Corbin, & Fromme, 2001). For example, research with the Comprehensive Effects on Alcohol questionnaire, developed to include items addressing positive and negative expectancies, has shown that negative valuations regarding Cognitive & Behavioral Impairment were most important in predicting drinking behavior for the studied sample (Jones, Corbin, & Fromme, 2001).

Fromme & D'Amico (2000) stated that two decades of research have provided evidence that positive alcohol outcome expectancies are consistently associated with drinking behavior. Moreover, many adolescents have formed positive alcohol

expectancies similar to adults' expectancies, well before they have engaged in a drinking experience.

The association between negative alcohol expectancies and drinking behavior is less clear (Ham, Stewart, Norton, & Hope, 2005). As noted previously, it has been hypothesized that negative expectancies are related to lower drinking behaviors because the negative beliefs serve as a motivation not to drink. Conversely, researchers have linked negative expectancies to heavier drinking because heavier drinkers are more familiar with the negative effects of alcohol (Ham, Stewart, Norton, & Hope, 2005). As noted, however, there has been limited research on negative expectancies and drinking behaviors (Zamboanga B. , 2006) relative to research on positive expectancies, so conclusions in this regard are unwarranted.

2.5 Alcohol Expectancies among Hispanic College Students

Researching alcohol expectancies among Hispanic college students is important because literature has shown that Hispanics have one of the highest rates of alcohol consumption in the United States and that rates of heavy drinking are higher among Hispanics than among non-Hispanic whites (Marin, 1996). Little research has been done among Hispanic men and women and the role of alcohol expectancies, and because they have the highest rate of alcohol consumption, it is important to do so.

For example, in a study done by Marin et al. (1993), Hispanic adults were more likely than non-Hispanic White adults to expect that drinking alcohol would ease social interactions and produce emotional and behavioral impairment. They used a questionnaire that assessed 36 items on consequent expectations of drinking alcoholic beverages (i.e. become more social) and 35 items dealing with expectancies of

excessive drinking (i.e. engaging in risky behaviors). The results showed that Hispanics had higher expectations of consuming alcoholic beverages in greater-proportions to non-Hispanic Whites. The amount of alcohol consumed also influenced the type of expectancies held. For example, light drinkers were more likely to expect negative consequences whereas heavy drinkers were more likely to expect positive outcomes (Marin, 1996). Negative expectancies, which were related to lower drinking levels, suggest that such expectancies are negatively related to drinking.

Two studies have examined expectancies in Hispanic College students. Similar to Marin et al.'s study of adults, Zamboanga (2005) found that alcohol expectancies related to social pleasure and assertiveness were significantly predictive of heavy drinking, among Mexican-American college students. A version of the Alcohol Expectancy Questionnaire was used to assess 6 alcohol expectancies. Like much of the research using the AEQ, the goal of the study was to determine if positive alcohol expectancies would be associated with drinking behaviors in Hispanic adults. The results, much like Marin et al.'s, showed that positive alcohol expectancies of sociability and pleasure were linked with higher consumption of alcohol in Hispanic college students (Zamboanga B. , 2005). The results suggest that Hispanic college students who view alcohol as a social enhancement are more likely to consume heavy alcohol more frequently. Unfortunately, the study did not assess negative alcohol expectancies.

The second college student study was conducted by Bordeau et al. (2007) and it examined the relations between sexual-enhancement and social facilitation alcohol expectancies, and college students' self reported sexual experiences while drinking. They looked to see if there was a difference between Latino and non-Latino white

college students. The results showed that social expectancies predicted Latino students' alcohol-related behavior whereas it did not predict such behavior in non-Latino white students (Bordeau, Saltz, Bersamin, & Grube, 2007). This may suggest that Latino students have unique risk factors (i.e., patterns of alcohol expectancies) that contribute to health-risk behaviors, specifically alcohol-related sexual experiences. Like the other college student study, this study did not assess negative expectancies.

In another study done with Mexican-American adult woman, acculturation was positively associated with alcohol expectancies of physical and social pleasure, sexual enhancement, arousal, aggression and power, and social assertiveness (Gilbert, Mora, & Ferguson, 1994). Highly acculturated women tended to believe that consuming alcohol was part of the social norm whereas less acculturated women stayed true to their cultural beliefs in that woman should “stay pure” (i.e. abstain from drinking and risky behaviors).

Another topic that has gained attention in Hispanic and non-Hispanic samples is how significant others deal with problem drinkers, and specifically, how an individual's expectancies may play a role in how the significant other reacts to the problem drinking at hand. In a study conducted by Jung & Rojas (2000), the researchers hypothesized that significant others with strong positive expectancies would be more likely to accept and condone excessive drinking by their partners, whereas significant others with less positive expectancies or no expectancies at all would react negatively to excessive drinking by their partners. The goal of the study was to see how alcohol expectancies were related to coping methods for dealing with male significant other drinking between Mexican-American women and non-Hispanic Whites (Jung & Rojas, 2000). The Alcohol

Expectancy Questionnaire was used to measure alcohol expectancies in 46 Mexican-American college women and 34 non-Hispanic white college women. The Significant Other Coping Scale was also used to measure how one would feel if their significant other had a drinking problem (Jung & Rojas, 2000). The results confirmed the hypotheses. Among women in both groups, women with high positive expectancies showed greater support for excessive drinking (i.e., less disapproval) by their significant other.

Other research on expectancies in Hispanic samples has examined links between alcohol and aggression. Specifically, researchers have explored differences between the people who become aggressive while drinking and those who do not (Grange, Hojnowski, & Nesterova, 2007). Grange et al. (2007) conducted a study to look at the relationship between image of power, alcohol expectancies, and alcohol-related aggression in a Hispanic college population. The main goals of the study were to examine the relations between impulsivity with alcohol consumption and alcohol-associated aggression. They also wanted to compare frequency/amount of alcohol consumption in Hispanic university students compared with non-Hispanic students, as well as compare the number of alcohol-related fights in Hispanic university students. Finally, they wanted to identify the best predictors of alcohol use and alcohol-related aggression (Grange, Hojnowski, & Nesterova, 2007). The results showed that Hispanic males wanting to be viewed as tough were positively correlated with alcohol consumption and for females extraversion and sociability were positively correlated with frequency of alcohol consumption (Grange, Hojnowski, & Nesterova, 2007). Moreover, impulsivity did not correlate with alcohol consumption or alcohol-related aggression in

males but impulsivity did correlate with alcohol consumption in females (Grange, Hojnowski, & Nesterova, 2007).

In summary, research examining the role of alcohol expectancies among Hispanics has examined factors such as the role of positive expectancies in heavy drinking, how such expectancies interact with acculturation, and how expectancies guide reactions to the behavior of significant other interactions. Only two studies have examined expectancies in college students, with both showing evidence that positive expectancies relate to drinking in this group. However, neither examined negative expectancies. Overall, little is known and understood about the role of positive *and* negative expectancies in Hispanic college students and even less is known about how expectancies relate to alcohol related *problems* in this population.

Accordingly, the purpose of the present study was to examine the relationships among positive and negative alcohol expectancies and alcohol consumption and alcohol-related problems in a sample of Hispanic, predominantly Mexican-American, college students. It was hypothesized that positive expectancies would be positively related to alcohol consumption and alcohol-related problems and that negative expectancies would be negatively related to alcohol consumption and alcohol related problems.

Chapter 3: Methods

3.1 Overview

This study was a secondary analysis of data previously collected from participants in an alcohol risk reduction program conducted on the UTEP campus (i.e., the BASICS Program). Participants for this program were recruited by a Screening Coordinator who visited classes on campus and spoke about the BASICS program. The screening process consisted of a brief description of the program's goals and the completion of a questionnaire (i.e., the Alcohol Use Disorders Identification Test [AUDIT]) to determine whether or not they qualified to participate in the program. In order to participate in the BASICS program, the student had to have scored an eight or higher on the AUDIT. According to Babor et al. (2001), a score of 8-15 ranks as a medium risk, a score of 16-25 ranks as a high risk, and a score higher than 26 is considered very high risk of their consumption being harmful to themselves or someone else. Students who scored an eight or higher on the AUDIT were asked to participate in the BASICS program and recruited via telephone call.

Once the student voluntarily enrolled in the BASICS program, the student completed an assessment battery which included the Alcohol Use Disorder Identification Test (AUDIT), Daily Drinking Questionnaire (DDQ), and the Rutgers Alcohol Problems Inventory (RAPI), among other instruments. This report analyzes data from the initial assessment battery. All research activities were reviewed and approved by the UTEP Internal Review Board.

3.2 Participants

Participants included 403 college students from The University of Texas at El Paso, who participated in the BASICS program. Out of the 20,000 students enrolled at UTEP, 74% are Hispanic (UTEP Student Profile, 2007-2008). All students were drinkers with all scoring eight or higher on the Alcohol Use Disorders Identification Test (AUDIT). All were considered at risk for heavy or binge drinking or consequences resulting from such consumption. All participated voluntarily.

3.3 Measures

AUDIT. The AUDIT identifies a person's level of alcohol consumption and the level to which the problems caused by consumption affect the person's health. The AUDIT was developed primarily for practitioners to identify people who would benefit from reducing or ceasing drinking (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001)(included in Appendix A). The AUDIT provides a framework for interventions to help risky drinkers identify their problem and reduce the harmful consequences of risky drinking. In this study among a Hispanic population, good reliabilities were found for these scales (.77 respectively).

Comprehensive Effects of Alcohol Questionnaire (CEAQ). The CEAQ assesses positive expectancies, negative expectancies, and valuations of various possible consequences of drinking. The 38-item questionnaire has predicted variance in quantity of alcohol consumption in previous studies (Valdivia & Stewart, 2005)(included in Appendix C). The CEAQ was designed to assess distinct expectancies rather than comprehensive expectancies about alcohol's effects. The CEAQ measures expectations of physiological, psychological and behavioral

outcomes associated with drinking (Fromme, Stroot, & Kaplan, 1993). It has seven dimensions including sociability, tension reduction, sexuality, confidence, cognitive and behavioral impairments, risk and aggression, and self-perception. In this study among a Hispanic population, good reliabilities were found for these scales (.83, .72, .72, .78, .81, .77, and .68 respectively).

The Rutgers Alcohol Problems Index (RAPI). The RAPI is a 23-item questionnaire that examines the frequency of alcohol-related problems that students experience in the last three months with response options that vary from “never” to “always” (White & Labouvie, 1989)(included in Appendix B). In this study among a Hispanic population, good reliabilities were found for these scales (.91 respectively).

Daily Drinking Questionnaire (DDQ). The DDQ is used to assess unique drinking patterns across a “typical week” occurring within the last month and how many drinks are consumed on a specific day (Collins, Parks, & Marlatt, 1985). Responses to the measure will be used to calculate three indices: Frequency of drinking days during a typical week, number of drinks consumed during a typical week, and peak number of drinks on the day of greatest alcohol consumption during that typical week.

3.4 Procedures

Recruitment included the Screening Coordinator visiting classes on campus and giving presentations about the BASICS program. In these presentations, the Lifestyle Questionnaire was administered to the students. Once the students filled out the survey, the Screening Coordinator hand scored them, and determined who was eligible to participate in the BASICS program (students who score an 8 or higher). Students

who scored an eight or higher were called back by phone to participate in the BASICS intervention and received their feedback during the intervention session.

Once participants were enrolled in the BASICS Program, they were asked to complete an initial assessment battery. After the students completed the assessment battery, they participated in an hour-long intervention session. The facilitator gave a presentation on alcohol which included basic information on how alcohol affects the body physically and the individual mentally, the importance of moderate drinking, the definition of a standard drink and blood alcohol level, average drinking behavior among UTEP students, dispelling myths on how to “sober up,” factors that affect blood alcohol level, biphasic effects of alcohol, alcohol tolerance, alcohol and pregnancy, and alcohol myopia.

The facilitators conducted the sessions using the techniques of motivational interviewing (MI) (Miller & Rollnick, 1991). MI assisted the facilitators to interact with the students by helping them develop discrepancies between actual and desired behaviors, avoiding argumentation, rolling with client resistance, supporting self-efficacy, maintaining that the responsibility for change lies with the individual, and offering different options for behavioral change.

At the end of the intervention session, students received personalized feedback regarding their drinking habits and risks. The information for the feedback was extracted from the assessment battery. A customized blood alcohol chart was also given to students to help them monitor the amount of alcohol in their bloodstream.

3.5 Intervention Session and Six Month Follow-Up

Once the students voluntarily agreed to participate in the BASICS program, they were asked to complete the assessment battery which included the AUDIT, DDQ, RAPI, and CEOA questionnaires. Students received a \$20 gift card as an incentive for their participation in the BASICS intervention. They also received their personalized feedback at the end of the intervention.

Students were telephoned or e-mailed for their six month follow-up and were asked to complete the AUDIT, DDQ, RAPI, and CEOA questionnaires in person. After completion, the students received another \$20 gift card as an incentive for their participation. The same procedure applies for the one-year follow-up.

All data for the present investigation was derived from responses to the assessment battery. Specifically, for this study, data from the second year of the BASICS program was examined. The sample included 403 participants.

Chapter 4: Results

4.1 *Overview of Data Analyses*

As noted above, all data for the present investigation was derived from responses to the assessment battery. The primary variables included in this study were age, gender, positive and negative expectancies from the CEOA, AUDIT alcohol risk scores, RAPI alcohol-related problems, and the DDQ consumption variables. First, the data were filtered to exclude all non-Hispanic participants from the analyses leaving 359 self-identified Hispanics in the sample with 183 men and 176 women. Second, the data were checked for satisfaction of distributional assumptions and univariate outliers. Results of these analyses showed the RAPI to be positively skewed. Application of the logrhythmic transformation significantly reduced the variable's skewness

Third, correlation coefficients examined bi-variate relationships among the variables. Specifically, correlations between the various alcohol expectancies and alcohol-related outcomes were calculated. Fourth, standard multiple regression analysis examined multivariate relationships between the expectancy (CEAQ) variables and the main outcome variables (AUDIT, DDQ consumption, and RAPI scores). These analyses specifically examined whether there were unique relationships between specific alcohol expectancies and alcohol-related outcomes.

Fifth, and finally, exploratory analyses examined if there were gender differences in expectancies and whether gender moderated relationships between alcohol expectancies and alcohol-related outcomes in this Hispanic sample. For these analyses, gender by expectancy interaction terms were calculated using the product of gender times centered expectancy values. For these transformations, centered values

were calculated by subtracting the sample mean from each individual score and multiplying it by the dummy codes for gender.

4.2 Descriptive Statistics

Descriptive statistics for the main study variables in the sample are contained in the first column of Table 1. As shown, the average age in this sample was 21.40 and males represented a slightly larger portion of the population than females. Increased sociability was the highest rated expectancy, followed by tension reduction. Students on average consumed just under 15 drinks per week, drank on almost three days, and had an average of over six drinks on their peak drinking day during the past week.

Table 1

Descriptive Statistics for Main Study Variables and Comparisons by Gender

Variable	<i>M</i> or % (<i>SD</i>)	Women <i>M</i> (<i>SD</i>)	Men <i>M</i> (<i>SD</i>)	<i>F</i>
Age	21.40 (3.95)	21.34 (3.99)	21.47 (3.91)	.104
Gender (% Male)	51%	-	-	-
Sociability	3.05 (.63)	3.09 (.61)	3.01 (.64)	1.35
Tension Reduction	2.73 (.76)	2.74 (.77)	2.72 (.77)	.07
Liquid Courage	2.41 (.80)	2.44 (.81)	2.39 (.79)	.25
Sexual Enhancement	2.05 (.79)	2.03 (.81)	2.07 (.76)	.14
Cognitive Behavior	2.62 (.66)	2.65 (.67)	2.59 (.65)	.80
Risk Aggression	2.23 (.72)	2.24 (.74)	2.21 (.70)	.17
Self-Assessment	1.86 (.68)	1.86 (.72)	1.86 (.64)	.00
AUDIT	10.69 (.5.34)	10.24 (5.52)	11.11 (5.14)	2.39
RAPI (log)	.81 (.37)	.79 (.39)	.83 (.35)	.77
DDQ Quantity	14.45 (.11.35)	12.00 (8.57)	16.77 (13.07)	15.88***
DDQ Frequency	1.87 (1.30)	1.88 (1.19)	1.85 (1.40)	.04
DDQ Peak Day	6.64 (3.95)	5.90 (2.97)	7.34 (4.59)	11.81***

*** $p < .001$

4.3 Zero Order Associations

Table 2 shows the zero order correlations among the main study variables. As shown, age was positively related to Cognitive Behavioral Impairment and Negative Self Assessment. In both cases older participants had stronger expectancies that consuming alcohol would lead to these negative outcomes. Gender negatively related to DDQ Quantity, Frequency and Peak Day consumption. Because gender was coded 1 for male and 2 for female, these correlations show that women consumed fewer drinks in the past week, consumed alcohol on fewer days, and consumed fewer drinks on their highest drinking day. Sociability was positively related to the other expectancies as well as the AUDIT and RAPI. This shows that the higher the person's expectancy is for sociability the more they are likely to have elevated risk level scores and report experiencing alcohol-related problems.

Tension Reduction was positively related to all other expectancies and DDQ Frequency which means the higher the expectancy for tension reduction the more frequently they consumed alcohol during the week. Liquid Courage was positively related to all expectancies, AUDIT, RAPI, DDQ Quantity, DDQ Frequency, and DDQ Peak. This shows that the higher the expectancy for liquid courage the greater their risk score, the more they reported alcohol-related problems, drank more drinks in one week, drank more days during the week, and consumed more drinks on their highest peak day. Sexual Enhancement was positively related to all expectancies, AUDIT, RAPI, and DDQ Frequency. This indicates that the higher the expectancy for sexual enhancement, the greater their risk score, the more they reported having alcohol-related problems, and consumed alcohol on more days of the week. Cognitive Behavior

Impairment was positively related to all expectancies, AUDIT, RAPI, and DDQ Quantity. These results show that even though the person's expectancies for Cognitive and Behavioral Impairment are high, they still consumed alcohol, had alcohol-related problems, and consumed more drinks in a week. This holds true because the sample population in this study are people who are at medium risk and higher for alcohol-related problems due to alcohol consumption. Even though they know consuming a lot of alcohol can cause behavioral impairment, they still consume alcohol more frequently.

Risk Aggression was positively related to all expectancies, AUDIT, RAPI, DDQ Quantity, and DDQ Peak. This indicates that those with high expectancies on Risk Aggression had greater risk scores, had alcohol-related problems, drank more times during the week, and consumed more drinks on their highest peak day than their counterparts. Negative self-assessment was positively related to all expectancies, AUDIT, RAPI, and DDQ Frequency. These results show that those with higher expectancies on negative self assessment would have alcohol-related problems and consume alcohol on more days of the week than those with lower expectancies on negative self assessment. AUDIT was positively related to all expectancies, RAPI, DDQ Quantity, Frequency, and Peak day. This means that those who had greater risk scores also drank more drinks per week, consumed alcohol on more days of the week, and consumed more drinks on their peak day than their counterparts. RAPI was positively related to all expectancies, AUDIT, DDQ Quantity, Frequency, and Peak day. This indicated that the higher the person's score is for risk aggression, the more likely they had greater risk scores, drank more drinks per week, consumed alcohol on more days of the week, and consumed more drinks on their peak day. DDQ Quantity,

Frequency, and Peak day were positively related to all expectancies, AUDIT, and RAPI. These results showed that the more the person consumed alcohol on more days per week, consumed alcohol on more days out of the week, and consumed more drinks on their peak day, the greater their risk and aggression score was.

Table 2

Correlations Among Main Study Variables

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	-.02	-.02	.03	-.06	.07	.14**	-.04	.14**	.09	.01	.10	.06	.04
2. Gender		.06	.01	.03	-.02	.05	.02	.00	-.08	-.05	-.21**	-.12*	-.18**
3. Sociability			.40**	.56**	.52**	.27**	.48**	.26**	.19**	.28**	.07	.08	.07
4. Tension Reduction				.33**	.31**	0.12*	.16**	.05	.06	.07	.07	.13**	.08
5. Liquid Courage					.54**	.29**	.73**	.37**	.23**	.28**	.20**	.11*	.19**
6. Sexual Enhancement						.26**	.49**	.29**	.17**	.25**	.10	.16**	.09
7. Cognitive Behavior Impairment							.44**	.40**	.21**	.25**	.10*	.06	.07
8. Risk Aggression								.48**	.27**	.36**	.14**	.10	.11*
9. Negative Self- Assessment									.15**	.26**	.07	.10*	.01
10. AUDIT										.70**	.64**	.43**	.52**
11. RAPI											.47**	.40**	.34**
12. DDQ Quantity (no. of drinks/week)												.71**	.85**
13. DDQ Frequency (days/week)													.48**
14. DDQ Peak (max drinks/one day)													-

* p < .05, ** p < .01, N = 345-359

4.4 Multiple Regression Analyses

Table 3 shows the results of standard multiple regression analyses. These analyses predicted each alcohol-related outcome using the seven positive and negative alcohol expectancies. The purpose of these analyses was to examine whether any of the alcohol expectancies had unique (i.e., non-redundant) associations with the alcohol-related outcomes. In addition to general information regarding each model (i.e., R^2 and F values), the table also presents standardized beta weights for each expectancy, and compares the zero-order correlations with the semi-partial correlations. The latter reflect proportion of unique variance accounted for by each expectancy (Tabachnick & Fidell, 2007).

As shown, results for AUDIT risk scores indicated that despite several significant univariate associations, there were no unique associations between the various expectancies and AUDIT risk levels. This pattern of results suggests that having high alcohol-expectancies, in general, is associated with greater risk scores.

The results for RAPI scores showed that both Sociability and Risk/Aggression expectancies had a unique relationship with higher risk scores. These results suggest that having high expectancies for Sociability and Risk/Aggression are independently associated with greater risk scores on the RAPI.

The results for DDQ Frequency showed that there were no unique relationships between the multiple expectancies and DDQ Frequency scores. Similar to the results for the AUDIT, this suggests that having high alcohol-expectancies, in general, is associated with consumption variables.

Finally, the results for DDQ Quantity and DDQ Peak Day showed that Liquid Courage had a unique relationship with consumption scores. This suggests that high expectancies for Liquid Courage are independently associated with consumption scores.

Table 3
Regression Equations for Drinking-Related Variables

	β	r	SP r
AUDIT Adj $R^2 = .07$, $F(7, 351) = 5.04$, $p < .001$			
Sociability	.06	.20	.05
Tension Reduction	-.03	.06	-.03
Liquid Courage	.07	.24	.04
Sexual Enhancement	.02	.18	.02
Cognitive Behavioral Impairment	.11	.21	.10
Risk/Aggression	.14	.27	.08
Negative Self-Assessment	.00	.16	.00
RAPI Adj $R^2 = .15$, $F(7, 351) = 10.12$, $p < .001$			
Sociability	.14*	.29	.11
Tension Reduction	-.04	.07	-.04
Liquid Courage	-.06	.28	-.03
Sexual Enhancement	.06	.26	.05
Cognitive Behavioral Impairment	.09	.26	.08
Risk/Aggression	.24**	.37	.14
Negative Self-Assessment	.08	.26	.07
DDQ FREQ Adj $R^2 = .00$, $F(7, 351) = 1.22$, $p < .001$			
Sociability	.06	.08	.05
Tension Reduction	.05	.06	.04
Liquid Courage	-.11	.02	-.06
Sexual Enhancement	.07	.09	.06
Cognitive Behavioral Impairment	-.07	-.01	-.06
Risk/Aggression	.02	.04	.01
Negative Self-Assessment	.11	.09	.09
DDQ QTY Adj $R^2 = .03$, $F(7, 351) = 2.43$, $p < .001$			
Sociability	-.08	.07	-.06
Tension Reduction	.01	.07	.01
Liquid Courage	.24**	.20	.15
Sexual Enhancement	.00	.10	.00
Cognitive Behavioral Impairment	.07	.11	.06
Risk/Aggression	-.02	.14	-.01

Negative Self-Assessment	-0.03	.07	-.03
--------------------------	-------	-----	------

DDQ PEAK Adj R² = .03, $F(7, 351) = 2.41$, $p < .001$

Sociability	-.06	.07	-.05
Tension Reduction	.02	.08	.02
Liquid Courage	.27**	.20	.17
Sexual Enhancement	.00	.09	.00
Cognitive Behavioral Impairment	.05	.07	.05
Risk/Aggression	-.04	.11	-.02
Negative Self-Assessment	-.08	.01	-.07

* $p < .05$, ** $p < .01$, $N = 345-359$

4.5 Gender Differences and Moderator Analyses

Gender differences were examined using one-way ANOVA and the results of these analyses are shown in columns 2-4 of Table 1. As shown, the only differences that were significant between genders were DDQ Quantity and DDQ Peak Day. As shown, men consumed alcohol more times during the week and drank more drinks in one day than did women.

Moderator analyses were estimated in multiple regression. Such analyses were conducted by entering the main effects for gender and the expectancies first, then entering the interaction terms (Baron & Kenny, 1986).

Results of these analyses indicated a significant Gender by Sexual Enhancement expectancy interaction for DDQ Frequency ($b = -.56, p < .05$) and a Gender by Liquid Courage interaction for DDQ Quantity ($b = -.63, p < .05$). In addition, two interactions approached significance including a Gender by Negative Self-Assessment interaction for DDQ Quantity ($b = .37, p = .069$) and a Gender by Tension Reduction interaction for DDQ Peak Day ($b = -.33, p = .074$).

For the Gender by Sexual Enhancement interaction, analysis of the Sexual Enhancement main effect on DDQ Frequency were calculated for each gender separately. Results showed this relationship to be significant among men ($b = .24, p < .05$) but not among women ($b = -.09, ns$). Thus, men with high positive expectancies for sexual enhancement tended to drink more frequently than men without such expectancies. This relationship did not hold for women.

For the Gender by Liquid Courage interaction, analyses of the main effect for liquid courage on DDQ Quantity, conducted separately for each gender, showed this

relationship to be significant among men ($b = .39, p < .01$) but not among women ($b = .10, ns$). Thus men with high positive expectancies for Liquid Courage tended to drink in greater quantity than men without such expectancies. As above, this relationship was not significant among women.

Chapter 5: Discussion

5.1 *Summary of Findings*

The purpose of this study was to examine relationships among positive and negative alcohol expectancies and alcohol consumption and alcohol-related problems in a sample of Hispanic, predominately Mexican-American, college students. Based primarily on studies in more traditional non-Hispanic white samples, the hypothesis was that positive expectancies would be positively related to alcohol consumption and alcohol-related problems and that negative expectancies would be negatively related to alcohol consumption and alcohol-related problems. Overall, the zero-order correlation results showed consistent support that alcohol expectancies positively related to alcohol-related outcomes. In all cases, the higher the person's alcohol expectancy, the higher their scores were for alcohol risk, alcohol consumption, and alcohol-related problems.

Unexpectedly, this pattern was true for positive and negative expectancies. Not only were positive and negative expectancies intercorrelated, both were positively associated with alcohol-related outcomes. The finding that positive expectancies, such as increased sociability, positively related to drinking outcomes was not surprising and consistent with the literature in this area. In general, past research has shown that students with high positive expectancies for drinking alcohol tend to drink more than those with lower expectancies (for a review see Fromme & D'Amico, 2000). However, in this sample, even expectancies for negative outcomes, such as expectancies for cognitive and behavioral impairment, which one might think would discourage drinking, positively related to drinking outcomes in this sample.

One possible reason for these associations might relate to the nature of the study sample. Recall that this study included only those students who reported moderate to high levels of alcohol-risk, and who were eligible for participation in an alcohol-risk reduction program. As “experienced” drinkers, one could argue that these people knew all-too-well what the negative consequences were due to over consumption of alcohol, but chose to drink regardless of—or in hopes of avoiding—those outcomes. As such, this finding is consistent with Ham et al. (2005) who also linked negative expectancies to heavier drinking. They suggested that this relationship exists because heavier drinkers are simply more familiar with the negative effects of alcohol.

The regression analyses shed light on the unique prediction of outcomes from expectancies. Specifically, both Sociability and Risk/Aggression expectancies showed unique relationships with RAPI scores. Also, expectancies for Liquid Courage showed a unique relationship with DDQ Quantity and DDQ Peak Day scores. Like the correlations, in each case, greater expectancy levels were associated with higher scores on the various alcohol-related outcomes. Overall, these results suggest that some specific alcohol expectancies are uniquely related to the outcome. They also suggest that certain expectancies might be potential target intervention, or alternatively that Hispanic individuals with particular alcohol expectancies might benefit from targeted interventions. For example, a targeted intervention program to reduce alcohol-related problems might focus attention on the roles of sociability, risk/aggression, and liquid courage and their role in harmful alcohol consumption or consequences.

Overall, gender moderated two associations between expectancies and alcohol outcomes, with another two approaching significance. Specifically, men tended to show

greater associations between Gender by Sexual Enhancement for DDQ Frequency, Gender by Liquid Courage for DDQ Quantity, and Gender by Tension Reduction for DDQ Peak day. Women, in contrast, showed a nonsignificantly positive association for Gender by Negative Self-Assessment for DDQ Quantity which means the higher their expectancies were for Negative Self-Assessment the more they drank.

Similar to the results for the regression analyses, these results suggest that different approaches might be emphasized in interventions directed (or tailored) toward men compared with those directed toward women. For example, an intervention tailored to women might focus on expectancies dealing with negative self-perception and an intervention tailored to men might focus on expectancies dealing with sexual enhancement, tension reduction, and liquid courage. By tailoring interventions to the specific gender, there is a greater chance of changing the expectancy that is associated with alcohol-related problems.

Overall, these findings are consistent with previous research showing that high positive alcohol expectancies are positively related to alcohol consumption (Marin, 1996). This study adds to the literature by showing that negative expectancies were also positively related to alcohol consumption and that both types of expectancies were related to alcohol risk levels and alcohol-related problems, at least among those who are current moderate to heavy consumers of alcohol and who have considerable history or experience with the substance. This is interesting because it shows that students continue to drink in excess, even when they are aware of the potential negative consequences of doing so. Therefore, health education intervention programs should probably avoid emphasizing negative consequences and instead adopt a different

approach with this group of drinkers. Promising approaches might include those related to brief interventions and motivational interviewing (Miller & Rollnick, 2004) where students are encouraged to generate their own reasons for modifying their behavior, rather than trying to scare them into doing so by emphasizing negative outcomes.

Although these findings are consistent with the literature on Sociability expectancies and heavy drinking among college students, this study also adds that Liquid courage and Risk/Aggression expectancies are predictors of alcohol consumption and alcohol-related problems. This study also showed that both positive *and* negative alcohol expectancies were positively related to alcohol consumption and alcohol-related problems, whereas the literature states that positive expectancies are related to alcohol consumption and negative expectancies show a decrease in alcohol consumption among college students (Fromme, Stroot, & Kaplan, 2003).

One difference between the present study and past studies, however, might be the samples involved. Specifically, whereas this study focused on moderate to heavy drinkers, past studies focused on college students in general, including light- and nondrinking students. Overall, the pattern of results across studies suggests that relative experience may moderate the relationship between negative alcohol expectancies and alcohol-related outcomes, with such relationships being negative among light and nondrinkers, but positive among heavier (i.e., experienced) drinkers. Future studies on broad samples of college students might investigate such a moderator hypothesis.

5.2 Implications

The results of this study showed that positive expectancies in Hispanics operate much like expectancies in other populations/samples, with such expectancies being positively associated with drinking outcomes. The results are also consistent with studies of Hispanic students. For example, the results of this study are consistent with Zamboanga (2005), in which high expectancies for sociability were associated with heavy drinking in Mexican-American college students.

Although there were some interactions, expectancies work in similar fashion for men and women. This study found two significant gender differences, specifically for DDQ Quantity and DDQ Peak Day, which indicated that men consumed alcohol on more days out of the week and drank more drinks on their highest peak day than did women.

As noted above, the results may have implications for targeted interventions and health education practice in general. Regarding targeted interventions, some expectancies appear to show unique associations with outcomes, especially RAPI and DDQ QTY and PEAK variables with Sociability, Risk/Aggression and Liquid Courage expectancies. Students with high expectancies for these variables were more likely to experience alcohol-related problems, consume alcohol more days out of the week, and consume more drinks in one setting than those without these expectancies. Interventions designed to reduce alcohol consumption and alcohol-related problems might focus on these expectancies or target individuals with high expectancies for Sociability, Risk/Aggression, and Liquid Courage.

Regarding health education, many interventions try to change expectancies in experienced drinkers and from the results of this study, expectancies in experienced drinkers do not change. The best idea for changing expectancies would be to tailor a program that focuses on changing expectancies in inexperienced drinkers and trying another approach, such as motivational interviewing, for the ones who are moderate to heavy drinkers with greater likelihood of alcohol-related problems.

5.3 Limitations

There were several limitations in this study. For example, this study data were cross sectional and, as such, cause and effect cannot be determined. Thus, although this study used expectancies as predictors (i.e., independent variables) of supposed drinking outcomes (i.e., dependent variables) in the sample population of Hispanic college students, it could easily be the opposite where drinking behaviors could determine the expectancies.

A second limitation is the sample characteristics of this study. This study used a relatively homogeneous sample of Hispanic drinkers, rather than a representative sample of college students, or even a convenience sample that included light and non-drinkers. The study results describe these associations in moderate to heavy drinkers, but do not include the views of low drinkers and abstainers.

Finally, the last limitation of this study was self-report. All variables were assessed by self-report in which the answers could have been biased or may have been answered to please researchers. The high levels of drinking and alcohol-related problems, however, suggest that students were not shy about reporting their drinking behavior.

5.4 Future Research

There are several areas for future research. For example, a longitudinal study might be done so that cause and effect can be better explained for people with high alcohol expectancies. Future studies should also include those from other ethnic groups versus this study which only looked at the Hispanic population; such studies might be able to determine if ethnicity moderates associations between alcohol expectancies and alcohol-related outcomes. Future studies should also include abstainers in the study, especially in regards to negative expectancies. As noted, drinking status (or experience) may moderate associations between expectancies and alcohol consumption.

Expectancy-based intervention efficacy should be researched further because as results of this study shows, alcohol expectancies in moderate to heavy drinkers do not change. Many health education programs try to change expectancies in both inexperienced drinkers and moderate to heavy drinkers using the same intervention and this may not be as effective as a tailored intervention for each group.

5.5 Summary and Conclusions

Results showed that both positive and negative expectancies in a sample of Hispanic College Students were positively associated with alcohol consumption, alcohol risk scores, and alcohol-related problems. Findings that positive alcohol expectancies, such as Sociability and Liquid Courage, which are positively associated with alcohol-related problems are consistent with the literature presented at the beginning of this study.

The results for multiple regression show that Sociability and Risk/Aggression have a unique independent relationship with RAPI scores, and that Liquid Courage has a unique independent relationship with DDQ Quantity and DDQ Peak Day. These results indicate that high expectancies in these variables have an independent relationship with high risk scores, consumption of alcohol on more days out of the week, and more drinks consumed on a single peak day.

References

- Alcohol & Public Health*. (2008, September). Retrieved January 6, 2009, from Centers for Disease Control and Prevention: <http://www.cdc.gov/alcohol/index>
- Alcohol*. (2008, August). Retrieved July 8, 2009, from Center for Disease Control and Prevention: <http://www.cdc.gov/alcohol/faqs.htm#10>
- Babor, Higgins-Biddle, Saunders, & Monteiro. (2001). *The alcohol use disorders-guidelines for use in primary care*. World Health Organization.
- Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Baron, & Kenny. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and considerations. *Journal of Personality and Social Psychology* , 1173-1182.
- Beck, K., Arria, A., Calderia, K., Vincent, K., O'Grady, K., & Wish, E. (2008). Social context of drinking and alcohol problems among college students. *American Journal of Health Behavior* , 32(4) 420-430.
- Bordeau, B., Saltz, R., Bersamin, M., & Grube, J. (2007). Understanding the relationship between alcohol and sex: Latino and White college students and problematic sexual experiences while drinking. *Journal of American College Health* , (3) 299-306.
- Brown, Christiansen, & Goldman. (1987). The alcohol expectancy questionnaire: an instrument for the assessment of adolescent and adult alcohol expectancies. *Journal of Studies on Alcohol* , 48, 483-491.
- Cohen, A. (1997, September 8). Battle of the binge. *Time* , pp. 54-56.

- Collins, Parks, & Marlatt. (1985). Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol. *Journal of Consulting and Clinical Psychology* , 53(2), 189-200.
- Evans, M., & Dunn, N. (1995). Alcohol expectancies, coping responses and self-efficacy judgments: a replication and extension of Cooper et al.'s 1988 study in a college sample. *Journal of Studies on Alcohol* , 186-193.
- Fromme, K., & D'Amico, E. (2000). Measuring adolescent alcohol outcome expectancies. *Psychology of Addictive Behaviors* , 206-212.
- Fromme, K., Stroot, E., & Kaplan, D. (2003). comprehensive effects of alcohol: development and psychometric assessment of a new expectancy questionnaire. *Psychological Assessment* , 19-26.
- Fromme, Stroot, & Kaplan. (1993). Comprehensive effects of alcohol: development and psychometric assessment of a new expectancy questionnaire. *Psychological Assessment* .
- Gilbert, J., Mora, J., & Ferguson, L. (1994). Alcohol-related expectancies among Mexican-American women. *International Journal of the Addictions* , 1127-1147, (29).
- Grange, L., Hojnowski, N., & Nesterova, S. (2007). Personality correlates of alcohol consumption and aggression in Hispanic college population. *Hispanic Journal of Behavioral Sciences* , (4) 570-580.
- Ham, L., Stewart, S., Norton, P., & Hope, D. (2005). Psychometric assessment of the comprehensive effects of alcohol questionnaire. *Journal of Psychopathology and Behavioral Assessment* , 141-158.

- Hingson, Heeren, Winter, & Wechsler. (2005). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Annual Review of Public Health* , 259-257.
- Jones, B., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and alcohol consumption. *Addiction* , 57-72.
- Jung, J., & Rojas, R. (2000). Coping with a significant other's problem drinking in relation to alcohol expectancies among Mexican-American and non-Hispanic White women. *Journal of Alcohol and Drug Education* , (3) 47-56.
- Marin, G. (1996). Expectancies for drinking and excessive drinking among Mexican Americans and non-Hispanic Whites. *Addictive Behaviors* , 491-507 (4).
- Marin, Posner, & Kinyon. (1993). Alcohol expectancies among Hispanics and non-Hispanic Whites: Roles of respondents' drinking status and accumulation. *Hispanic Journal of Behavioral Sciences* , 373-381.
- Miller, W., & Rollnick, S. (1991). *Motivational interviewing: preparing people to change addictive behavior*. New York. New York: Guilford Press.
- National Center for Health Statistics. (2007). *Health, United States, 2007*. Washington, DC: U.S. Government Printing Office.
- National Highway Traffic Safety Administration. (2000). *Traffic safety facts*. Washington, DC: US Department of Transportation National Highway Traffic Safety Administration.
- NHSDA. (2001). *National Household Survey on Drug Abuse*.
- NIAAA Newsletter. (2004). *National Institute of Alcohol Abuse and Alcoholism*. NIAAA council approves definition of binge drinking.

(2005). *NIAAA's Vision: At the threshold of the new millennium, new successes.*

Washington, DC: National Institute on Alcohol Abuse and Alcoholism.

O'Malley, P. (1996). *Maturing out of problematic alcohol use.* Retrieved 01 31, 2009,

from National Institute on Alcohol Abuse and Alcoholism:

<http://pubs.niaaa.nih.gov/publications/arh284/202-204.htm>

Schoenborn, C., & Adams, P. (2001). *Alcohol use among adults: Advance data from*

vital health and statistics. Hyattsville, Maryland: National Center for Health

Statistics.

Schulenberg, J., O'Malley, P., Bachman, J., Wadsworth, K., & Johnston, L. (1996).

Getting drunk and growing up: Trajectories of frequent binge drinking during the transition to young adulthood. *Journal Studies of Alcohol* , (57) 289-304.

Simons-Morton, B., Greene, W., & Gottlieb, N. (1995). *Introduction to health education*

and health promotion. Prospect Heights: Waveland Press, Inc.

Strano, D., Cuomo, M., & Venable, R. (2004). Predictors of undergraduate student

binge drinking. *Journal of College Counseling* , (7) 50-63.

Tabachnick, & Fidell. (2007). *Using multivariate statistics.* Boston: Allyn & Bacon.

(2008). *Traffic Safety Facts-Crash Stats.* Washington, DC: National Highway of Traffic

Safety Administration.

Turrissi, Hughes, & Wiersma. (2000). Binge-drinking-related consequences in college

students. *Psychology of Addictive Behaviors* , 342-355.

UTEP Student Profile. (2007-2008). Retrieved February 20, 2009, from University of

Texas at El Paso: <http://admin.utep.edu/Default.aspx?tabid=50864#studentprofile>

- Valdivia, & Stewart. (2005). Further examination of the psychometric properties of the comprehensive effects of alcohol questionnaire. *Cognitive Behavior Therapy* , 22-33.
- Wechsler, H., & Dowdall, G. (1998). Changes in binge drinking and related problems among American college students between 1993 an 1997. *Journal of American College Health* , (47) 57-68.
- White, H., & Labouvie, E. (1989). Towards the assessment of adolescent problem drinking. *Journal of Studies on Alcohol* , (50), 30-37.
- Zamboanga, B. (2005). Alcohol expectancies and drinking behaviors in Mexican-American college students. *Addictive Behaviors* , (4) 673-684.
- Zamboanga, B. (2006). From the eyes of the beholder. *The American Journal of Drug and Alcohol Use* , 599-605.

Appendix A: Alcohol Use Disorders Identification Test

Assessment Questionnaire

Please complete the following demographic information (Please mark an X in the box corresponding to your answer)

1. **What is your gender?**
Male.....
Female.....
2. **What is your race? (Mark all that apply)**
White.....
African American.....
Asian.....
American Indian.....
Native Hawaiian/Pacific Islander.....
Alaska Native.....
3. **Are you Hispanic or Latino?**
Yes.....
No.....
4. **Where are you living now?**
With Parents
Own/Rent Apartment, Room, House.....
Minor Village/Dorms.....
Someone else's apartment/house.....
Other.....
5. **What is your current place of residence?**
El Paso County.....
Dona Ana County.....
Juarez.....
Other.....
6. **What is your classification?**
Freshman.....
Sophomore.....
Junior.....
Senior.....
Graduate Student.....
7. **If female, are you currently pregnant?**
Yes.....
No.....
Don't know.....

The following questions are about the past 3 months. (Please mark an X in the box corresponding to your answer)

8. **How often do you have a drink containing alcohol?**
 Never 2 to 3 times a week
 Monthly or less 4 or more times a week
 2 to 4 times a month
9. **How many drinks containing alcohol do you have on a typical day when you are drinking?**
 None 5 or 6
 1 or 2 7 to 9
 3 or 4 10 or more
10. **How often do you have six or more drinks on one occasion?**
 Never Weekly
 Less than monthly Daily or almost daily
 Monthly
11. **How often during the past 3 months have you found that you were not able to stop drinking once you had started?**
 Never Weekly

- Less than monthly Daily or almost daily
 Monthly
12. **How often during the past 3 months have you failed to do what was normally expected from you because of drinking?**
 Never Weekly
 Less than monthly Daily or almost daily
 Monthly
13. **How often during the past 3 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?**
 Never Weekly
 Less than monthly Daily or almost daily
 Monthly
14. **How often during the past 3 months have you had a feeling of guilt or remorse after drinking?**
 Never Weekly
 Less than monthly Daily or almost daily
 Monthly
15. **How often during the past 3 months have you been unable to remember what happened the night before because you had been drinking?**
 Never Weekly
 Less than monthly Daily or almost daily
 Monthly
16. **Have you or someone else been injured as a result of your drinking?**
 No
 Yes, but not in the past 3 months
 Yes, during the past 3 months
17. **Has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?**
 No
 Yes, but not in the past 3 months
 Yes, during the past 3 months

Appendix B: Rutgers Alcohol Problems Index

Different things happen to people while they are drinking ALCOHOL or as a result of their ALCOHOL use. Some of these things are listed below. Please indicate *how many times* each has happened to you *during the last 3 months* while you were drinking ALCOHOL or as the result of your ALCOHOL use. Place an X in the box that corresponds to your answer.

How many times did the following things happen to you while you were drinking alcohol or because of your alcohol use during the last 3 months?

	<i>Never</i>	<i>1-2 times</i>	<i>3-5 times</i>	<i>6-10 times</i>	<i>More than 10 times</i>
A. Not able to do your homework or study for a test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Got into fights, acted bad, or did mean things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Missed out on other things because you spent too much money on alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Went to work or school high or drunk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Caused shame or embarrassment to someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Neglected your responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Relatives avoided you	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Felt that you needed more alcohol than you used to use in order to get the same effect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Tried to control drinking by trying to drink only at certain times of the day or certain places	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Noticed a change in your personality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Felt that you had a problem with alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. Missed a day (or part of a day) of school or work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N. Tried to cut down or quit drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O. Suddenly found yourself in a place that you could not remember getting to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P. Passed out or fainted suddenly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q. Had a fight, argument, or bad feelings with a friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R. Had a fight, argument, or bad feelings with a family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S. Kept drinking when you promised yourself not to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T. Felt you were going crazy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U. Had a bad time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V. Felt physically or psychologically dependent on alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
W. Was told by a friend or neighbor to stop or cut down drinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix C: Comprehensive Effects of Alcohol Questionnaire

Instructions: The following questions ask what you would expect to happen if you were under the influence of **ALCOHOL**. Circle from disagree to agree - depending on whether you expect the effect to happen to you if you were under the influence of alcohol. These effects will vary, depending upon the amount of alcohol you typically consume. This is not a personality test. **We want to know what you would expect to happen if you were to drink alcohol, not how you are when you are sober.** Example: If you are always emotional, you would not circle agree as your answer unless you expected to become more emotional if you drank.

When I drink alcohol, I expect that _____:

1. I would be outgoing

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

2. My senses would be dulled

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

3. I would be humorous

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

4. My problems would seem worse

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

5. It would be easier to express my feelings

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

6. My writing would be impaired

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

7. I would feel sexy

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

8. I would have difficulty thinking

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

9. I would neglect my obligations

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

10. I would be dominant

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

11. My head would feel fuzzy

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

12. I would enjoy sex more

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

13. I would feel dizzy

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

14. I would be friendly

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

15. I would be clumsy

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

16. It would be easier to act out my fantasies

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

17. I would be loud, boisterous, or noisy

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

18. I would be feel peaceful

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

19. I would be brave and daring

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

20. I would feel unafraid

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

21. I would feel creative

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

22. I would be courageous

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

23. I would feel shaky or jittery the next day

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

24. I would feel energetic

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

25. I would act aggressively

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

26. My responses would be slow

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

27. My body would be relaxed

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

28. I would feel guilty

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

29. I would feel calm

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

30. I would feel moody

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

31. It would be easier to talk to people

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

32. I would be a better lover

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

33. I would feel self-critical

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

34. I would be talkative

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

35. I would act tough

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

36. I would take risks

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

37. I would feel powerful

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

38. I would act sociable

Disagree	Slightly disagree	Slightly agree	Agree
1	2	3	4

Curriculum Vita

Michelle Greco was born on June 27, 1982 in El Paso, Texas. The first daughter of Vincent Greco and Kimberly Greco, she graduated from Jesus Chapel High School, El Paso, Texas in the spring of 2001 and entered The University of Texas at El Paso that fall. While pursuing a bachelor's degree in health promotion, she interned at the Paso del Norte Health Foundation during the fall of 2006. There she gained valuable experience in reading, writing, and evaluating grant proposals. After receiving her bachelor's degree, she entered the Graduate School in fall of 2007 at the University of Texas at El Paso.

Meanwhile, she was hired on full time at the Paso del Norte Health Foundation where she continued to gain experience in grant funding.

Permanent address: 100 Royal Way, STE 2B
Del Rio, Texas 78840

This thesis was typed by Michelle Nicholle Greco.