

2013-01-01

Examining The Effects Of Impression Management And Self-Deception On Self-Reports Of Alcohol Use And Alcohol Related Problems In Hispanic College Students And Municipal Firefighters

Kristen Eileen Hernandez

University of Texas at El Paso, kehernandez2@miners.utep.edu

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Examining the Effects of Impression Management and Self-Deception on Self-Reports
of Alcohol Use and Alcohol-Related Problems in Hispanic College Students and

Municipal Firefighters

Kristen Eileen Hernández

Department of Public Health Sciences

APPROVED:

Joe Tomaka, Ph.D., Chair

Maria Duarte-Gardea, Ph.D., R.D.

Holly J. Mata, Ph.D

Benjamin C. Flores, Ph.D.
Dean of the Graduate School

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2013

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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 PUBLIC HEALTH

Department of Public Health Sciences

THE UNIVERSITY OF TEXAS AT EL PASO

AUGUST 2013

ACKNOWLEDGMENTS

Firstly I would like extend my gratitude to the following individuals who supported and help make this thesis project possible Dr. Shamaley and Dr. Morales-Monks. I would like to acknowledge my advisor Dr. Tomaka and my long time mentor Dr. Mata for their guidance throughout the years even before entering this program and continuously helping me to become a public health professional. Additionally I would like to give a special thanks to my committee member Dr. Duarte who has continued to support me through this process and has provided valuable feedback. Last but not least I would like to thank my family, boyfriend, and close friends who have supported me in completing this challenge and sharing this chapter of my life.

ABSTRACT

Researchers use survey methods in a variety of settings to assess health behaviors, chronic disease, and other health outcomes. Since most surveys rely on self-report from respondents, prevalence rates have been regarded with criticism on the assumption that some respondents are unwilling to divulge personal information about behaviors due to people's desires to maintain a good impression. Accordingly, the purpose of this study was to assess the extent to which self-reported drinking behavior correlates with measures of two known biases that may affect the validity of such report: Impression management and self-deception. The present study consisted of a secondary analysis of existing data from an alcohol risk reduction intervention among college students (N=511) and an intervention project involving a municipal fire department (N=740). Students and firefighters completed the Balanced Inventory of Desirable Responding, the Alcohol Use Disorders Identification Test, the Rutgers Alcohol Problem Index, and the Daily Drinking Questionnaire. Results suggested that among college students, impression management contributed uniquely and significantly to alcohol risk level, alcohol related-problems, and alcohol consumption. Among firefighters, self-deception contributed uniquely and significantly to alcohol risk and alcohol related problems. The relationships between social desirability biases and alcohol use among college students did not differ by gender. Overall, the results suggest that researchers may need to take into account social desirability bias in research and when implementing alcohol intervention programs in different populations. Increased assessment of social desirability bias may also lead to more accurate interpretation of research results when relying on self-reported behaviors and outcomes.

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CHAPTER 1: INTRODUCTION

Researchers use survey methods in a variety of settings to assess health behaviors, current health status, use of preventive health services, dietary patterns and other health outcomes. These surveys contribute to the knowledge of known health outcomes, show prevalence of disease, and display the overall health of the nation. Surveys are also used to assess frequency of participation in a variety of potentially sensitive behaviors, such as the extent to which people use illicit drugs and alcohol, engage in risky sexual practices, or participate in other activities that may be illegal or highly personal (Davis, Thake, & Vilhena, 2010).

Since most surveys rely on self-report from respondents, prevalence rates based on self-reports have been regarded with criticism on the assumption that some respondents are unwilling to divulge personal information about behaviors, cannot recall correctly, or do not answer honestly (Davis et al., 2010). Literature suggests that willingness to divulge sensitive information varies from context to context (Babor, Stephens, & Marlatt, 1987). For example, people are typically less willing to divulge sensitive information in a clinical interview vs. an anonymous computer survey. Indeed, studies have shown that people respond in a socially desirable way when asked to self-report on sensitive topics such as history of incarceration, levels of physical activity and dietary intake, psychological distress, drug use, and other behaviors (van de Mortel, 2008). To this end, Zerbe and Paulhus (1987), formally defined socially desirable responding as “the tendency of individuals to present themselves in a favorable way in reference to current social norms and standards” (p. 250).

Despite these concerns, others have concluded that self-reports can be useful and accurate for assessing sensitive topics. For example, Welte and Russell (1993) found that social desirability bias did not significantly affect reports of marital conflict, age, or stressful life events. Van de Mortel (2008) also found that social desirability bias did not affect self-reports of a variety of health behaviors including willingness to engage in health promoting behaviors, clinical attitudes, and beliefs about human sexuality.

Self-Reports and Alcohol Use

The same debate characterizes self-reports of alcohol use. Some have suggested that self-presentational concerns, such as respondents presenting themselves favorably, seriously affect self-reports of alcohol use and problems. For example, in two samples of undergraduates students Davis et al (2010) found a significant relationship between socially desirable responding and alcohol consumption and alcohol risk, such that people who were considered impression managers reported lower levels of alcohol consumption and risk. The authors discuss concerns with the validity of self-reported alcohol use and other alcohol-related variables, and emphasize the importance of accounting for social desirability bias in alcohol research that involves self-report (Davis et al., 2010). Others have suggested that self-reports of alcohol use can be reliable and valid in most research contexts. For example, in a meta-analysis discussing the reliability and validity of self-reported alcohol use, Babor et al (1987) found reported frequency of drinking and number of days abstaining from alcohol use to be reliable and accurate.

Researchers who have studied the validity of self-report have used other techniques in efforts to examine factors influencing the self-report of sensitive behaviors

and minimizing biases in such reporting. For example, when assessment settings have been structured to minimize bias, by emphasizing anonymity or confidentiality, self-reports of drinking show increased reliability and validity (Del Boca & Darkes, 2003). Zaldívar and colleagues (2009) found similar effects of confidentiality and anonymity assurances on self-reports of cocaine and marijuana use.

Others have suggested that self-report measures of alcohol use are inherently biased or inaccurate. Indeed, some have suggested that inaccuracies in reporting are not only due to self-presentational concerns, but also to the method in which the data was collected (Midanik, 1982). Specifically, they have suggested that it is difficult for individuals to provide accurate estimates on drinking surveys, particularly when they assess such behavior over an extended timeframe (e.g., a month or a year; Midanik, 1982; Del Boca & Darkes, 2003).

Studies using self-report measures alongside use of other measures, presumably less biased objective measures, such as collateral reports, biochemical markers or other data sources are mixed. Some studies suggest lack of correspondence between these presumably less biased measures and self-reports (Del Boca & Darkes, 2003; Zaldívar-Basturo et al., 2009). For example, one study used biochemical markers, breathalyzer data, and collateral data to predict relapse and to assess the consistency of self-report data in alcohol dependent veterans (Whitford, Widner, Mellick, & Elkins, 2009). They found that collateral reports were the best predictor of alcohol relapse relative to the other measures. In contrast, other studies have found considerable correspondence between self-reports of alcohol-related events and objective evidence of drunk driving arrests, police reports, and hospitalizations (Midanik, 1982). Since

these types of historical events are less susceptible to memory error and intentional distortion, self-reports of them tend to be more accurate (Del Boca & Darkes, 2003).

It is also true that presumably more objective measures are not without significant limitations. For example, most methods of biochemical measurement, including blood analysis, breath, and urine testing, provide only brief and immediate measurements of alcohol consumption (Litten & Allen, 1992). They also cannot describe use over a longer periods of time (e.g., week or month), or even tell us about a typical week. Moreover, information that is collected through collateral reports is also subject to the same sources of error as self-reports (Del Boca & Darkes, 2003). For instance, underreporting can occur between respondent and collateral informants, such as spouses, having discrepancies within reporting the frequency in drinking and its related problems varying within population samples (Midanik, 1982).

Babor and Del Boca (1992) have provided a theoretical model of self-reporting that tries to incorporate the major issues surrounding this debate. This Question-Answering Process model suggests that respondent characteristics such as personality traits, attitudes, and beliefs interact with the setting in which the variables are being assessed (e.g., such as a clinical setting or research staff), and can affect the validity of self-report data being gathered (Babor & Del Boca, 1992). They suggest that participants are willing and able to respond when confidentiality is ensured and a degree of rapport is established with the interviewer, alongside other means of reducing self-reported bias (Babor & Del Boca, 1992). In contrast, the model suggests that participants will be unable or unwilling to respond depending on their psychological state, whether the individual is under the influence or being withdrew from alcohol or

other drugs, and or the duration to which the respondent is to recall in time (Babor & Del Boca, 1992).

Recent studies also suggest that self-report is the best method when gathering information on moderate alcohol consumption (Whitford, Widner, Mellick, & Elkins, 2009). For instance, Babor & Del Boca, 1992, suggest self-report methods could be more accurate for current drinking than past and in clinical practice have been beneficial for their flexibility, inexpensiveness and efficiency. Other studies have suggested that under-reporting or over-reporting occurs, but do not indicate where or in which segments of the population misreporting is prevalent (Davis et al., 2010). For example, in a study comparing two self-report techniques that measure quantity and frequency of drinking and a 1-month daily alcohol intake diary over a period of time there was an overestimation in reporting occurring within frequency and amount of drinking (e.g. ≥ 5 drinks a day or frequent drinking; Poikolainen, Podkletnova, & Alho, 2002).

In certain instances alcohol consumption could be seen as an undesirable behavior socially, although this perspective may not hold true under some circumstances (Del Boca & Darkes, 2003). For example, responding could reflect individual differences within the sample population due to personality. In other words, people might be concerned about societal approval or they might under-report certain behaviors to make a good impression on the researchers (Welte & Russell, 1993). In a study assessing socially desirable responding in relationship to illegal substance use and legal substances such as alcohol use or cigarette smoking, there were stronger correlations seen between respondent's illegal drug use over a lifetime and social

desirability responding ($r = -.27$) than legal substances such as alcohol related variables ($r = -.09$ to $r = -.17$; Welte & Russell, 1993).

Impression Management and Self-Deception Biases in Self-Report Methods

Researchers have suggested that impression management and self-deception reflect distinct biases in self-report measures. Paulhus (1991) described impression management as referring to the idea that some people systematically over-report the performance of desirable behaviors and underreport undesirable behaviors. He further described it as a deliberate self-presentation to an audience. Similarly, Barrick and Mount (1998) describe impression management as referring to deliberate attempts to distort one's responses in order to create a favorable impression or self-presentation to others. For example, when taking a survey, impression-managing respondents would underreport their use of marijuana to make them look favorable to the researchers.

In contrast, self-deception refers to the dispositional tendency to think of oneself in a favorable light (Barrick & Mount, 1998), where *the respondent believes* in his or her positive self-reports (Paulhus, 1984), even though they are more positive than reality. Self-deception is also thought to be less conscious than impression management. For example, unlike consciously responding as in impression management, the self-deceiving responder may underreport the extent of their alcohol-related problems during recent semesters. In this case the respondent would be unconsciously deceiving themselves, as well as the researchers, about the level and nature of their drinking-related consequences.

These influences can affect how individuals respond to a variety of questions and they may be particularly relevant for sensitive behaviors, such as alcohol and drug use,

compared with other behaviors such as physical activity. In a meta-analysis assessing influences of social desirability responding, a little less than half of reviewed articles showed significant influence of social desirability responding on a variety of health outcomes (van de Mortel, 2008). For example, socially sensitive topics within the article mentioned above demonstrated influences of social desirability that were classified as such were, admissions to domestic violence, history of incarceration, levels of drug and alcohol use, and levels of psychological distress (van de Mortel, 2008).

In a study of college students in Canada assessed the two constructs impression management and self-deception on sexuality reports and found that impression management exerted a greater influence than self-deception. Specifically, under anonymous testing conditions of not collecting any identifying information, researchers found that after controlling for personality measures such as the Big Five personality dimensions (extraversion, agreeableness, conscientiousness, neuroticism, and openness) and social conservatism, associations between impression management and sexuality measures remained significant, whereas the associations with self-deception and sexuality measures were diminished substantially (Meston, Heiman, Trapnell, & Paulhus, 1998).

The results described above were similar to those found by Davis and colleagues (2010), who also found that impression management was inversely related to alcohol consumption and risk but that self-deception was not. This study suggested that the strength of these relationships is different for men and for women.

Finally, a recent study of Spanish college students explored relationships between measures of alcohol and other drug use and social desirability biases while

using previously recommended strategies to reduce socially desirable responding such as assuring confidentiality and further clarifying the study activities (Zaldivar, Molina, Lopez Rios, & Garcia Montes, 2009). In this instance, researchers found that both impression management and self-deception were significantly associated with alcohol risk level, $r = -.39$ and $r = -.19$, respectively.

In summary, there is significant evidence that socially desirable responding biases influence self-reports on a variety of health outcomes, including sensitive topics such as drug or alcohol use. Results have been particularly consistent for impression management, but more mixed for self-deception. Research has also shown that use of more objective measures or using instruments that help detect socially desirable responding can be helpful for reducing such bias and/or identifying respondents who are trying hardest to present themselves in a favorable way or unconsciously believing in their own reports. Particularly relevant to this study, previous investigations have shown consistent associations between impression management and reports of alcohol risk and consumption, but less consistent associations between self-deception and alcohol risk and consumption.

In spite of previous research of social desirability, little is known about such relationships in Hispanic populations, both at the college level and in the community. In addition there is little information about how the dual influences on self-report discussed above (i.e., self-deception and impression management) contribute uniquely or redundantly to alcohol-related outcomes.

Purpose of Study

Accordingly, the purpose of this study was to assess the extent to which self-reported drinking behavior correlates with measures of two known biases that may affect the validity of such report: Impression management and self-deception. In addition, such associations were examined across two large samples: one of college students at a Hispanic Serving Institution on the U.S. - Mexico border, and another of municipal firefighters in the same region. Both samples were predominately Hispanic. It was hypothesized that:

1. There is an association between social desirability biases and self-reported alcohol use and problems, such that:
 - a) Higher levels of impression management will be associated with lower levels of alcohol risk, alcohol consumption, and alcohol related problems.
 - b) Higher levels of self-deception will be associated with lower levels of alcohol related problems.
 - c) Impression management and self-deception will independently influence self-reported alcohol related outcomes.
2. The relationships between social desirability and alcohol use and problems will be stronger among firefighters than among college students.
3. The relationships between social desirability biases and alcohol use among college students will be stronger among women than among men.

CHAPTER 2: METHODS

Design

The study design was two cross-sectional studies conducted through secondary analysis of existing data collected as part of an alcohol risk reduction intervention among college students (see Shamaley, 2013) and an intervention project involving the El Paso Fire Department (EPFD) among municipal firefighters (see Morales-Monks, 2012). Sample one used data collected from August 2010 - December 2011 from a dissertation study at the University of Texas at El Paso (UTEP). Sample two used data collected from June 2010-August 2010 also from a dissertation study at the EPFD training academy.

This study examined relationships between impression management and self-deception and respondents' self-reports of alcohol risk level, alcohol consumption, and alcohol-related problems. Questionnaires used for both studies included a Demographic Questionnaire that was specifically tailored to each study, Alcohol Use Disorders Identification Test (AUDIT), Rutgers Alcohol Problems Index (RAPI), Daily Drinking Questionnaire (DDQ), and the Balanced Inventory of Desirable Responding (BIDR).

Participants and Settings

Sample One: College Students

Data from sample one were part of a dissertation study that implemented an alcohol risk reduction intervention among college students in a classroom setting at UTEP. The purpose of the study was to investigate if whether an addition of a coping component to a Personalized Normative Feedback (PNF) intervention would have a stronger impact on reducing alcohol risk levels, alcohol-related problems, and alcohol

consumption than using a standard Personalized Normative Feedback invention (see Shamaley, 2013). The larger intervention study was conducted with students in a class setting. Students either received one of three conditions being presented as a class with a standard alcohol personalized normative feedback form (PNF), an alcohol PNF + stress and coping PNF, or generally receiving alcohol education to reduce risky drinking (see Shamaley, 2013). The UTEP Institutional Review Board approved this study. Informed consent was obtained from all intervention participants.

Participants. There were 501 college students in sample one. As shown in Table 1, 74% were female and 85% were Hispanic (see Shamaley, 2013). Mean age for the sample was 24 years old. This sample was assessed twice, once at baseline and again 6 weeks later. Baseline and follow-up data were used for the present study.

Setting. UTEP is located on the U.S.-Mexico border in the Southwest corner of Texas (bordering Juarez, Chihuahua, Mexico). At the time of the original studies and currently, student body demographics reflect regional characteristics. Most (77%) of students are Hispanic, and an additional 5% are international students from Mexico. Slightly more than half (54%) are female, and 83% of students are from El Paso County (UTEP, 2013). The UTEP students were recruited by research assistants who visited classes within the College of Health Science, School of Nursing and College of Business Administration. Students who chose to participate completed the baseline questionnaire at that time.

Sample 2: Municipal Firefighters

Data from sample two were part of a dissertation study for an alcohol intervention project among municipal firefighters. Support from this intervention study

was from the El Paso Training Academy. The training academy offers required training on a variety of topics for all EPFD uniformed employees three times a year (see Morales-Monks, 2012). This alcohol intervention study was used as part of a regular training cycle given. The purpose of that particular study was to test the effectiveness of a public health approach used with college students (see Morales-Monks, 2012). Firefighters who participated received a large scale intervention that involved one of three alcohol interventions, including Brief Alcohol Screening Intervention for College Students (BASICS) Psychoeducation + PNF, PNF only, or a standard Drinking While Intoxicated (DWI) presentation given by the El Paso Police Department (see Morales-Monks, 2012). It was anticipated that the theory-based brief motivational interventions would fare better than the educational control group in reducing alcohol use and alcohol related problems (see Morales-Monks, 2012). The UTEP Institutional Review board approved that study.

Participants. There were 740 employed uniformed EPFD firefighters in sample 2 (Morales-Monks, 2012). As shown on Table 1, 98 percent of the fighters were male and 76 percent were Hispanic with the mean age of 38 years old. The baseline assessments from this project were used for the present study.

Setting. The setting for sample 2 was in the city of El Paso, Texas that is located along the U.S.-Mexico border with the sister city Ciudad Juarez, Chihuahua, Mexico. The larger study was conducted at El Paso Fire Department Training Academy.

Measures

Demographics. As stated previously both of the larger studies had specific demographic questionnaires tailored for each project. See Appendix B or C for

developed questionnaires used per sample. Demographic items to be included within this study were gender, age, ethnicity, income, and marital status.

Anthropometric measures. Self - reported height and weight were included as non-related outcome variables; it was expected that the measures of social desirability would be uncorrelated with these measures.

Balanced Inventory of Desirable Responding (BIDR). This is a 40-item scale which assesses the tendency to give a socially desirable response to other measures. As described above the BIDR captures two major dimensions, impression management and self-deception. Statements measuring impression management include “I always declare everything at customs” and self-deception includes “My parents were not always fair when they punished me.” Other examples which differentiates impression management items and self-deception items could be found in Appendix A. Responses collected are on a 7 point Likert-type scale ranging from “Not True” to “Very True”. Reliability for the BIDR has ranged from $\alpha = .67-.77$ (SDE) and $\alpha = .77-.85$ (IM) (Paulhus, 1991).

Alcohol Use Disorders Identification Test (AUDIT). The AUDIT assesses risky drinking behavior, alcohol-related problems, and alcohol dependence (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). The AUDIT has been evaluated and validated in a variety of settings and with diverse populations. It has demonstrated good reliability with recent reviews showing ranges of $\alpha = .75-.97$ (Reinert & Allen, 2007). In the college student sample that will be used in this study, the AUDIT was modified to reflect alcohol use within past month rather than past year as is common, and in the firefighter study

the AUDIT was modified to reflect alcohol use within the past 3 months. These modified versions of the AUDIT had good reliability, ($\alpha = .80, .82$, respectively).

Rutgers Alcohol Problems Index (RAPI). The RAPI is a 23-item screening tool developed to assess problems related to drinking among adolescents and young adults (White & Labouvie, 1989). Convergent validity has been demonstrated, and the RAPI has high reliability, with coefficients ranging from $\alpha = .80$ to $\alpha = .92$ in clinical and nonclinical settings (White & Labouvie, 1989). The RAPI asks respondents about consequences related to drinking within the last three months. In the college student sample, the RAPI was modified to ask about the last month. The RAPI had good reliability in both the college student and firefighter samples, $\alpha = .85, .92$ respectively.

Daily Drinking Questionnaire (DDQ). This scale assesses frequency of alcohol consumption (Collins, Parks, & Marlatt, 1985). The DDQ is a 7-day drinking calendar for participants to report a typical week (Monday-Sunday) in the past month they typically consume over a day period. Variables to be assessed from the college student sample are calculated drinking frequency, quantity and peak. From the firefighters' sample, are means of drinks/week, drinking hours/week, drinking days/week.

Procedure

The data for sample one and two were collected as part the ongoing study activities. In both samples the BIDR and drinking outcomes were assessed at baseline. In the college sample, they were also assessed at follow-up approximately 6 weeks after initial assessment. Because of the different study designs, students completed the questionnaires under confidential circumstances (confidential linking of names to data with a unique code), whereas the firefighters completed the questionnaires under

anonymous conditions (i.e., no linking of names to the data). All the questionnaires were completed in group or classroom settings; however, participants they were instructed not to see what others near them were reporting. See dissertations by Morales-Monks (2012) and Shamaley (2013) for additional details regarding the procedures of the individual studies. The Institutional Review Board approved study exemption for the present secondary analysis of both samples.

Data Analysis

This study was conducted using secondary analysis of data collected during the studies described above. Descriptive and inferential statistics were conducted using SPSS 20. Demographic variables included gender, age, ethnicity, income, marital status, and height and weight. Primary study variables included impression management, self-deception, AUDIT, RAPI, and DDQ. Correlation and regression analyses were conducted to determine the relationship between socially desirable responding constructs and alcohol-related outcomes in each of the samples. Specifically, these analyses determined the unique or redundant contribution of impression management and self-deception to alcohol-related outcomes. Finally, to determine if these relationships were different for men than for women, the moderating role of gender on the relationship between socially desirable responding constructs and alcohol-related outcomes among the college student sample was examined. Gender relationships were not examined further within the sample of firefighters because not enough women were in the sample.

CHAPTER 3: RESULTS

Descriptive Analyses

Table 1 displays means and standard deviations, or percentages, for demographic and main study variables of each study. As shown in Table 1, the college student sample had a mean age of 24 years and was predominantly Hispanic as well as mostly female. The firefighter sample had a mean age of 38 years and was 98% Hispanic. Only 2% of the firefighters were female.

Table 1

<i>Descriptive Statistics among College Students and Municipal Firefighters</i>		
	Mean (SD) or %	
	College Students (n=501)	Firefighters (n=740)
Age	24.04 (6.41)	37.67(8.07)
Ethnicity (% Hispanic)	85.4%	98.0%
Gender (% male)	25.7%	98.0%
Marital Status (% single)	70.7%	33.0%
Weight	152.82(37.72)	200.62(30.63)
Height	65.43(6.29)	63.81(3.06)
AUDIT	4.98(4.39)	6.26(5.25)
RAPI	1.81(3.41)	2.83(5.80)
DDQ	1.29(1.29)	1.97(1.63)
DDQ	4.90(6.68)	10.22(12.71)
DDQ	2.75(3.14)	7.23(8.52)
BIDR (Self-Deception)	3.48 (0.63)	4.87 (0.69)
BIDR (Impression Management)	3.91 (0.81)	4.11 (0.84)

Main study variables. Regarding the main variables of interest, among college students, the means for BIDR self-deception and impression management were 3.48 and 3.91, respectively. Among firefighters, the means for the same measures were 4.87 and 4.11. These results suggest that the firefighters were more likely to be self-

deceptive about their alcohol use than were the college students, but that both groups had similar levels of impression management.

As shown, firefighters had higher scores on all measures of alcohol risk, alcohol-related problems, and alcohol consumption than did college students.

Correlation and Regression Analyses

College Students

Table 2

Correlations between BIDR Self-Deception and BIDR Impression Management and Drinking-Related and Non-alcohol Related Outcomes among College Students at Assessment and Six Weeks Later

Outcome	Assessment		Follow Up	
	Self-Deception	Impression Management	Self-Deception	Impression Management
Alcohol Risk Level (AUDIT)	-.10*	-.27**	-.16**	-.27**
Alcohol-Related Problems (RAPI)	-.15**	-.28**	-.21**	-.30**
Drinking Frequency (DDQ)	-.05	-.23**	-.10*	-.23**
Drinking Quantity (DDQ)	-.03	-.22**	-.08	-.23**
Drinking Peak (DDQ)	-.02	-.18**	-.05	-.20**
Gender	.20**	-.14**		
Weight	.07	-.12**		
Height In Inches	.10*	-.08		

N = 501, * $p < .05$, ** $p < .01$

Results in Table 2 suggest that people scoring high in impression management reported substantially less alcohol risk level, fewer alcohol related problems, and lower alcohol consumption than people scoring low in impression management. And self-deception, although inversely correlated with alcohol risk level and alcohol-related

problems, did not substantially influence self-reported measures of consumption. Men were less likely to be impression managers and more likely to be self-deceivers.

Table 3

Standardized Beta Coefficients between BIDR Self-Deception and BIDR Impression Management and Drinking-Related and Non-alcohol Related Outcomes among College Students at Assessment and Six Weeks Later

Outcome	Assessment		Follow Up	
	Self-Deception	Impression Management	Self-Deception	Impression Management
Alcohol Risk Level (AUDIT)	.03	-0.29**	-.06	-.25**
Alcohol-Related Problems (RAPI)	-.03	-.27**	-.10*	-.26**
Drinking Frequency (DDQ)	.06	-.26**	.00	-.23**
Drinking Quantity (DDQ)	.07	-.25**	.02	-.24**
Drinking Peak (DDQ)	.07	-.22**	.04	-.22**
Gender	.31**	-.27**		
Weight	.15**	-.19**		
Height In Inches	.16**	-.15**		

N = 501, * $p < .05$, ** $p < .01$
Correlation between IM & SD: $r = .43$ **

As shown in Table 3, impression management at baseline assessment contributed uniquely and significantly to alcohol risk level, alcohol-related problems, and measures of alcohol consumption (drinking frequency, quantity, and peak). At follow-up,

impression management consistently contributed uniquely and significantly to alcohol risk level, alcohol-related problems, and alcohol consumption.

Table 4

Correlations between BIDR Self-Deception and BIDR Impression Management and Drinking-Related and Non-alcohol Related Outcomes among College Students by Gender

Outcome	Gender			
	Women		Men	
	<i>n</i> =372		<i>n</i> =129	
	Self-Deception	Impression Management	Self-Deception	Impression Management
Alcohol Risk Level (AUDIT)	-0.13**	-0.26**	-0.15	-0.24**
Alcohol-Related Problems (RAPI)	-0.28**	-0.30**	-0.20*	-0.25**
Drinking Frequency (DDQ)	-0.06	-0.21**	-0.12	-0.24**
Drinking Quantity (DDQ)	-0.05	-0.19**	-0.11	-0.22*
Drinking Peak (DDQ)	-0.04	-0.16**	-0.09	-0.18*
Weight	-0.07	-0.09	0.03	-0.01
Height In Inches	0.05	-0.04	0.04	-0.03

N = 501, * $p < .05$, ** $p < .01$

As shown, these relationships did not differ by gender in any meaningful or statistically significant ways. As expected, neither of the BIDR constructs were associated with height nor did weight (included as non alcohol-related outcomes).

Firefighters

Table 5

Zero-order Correlations and Standardized Betas Between BIDR Self-Deception and BIDR Impression Management and Drinking-Related and Non-alcohol Related Outcomes among municipal firefighters

	Zero-Order		<i>B</i>	
	Self-Deception	Impression Management	Self-Deception	Impression Management
Alcohol Risk Level (AUDIT)	-.13**	-.16**	-0.08*	-.13**
Alcohol-Related Problems (RAPI)	-.20**	-.18**	-.15**	-.13**
Average Drinking Days/ Weekly	-.04	-.11**	-.01	-.11**
Average Weekly Drinking	-.05	-.10**	-.02	-.09*
Average Drinking Hours/Weekly	-.03	-.08*	-.01	-.08*
Weight	-.02	-.08*	.01	-.09*
Height	-.05	-.03	-.04	-.01
Vigorous Physical Activity Days	.05	.04	.04	.03
Vigorous Physical Activity Minutes	.01	.05	-.01	.06

N = 740, * $p < .05$, ** $p < .01$

Correlation between IM & SD: $r = .43$ **

Table 5 shows the zero-order correlations and standardized betas between BIDR self-deception and impression management and drinking-related and non-alcohol related outcomes among municipal firefighters. The relationships between self deception and impression management and alcohol risk and problems were weaker

among firefighters than among college students. Regarding consumption, among the firefighters no substantial relationships are suggested.

Self-deception contributes uniquely and significantly to alcohol risk level and alcohol-related problems. Impression management contributes uniquely and significantly to alcohol risk level and alcohol-related problems, but not to alcohol consumption (average drinking days/weekly, weekly, and hours/weekly).

CHAPTER 4: DISCUSSION & CONCLUSION

This study examined the relationships between impression management and self-deception and self-reported alcohol risk level, alcohol consumption, and alcohol-related problems among college students and municipal firefighters. Consistent with the first hypothesis there was an association between social desirability biases and self-reported alcohol use and problems. However, no support was found for the second hypothesis that the relationships between social desirability and alcohol use and problems would be stronger among firefighters than among college students. In fact it was the opposite, suggesting that firefighters are more likely to engage in self-deception regarding alcohol-related problems. The relationships between social desirability biases and alcohol use among college students did not differ by gender.

Although impression management was associated with lower reports of alcohol use and alcohol related problems among both college students and firefighters, these relationships were stronger among the college students. This suggests that college student impression managers underreported their problems associated with alcohol use more than they underreported consumption. The impression manager responses could have been influenced by the respondents trying to make a good impression on the researchers collecting the data, their classmates, and/ or in some instances their professors.

A similar relationship of impression management and alcohol risk level was seen in college students (Zaldivar, Molina, Lopez Rios, & Garcia Montes, 2009). Consistent with literature, impression managers were less likely to acknowledge harmful consequences of drinking than actual alcohol consumption (Davis et al., 2010).

The results suggest that self-deceiving firefighters were lying to themselves about the extent of their alcohol related problems. In this sample, self-deceivers lied to themselves more about the *consequences* related to their alcohol use rather than about how much and how often they drink. This type of self-deception tends to be unconscious rather than intentional. Self-deceivers are said to be motivated to protect self-beliefs, including self-esteem (Randall & Fernandes, 1991); it is likely that this population would benefit from interventions designed to raise awareness about common alcohol-related problems and tailored approaches to help firefighters connect alcohol consumption with alcohol-related problems.

This study found the relationship between self-deception and alcohol related problems to be stronger than the relationship between self-deception and alcohol risk. Zaldivar et al. (2009) did not examine alcohol related problems, but did find that self-deception was inversely correlated with alcohol risk. Similar to the findings of Davis et al. (2009), this study found no significant relationships between self-deception and alcohol consumption.

There are several possibilities as to why the relationship between impression management and alcohol-related outcomes was weaker among firefighters than college students. First, it could be the context in that firefighters were guaranteed absolute anonymity whereas the college students were not. This circumstance of anonymity and confidentiality might have influenced responses. It could also be personality, where the profession of firefighting may attract certain personality types. Maturity might also have played a role; the firefighters' sample was considerably older and might just be less concerned on how they are perceived by others. These are just other possibilities that

might have influenced the responses on the self-reported measures of alcohol use and alcohol related-problems.

Limitations and Strengths

This study had several limitations. First of all, the cross-sectional design limits causal inference. Second, the college student sample was not necessarily representative of the student or the community population. Third, although both studies used the same measures, some were assessed using different time frames (3 month vs. 1 month recall for some measures). Finally, although the study instruments have been widely used and have demonstrated reliability and validity, they rely on self-report with no collateral information (e.g., information from a family member, friend, or employer or any type of biological or clinical assessment). It should be noted however that in studies comparing student self-report with collateral information, college students typically provide fairly accurate information about their alcohol use (Hagman, Cohn, Noel, & Clifford, 2010).

This study also had several strengths. The large sample size in both original studies provided ample power to conduct the analyses. Among the firefighters, the sample represents virtually the entire population of firefighters in the community, providing specific and relevant information for the fire department as well as for health education specialists and other public health professionals providing training and/or health promotion programs. Finally, although the results are not necessarily generalizable to other firefighter populations, they are likely highly relevant to similar firefighter populations, especially in communities with similar demographics.

Implications for Public Health Practice and Suggestions for future research

This study provided a unique opportunity to examine relationships between social desirability bias and self-reported alcohol use and alcohol-related outcomes in two large samples. Overall, the results suggest that researchers may need to take into account social desirability bias in research and when implementing alcohol intervention programs in different populations. From a broader perspective, understanding response bias in self-reported health behaviors across diverse priority populations may contribute to tailored interventions or programs involving potentially sensitive topics. Increased assessment of social desirability bias may also lead to more accurate interpretation of research results when relying on self-reported behaviors and outcomes (van de Mortel, 2009). This study has implications for public health research and practice, and suggests the need for increased use of social desirability bias measures.

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APPENDIX A

Balanced Inventory of Desirable Responding Scale Version 6

Impression management items 1-20	Self-deception items 21-40
<ol style="list-style-type: none"> 1. My first impressions of people usually turn out to be right. 2. It would be hard for me to break any of my bad habits. 3. I don't care to know what other people really think of me. 4. I have not always been honest with myself 5. I always know why I like things. 6. When my emotions are aroused, it biases my thinking. 7. Once I've made up my mind, other people can seldom change my opinion. 8. I am not a safe driver when I exceed the speed limit. 9. I am fully in control of my own fate. 10. It's hard for me to shut off a disturbing thought. 11. I never regret my decisions. 12. I sometimes lose out on things because I can't make up my mind soon enough. 13. The reason I vote is because my vote can make a difference. 14. My parents were not always fair when they punished me. 15. I am a completely rational person. 16. I rarely appreciate criticism. 17. I am very confident of my judgments. 18. I have sometimes doubted my ability as a lover. 19. It's all right with me if some people happen to dislike me. 20. I don't always know the reasons why I do the things I do. 	<ol style="list-style-type: none"> 21. I sometimes tell lies if I have to. 22. I never cover up my mistakes. 23. There have been occasions when I have taken advantage of someone. 24. I never swear. 25. I sometimes try to get even rather than forgive and forget. 26. I always obey laws, even if I'm unlikely to get caught. 27. I have said something bad about a friend behind his or her back. 28. When I hear people talking privately, I avoid listening. 29. I have received too much change from a salesperson without telling him or her. 30. I always declare everything at customs. 31. When I was young I sometimes stole things. 32. I have never dropped litter on the street 33. I sometimes drive faster than the speed limit 34. I never read sexy books or magazines. 35. I have done things that I don't tell other people about. 36. I never take things that don't belong to me. 37. I have taken sick-leave from work or school even though I wasn't really sick. 38. I have never damaged a library book or store merchandise without reporting it. 39. I have some pretty awful habits. 40. I don't gossip about other people's business.

APPENDIX B

COLLEGE STUDENT MEASURES

Demographics

1. Which one of these groups would you say best represents your race/ethnicity?
 - ☐ Hispanic or Latino (someone of Mexican culture or origin)
 - ☐ Non-Hispanic White
 - ☐ Black or African American
 - ☐ Asian
 - ☐ Native Hawaiian or Other Pacific Islander
 - ☐ American Indian or Alaska Native
 - ☐ Other [specify] _____
2. Are you currently?
 - ☐ Single/ never married
 - ☐ Married
 - ☐ Divorced
 - ☐ Widowed
 - ☐ Separated
 - ☐ Cohabiting (living with someone)
 - ☐ Other
3. What country do you live in?
 - ☐ El Paso, Texas, United States
 - ☐ Cd. Juarez, Chihuahua, MX (I commute to El Paso, TX for school)
 - ☐ El Paso on weekdays, and Juarez on weekends
 - ☐ El Paso and Juarez, days of stay vary
 - ☐ Other (please specify) _____
4. Under what college are you currently pursuing a degree?
 - ☐ Business
 - ☐ Education
 - ☐ Engineering
 - ☐ Liberal Arts
 - ☐ Health Sciences
 - ☐ Nursing
 - ☐ University
 - ☐ Other (please specify) _____
5. What is your major?

6. What is your age?
_____(years)
7. What is your classification?
 - ☐ Freshman
 - ☐ Sophomore
 - ☐ Junior
 - ☐ Senior
 - ☐ Graduate
 - ☐ Other _____

(AUDIT) Alcohol Use Disorders Identification Test

We are asking you some general questions about your use of alcohol.

Please circle the answer that is correct for you.

1. How often do you have a drink containing alcohol?	Never	Monthly or Less	2-5 times/month	2-3 times/week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	None	1 or 2	3 or 4	5 or 6	7 or 9	10 or more
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last 6 months have you found that you were unable to stop drinking once you started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often have during the last 6 months have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last 6 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
7. How often during the last 6 months have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8. How often during the last 6 months have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9. Have you or someone else been injured as the result of your drinking?	No	Yes, but not in the past 3 months	Yes, during the past 3 months			

10. Has a relative, friend, or a 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
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(RAPI) Rutgers Alcohol Problem Index

Different things happen to people while they are drinking alcohol or because of their alcohol drinking. Several of these things are listed below. Please indicate **how many times** during the **last 30 days** (month) each of these things happened to you **while you were drinking alcohol** or **because of your alcohol use**.

INSTRUCTIONS: Please respond to each of the following statements by **circling** the appropriate number for each statement.

How many times has this happen to you because you were drinking alcohol during the last 30 days?	Never	1-2 times	3-5 times	6-10 times	More than 10 times
1. Not able to do your homework or study for a test	0	1	2	3	4
2. Got into fights with other people (friends, relatives, or strangers)	0	1	2	3	4
3. Missed out on other things because you spent too much money on alcohol	0	1	2	3	4
4. Went to work or school drunk	0	1	2	3	4
5. Caused shame or embarrassment to someone	0	1	2	3	4
6. Neglected your responsibilities	0	1	2	3	4
7. Relatives avoided you	0	1	2	3	4
8. Felt that you needed <u>more</u> alcohol than you used to in order to get the same effect	0	1	2	3	4
9. Tried to control you're drinking (tried to drink only at certain times of the day or in certain places, that is, tried to change your pattern of drinking)	0	1	2	3	4
10. Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking	0	1	2	3	4

11. Noticed a change in your personality	0	1	2	3	4
12. Felt that you had a problem with alcohol	0	1	2	3	4
13. Missed a day (or part of a day) of school or work	0	1	2	3	4
14. Wanted to stop drinking but couldn't	0	1	2	3	4
15. Suddenly found yourself in a place that you could not remember getting to	0	1	2	3	4
16. Passed out or fainted suddenly	0	1	2	3	4
17. Had a fight, argument, or bad feelings with a friend	0	1	2	3	4
How many times has this happen to you because you were drinking alcohol during the last 30 days?	Never	1-2 times	3-5 times	6-10 times	More than 10 times
18. Had a fight, argument, or bad feelings with a family member	0	1	2	3	4
19. Kept drinking when you promised yourself not to	0	1	2	3	4
20. Felt you were going crazy	0	1	2	3	4
21. Had a bad time	0	1	2	3	4
22. Felt physically or psychologically dependent on alcohol	0	1	2	3	4
23. Was told by a friend, neighbor, or relative to stop or cut down on drinking	0	1	2	3	4

(DDQ) Daily Drinking Questionnaire

For the past month, please fill in a number for each day of the week indicating the typical number of drinks you usually consume on that day, and a number for the typical number of hours you usually drink on that day.

For example: If you usually go out on Saturdays, fill in how many drinks do you typically have, and over how many hours do you typically consume these drinks. (Please be sure to fill out the information regarding your weight, height, and gender.)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Typical Number of Drinks							
Typical Number of Hours							

(BIDR) The Balanced Inventory of Desirable Responding

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6
Not True Somewhat True Very True

- _____ 1. My first impressions of people usually turn out to be right.
- _____ 2. It would be hard for me to break any of my bad habits.
- _____ 3. I don't care to know what other people really think of me.
- _____ 4. I have not always been honest with myself
- _____ 5. I always know why I like things.
- _____ 6. When my emotions are aroused, it biases my thinking.
- _____ 7. Once I've made up my mind, other people can seldom change my opinion.
- _____ 8. I am not a safe driver when I exceed the speed limit.
- _____ 9. I am fully in control of my own fate.
- _____ 10. It's hard for me to shut off a disturbing thought.
- _____ 11. I never regret my decisions.
- _____ 12. I sometimes lose out on things because I can't make up my mind soon enough.
- _____ 13. The reason I vote is because my vote can make a difference.
- _____ 14. My parents were not always fair when they punished me.
- _____ 15. I am a completely rational person.
- _____ 16. I rarely appreciate criticism.
- _____ 17. I am very confident of my judgments.
- _____ 18. I have sometimes doubted my ability as a lover.
- _____ 19. It's all right with me if some people happen to dislike me.
- _____ 20. I don't always know the reasons why I do the things I do.
- _____ 21. I sometimes tell lies if I have to.
- _____ 22. I never cover up my mistakes.
- _____ 23. There have been occasions when I have taken advantage of someone.
- _____ 24. I never swear.
- _____ 25. I sometimes try to get even rather than forgive and forget.
- _____ 26. I always obey laws, even if I'm unlikely to get caught.

0 -----1 -----2 -----3 -----4 -----5 -----6
Not True **Somewhat** **Very True**

- _____ 27. I have said something bad about a friend behind his or her back.
- _____ 28. When I hear people talking privately, I avoid listening.
- _____ 29. I have received too much change from a salesperson without telling him or her.
- _____ 30. I always declare everything at customs.
- _____ 31. When I was young I sometimes stole things.
- _____ 32. I have never dropped litter on the street
- _____ 33. I sometimes drive faster than the speed limit
- _____ 34. I never read sexy books or magazines.
- _____ 35. I have done things that I don't tell other people about.
- _____ 36. I never take things that don't belong to me.
- _____ 37. I have taken sick-leave from work or school even though I wasn't really sick.
- _____ 38. I have never damaged a library book or store merchandise without reporting it.
- _____ 39. I have some pretty awful habits.
- _____ 40. I don't gossip about other people's business.

APPENDIX C

MUNICIPAL FIREFIGHTERS MEASURES

Health Assessment

Demographics

1. What is your age?
_____ (years)
2. Are you Hispanic or Latino?
☐ Yes
☐ No
3. Which one of these groups would you say best represents your race?
☐ White
☐ Black or African American
☐ Asian
☐ Native Hawaiian or Other Pacific Islander
☐ American Indian or Alaska Native
☐ Other [specify] _____
4. Are you currently?
☐ Married
☐ Divorced
☐ Widowed
☐ Separated
☐ Never married/Single
☐ Cohabiting
☐ Other
5. What is your sex?
☐ Male
☐ Female
6. Approximately, how long have you been a firefighter?
_____ (years)
_____ (months)
7. What is your rank?
☐ Firefighter
☐ Driver
☐ Lieutenant
☐ Captain
☐ Chief
8. What is your current shift assignment?
☐ A
☐ B
☐ C
☐ Not on Shift Assignment

RAPI

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

No.	Response (Number of Times)	Never	1-2	3-5	6-10	10+
1.	<i>In the last three months, how often have you felt that you not able to do your homework or study for a test?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<i>In the last three months, how often have you got into fights, acted bad or did mean things with other people (friends, relatives, strangers)?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<i>In the last three months, how often have you missed out on other things because you spent too much money on alcohol?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<i>In the last three months, how often have you went to work or school high or drunk?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<i>In the last three months, how often have you caused shame or embarrassment to someone?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<i>In the last three months, how often have you neglected your responsibilities?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<i>In the last three months, how often have you relatives avoided you?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<i>In the last three months, how often have you felt that you needed more alcohol than you used to use in order to get the same effect?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<i>In the last three months, how often have you tried to control your drinking by trying to drink only at certain times of the day or certain places?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<i>In the last three months, how often have you had a withdrawal symptom, that is, felt sick because you stopped or cut down on drinking?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	<i>In the last three months, how often have you noticed a change in your personality?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	<i>In the last three months, how often have you felt that you had a problem with alcohol?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	<i>In the last three months, how often have you missed a day (or part of a day) of school or work?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	<i>In the last three months, how often have you tried to cut down or quit drinking?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	<i>In the last three months, how often have you suddenly found yourself in a place that you could not remember getting to?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	<i>In the last three months, how often have you passed out or fainted suddenly?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	<i>In the last three months, how often have you had a fight, argument, or bad feelings with a friend?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	<i>In the last three months, how often have you had a fight, argument, or bad feelings with a family member?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	<i>In the last three months, how often have you kept drinking when you promised yourself not to?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20.	<i>In the last three months, how often have you felt you were going crazy?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	<i>In the last three months, how often have you had a bad time?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	<i>In the last three months, how often have you felt physically or psychologically dependent on alcohol?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	<i>In the last three months, how often have you was told by a friend or neighbor to stop or cut down on drinking?</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DDQ-Modified

For each day of the week, fill in both the number of drinks consumed and the number of hours you typically drink. Please be sure to fill out the information regarding your gender, weight, and height.

1. For the past month, please fill in a number for each day of the week indicating the *typical number of **drinks*** you usually consume on that day, and the *typical number of **hours*** you usually drink on that day.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
# drinks							
# hours							

BIDR

Write a number beside each statement to indicate how much you agree with it.

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7	
Not True	Somewhat True
_____ 1. My first impressions of people usually turn out to be right.	_____ 21. I sometimes tell lies if I have to.
_____ 2. It would be hard for me to break any of my bad habits.	_____ 22. I never cover up my mistakes.
_____ 3. I don't care to know what other people really think of me.	_____ 23. There have been occasions when I have taken advantage of someone.
_____ 4. I have not always been honest with myself.	_____ 24. I never swear.
_____ 5. I always know why I like things.	_____ 25. I sometimes try to get even rather than forgive and forget.
_____ 6. When my emotions are aroused, it biases my thinking.	_____ 26. I always obey laws, even if I'm unlikely to get caught.
_____ 7. Once I've made up my mind, other people can seldom change my opinion.	_____ 27. I have said something bad about a friend behind his or her back.
_____ 8. I am not a safe driver when I exceed the speed limit.	_____ 28. When I hear people talking privately, I avoid listening.
_____ 9. I am fully in control of my own fate.	_____ 29. I have received too much change from a salesperson without telling him or her.
_____ 10. It's hard for me to shut off a disturbing thought.	_____ 30. I always declare everything at customs.
_____ 11. I never regret my decisions.	_____ 31. When I was young I sometimes stole things.
_____ 12. I sometimes lose out on things because I can't make up my mind soon enough.	_____ 32. I have never dropped litter on the street
_____ 13. The reason I vote is because my vote can make a difference.	_____ 33. I sometimes drive faster than the speed limit
_____ 14. My parents were not always fair when they punished me.	_____ 34. I never read sexy books or magazines.
_____ 15. I am a completely rational person.	_____ 35. I have done things that I don't tell other people about.
_____ 16. I rarely appreciate criticism.	_____ 36. I never take things that don't belong to me.
_____ 17. I am very confident of my judgments.	_____ 37. I have taken sick-leave from work or school even though I wasn't really sick.
_____ 18. I have sometimes doubted my ability as a lover.	_____ 38. I have never damaged a library book or store merchandise without reporting it.
_____ 19. It's all right with me if some people happen to dislike me.	_____ 39. I have some pretty awful habits.
_____ 20. I don't always know the reasons why I do the things I do.	_____ 40. I don't gossip about other people's business.

VITA

Kristen Eileen Hernandez graduated from Bel Air High School in 2007 and graduated with a Bachelors of Science degree in Health Promotion with a minor in Community Health from UTEP in spring 2011. She entered the Master of Public Health program in the fall of 2011.

She has always has had an interest in community health. As she progressed in her studies she has found a greater interest in health disparities research. After much mentorship during her undergraduate work from Dr. Holly Mata and being part of an interdisciplinary research group through the direction of Dr. Joe Tomaka she has been able to serve in a variety of capacities. This has included being a project research assistant, student intern and a community health educator. She has been able to aid in the coordination and collaboration with different community partners such as the Boys and Girls Club of El Paso, American Red Cross, International AIDS Empowerment, Centro de Salud Familiar La Fe, and the Housing Authority of the City of El Paso. Kristen has participated in a number of mentored internships including one in Chile through the Minority Health International Research Center in Summer 2011.

Kristen has presented work regionally and nationally with the Society of Public Health Education and the Society of Behavioral Medicine. She appreciates the wide range of experiences she's had at UTEP and the opportunity to collaborate with so many community partners to better enhance public health practice and community health.