San Jose State University
SJSU ScholarWorks

Master's Theses | Master's Theses and Graduate Research

2012

Consequences in Alcohol Use Portrayals on Emerging Adult Attitudes

Stephanie Jwo
San Jose State University

Follow this and additional works at: http://scholarworks.sjsu.edu/etd_theses

Recommended Citation
Jwo, Stephanie, "Consequences in Alcohol Use Portrayals on Emerging Adult Attitudes" (2012). *Master's Theses.* Paper 4139.

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

CONSEQUENCES IN ALCOHOL USE PORTRAYALS ON EMERGING ADULT ATTITUDES

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Stephanie Jwo

May 2012

©2012

Stephanie Jwo

ALL RIGHTS RESERVED

The Designated Thesis Committee Approves the Thesis Titled

CONSEQUENCES IN ALCOHOL USE PORTRAYALS ON

EMERGING ADULT ATTITUDES

by

Stephanie Jwo

APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

SAN JOSÉ STATE UNIVERSITY

May 2012

Dr. Arlene Asuncion	Department of Psychology
Dr. Mark Van Selst	Department of Psychology
Dr. Mildred Alvarez	Department of Psychology

ABSTRACT

CONSEQUENCES IN ALCOHOL USE PORTRAYALS ON

EMERGING ADULT ATTITUDES

by Stephanie Jwo

Many factors may contribute to forming attitudes towards alcohol, such as peer groups, family history, and media influences. This study focused on the inclusion of consequences in portrayals of alcohol use and the possible influences on emerging adult attitudes towards alcohol. The emerging adult population represents a relatively newly defined developmental stage that roughly spans the ages of 18 to 25 years. Emerging adult attitudes towards alcohol were expected to vary positively or negatively after reading a vignette of alcohol use that included a positive consequence, a negative consequence, or no consequence. Emerging adult attitudes did not vary by the alcohol-use consequences presented, and no difference was found between male and female attitudes towards alcohol. The null results may be due to a lack of control during the online survey procedure that led to ineffective exposure of the experimental stimuli. However, a small effect size of the vignette medium may also play a role in the null results, as no significant results were found when restricting analyses to participants with adequate stimulus exposure.

ACKNOWLEDGEMENTS

I would like to dedicate this thesis to my family and friends who stayed with me throughout the entire process. Without their love, support, and gentle chiding, I am certain that the final product would be much worse for the wear.

Many thanks go out to my committee members Dr. Arlene Asuncion, Dr. Mark Van Selst, and Dr. Mildred Alvarez, whose engaging instruction during classes and patience during my long "writing" disappearances were exactly what I needed in my early twenties. The faculty of the San Jose State University Psychology department is made up of amazing educators and I am grateful for their tutelage through my undergraduate and graduate studies. In particular, Dr. Nancy Eldred provided excellent mentorship and I am truly lucky to have been guided by her iron-clad hand.

I would like to acknowledge Dr. Alan Reifman for his research into the emerging adult population and for developing the Views of Life survey and to thank him for allowing me to use it in my thesis project.

Finally, I would like to thank Knowledge Networks Inc. for allowing me to collect data for this project through the nationally representative KnowledgePanel®. The real-world experience I have gained in working with the company is an invaluable application of the skills I developed in school and I am grateful for the opportunity.

Table of Contents

SECTION PAGE

Introduction 1

Hypothesis 7

Method 9

Design 9

Participants 10

Measures 12

Setting 12

Vignettes 12

Francis Scale of Attitude Toward Alcohol 14

Procedure 15

Results 16

Main Analyses 16

Main effect of condition 17

Main effect of gender 18

Interaction 18

Exploratory Analyses 18

Self-perception of adulthood status and attitude toward alcohol 18

Age and attitude toward alcohol 19

Table of Contents continued

SECTION PAGE

Exploratory Analyses continued 19

Self-perception of adulthood and age 19

Self-perception of adulthood and gender 19

Factorial analysis of drinker status and condition on

mean Francis Score 21

Discussion 21

Conclusion 28

References 29

Appendices 31

Appendix A: Vignettes 31

Appendix B: Francis Scale of Attitude Toward Alcohol 34

Appendix C: Demographic Questions 36

Appendix D: IDEA Instrument/Views of Life Survey 38

Appendix E: Memory Recall/Manipulation Check Questions 40

Appendix F: Alcohol use Questions 43

Lists of Tables

TABLE PAGE

1. Summary of Sample Demographics 11

2. Summary of Means and Standard Deviations of Independent Variables ...17

3. ANOVA Summary Table of Main Analysis.....17

Lists of Figures

FIGURE PAGE

1. Percentage of males and females within each response category of "Do you feel you have reached adulthood" item 20

Introduction

Alcohol-use research covers such various domains as effectiveness of public service announcements and the influence of advertisements on behavior (Bernthal, Rose, & Kaufman, 2006; Collins, Ellickson, McCaffrey, & Hambarsoomians, 2007). A large area of alcohol research is about attitudes and attitude formation. Many factors may contribute to the development of an individual's attitude towards alcohol, such as televised alcohol use (Kotch, Coulter & Lipsitz, 1986), community alcohol usage (DeHaan & Thompson, 2003), and parents' drinking habits (Ingle & Furnham, 1996). The focus of this experiment is the attitudes towards alcohol of emerging adults exclusively.

Emerging adulthood is a recently proposed developmental stage that occurs after adolescence but before adulthood. It is experienced, generally, by people between the ages of 18 and 25 years from industrialized countries (Arnett, 2000). Emerging adulthood is distinct from the adolescent and adulthood developmental periods with features marking the period as a time of: identity explorations, instability, self-focus, feeling in-between, and possibilities. Research in this field is still relatively new and one area to concentrate on is the attitudes of emerging adults.

The transition to adulthood is conceptualized by emerging adults as somewhat intangible and marked by more psychological development than physical development (Arnett, 1997), unlike the previous stage of adolescence which is prominently marked by the onset of puberty. Not all young adults transition through adolescence to emerging

adulthood and onto adulthood at the same rate, thus the emerging adult population is hard to conceptualize. The emerging adult age range falls across two of Erikson's stages of psychosocial development: the latter part of Fidelity (Identity vs Role Confusion) and the early part of Love (Intimacy vs Isolation). Erikson's stages deal with internal conflicts that one may encounter at various times during one's lifetime, however the stages do not address the fundamental aspects between what separates an adolescent from an adult.

Schaie (1977) proposed an alternative stage theory of the transition to adulthood focusing on cognitive development. Adolescence is described as a *period of acquisition* during which cognitive development is focused on obtaining knowledge and skills that are then put to use during the *achieving stage* of adulthood. Emerging adults would fall between the period of acquisition and achieving stage in that they have the knowledge but have not quite figured out what to do with it. This transition from adolescence to adulthood also converts the belief in absolute truths to a relativism in which individuals test and embrace self-chosen beliefs and values.

One difference that may distinguish emerging adults as a separate developmental group is the perception of adulthood criteria (Nelson & Barry, 2005). Both self-perceived adults and self-perceived emerging adults hold similar views on the criteria that must be met in order to achieve adulthood status, such as independence, interdependence, role transitions, norm compliance, biological transitions, and family capacities. Emerging adults and adults differ only in the number of criteria they perceive themselves

to have met. For example, adults perceive themselves to have achieved such adulthood criteria as independence and family capacities at much higher rates than emerging adults.

While adolescents transition quickly to the legally defined status of adulthood, they are not always immediately independent and self-sufficient. Rather, young adults in industrialized countries are transitioning out of adolescence into an assumed state of adulthood but without the burden of many responsibilities and without developed self-care abilities. This extended transition period between adolescence and adulthood tends to be a period of self-focus and identity explorations and therefore can be a profound time for attitude formation (Arnett, 2000).

Attitudes towards alcohol have been studied in many groups such as adolescents, adults, college students, and children (DeHaan & Thompson, 2003; Ingle & Furnham, 1996; Kotch, Coulter, & Lipsitz, 1986). Research comparing the attitudes towards alcohol of adolescents and adults in a high consumption community (DeHaan & Thompson, 2003) has shown that adolescents (14-17 yrs) have the least restrictive attitudes towards alcohol. Adults (18+ yrs) *with children* have the most restrictive attitudes towards alcohol. However, adults aged 18-24 years old *without* children have attitudes towards alcohol similar to adolescents, showing that not all individuals aged 18+ years have the same attitudes towards alcohol, even when legally considered to be adults.

Self-perceived adults have reported engaging in fewer risky behaviors than self-perceived emerging adults. Arnett (2000) hypothesized that the high rates of risky behaviors seen during the emerging adult period may be due to the Identity Explorations

feature of this period. This notion is supported in that self-perceived adults in a college student sample reported having resolved identity issues significantly more often than self-perceived emerging adults (Nelson & Barry, 2005).

Emerging adults, who engage in the higher amounts of risky behavior than any other age group (Nelson & Barry, 2005), deserve empirical scrutiny as a unique group; distinct from other developmental periods such as adolescence and adulthood as well as separate from demographic populations such as college students. Previous research has examined various aspects of the relationship between college students and alcohol, including alcohol use and attitudes towards alcohol. The college environment fosters numerous opportunities to experiment with alcohol as well as to observe alcohol being consumed. College students have also been shown to have more liberal attitudes towards alcohol than the general community (Kilty, 1978). The emerging adult and college student populations seem to be similar, as they do overlap in age range. However, one must note that, whereas college is an environmental influence on the demographic status of a certain group of students, emerging adulthood is a period of developmental change for an entire age cohort.

When examining attitudes towards alcohol in college students, these attitudes, in particular enjoyment of alcohol and drinking to relax, have been shown to be positively correlated with TV viewing duration (Ingle & Furnham, 1996). Though no research has yet been done with an emerging adult population, research on the effects of television

viewing on attitudes towards alcohol has been conducted with younger populations (Kotch et al, 1986).

Kotch et al (1986) researched 5th and 6th grade children's attitudes towards alcohol after they viewed a television program in which the main character drank alcohol in social context with no negative consequences and compared those attitudes to those of a control group that viewed a television program with no alcohol consumption. No significant differences were found between the experimental and control conditions, though it can be argued that children have not yet fully formed their attitudes towards alcohol.

In contrast, Bahk (1997) examined attitudes towards alcohol in college students using a movie medium to show a portrayal of alcohol use with the inclusion of a negative consequence or no consequence, then compared the student's attitudes to those who watched a video with no alcohol use. The negative consequence portrayal elicited the most unfavorable attitudes towards alcohol compared to the control condition and the condition with no consequence to the alcohol use.

Bernthal, Rose, and Kaufman (2006) posit that the effectiveness of public service announcements (PSAs) meant to deter a behavior such as drinking and drinking may be impeded by conflicting messages in societal norms. For example, college-themed movies showing positive consequences of binge drinking, such as popularity and sexual activity, are at odds with the injunctive norm of how society *should* behave and the expected negative consequences to health and academic career. Commercials that

promote alcohol products and drinking are shown on television as well as PSAs denouncing drinking and driving.

This study will examine how the inclusion of consequences in portrayals of alcohol use may affect the attitudes towards alcohol of emerging adults by expanding on the method used in the Bahk (1997) study to include positive consequences in addition to negative consequences and no consequence with the portrayal of alcohol use. The aim of this study is to further examine how the inclusion of consequences into alcohol use portrayals may influence attitudes towards alcohol of emerging adults specifically, rather than college students, as such research has traditionally focused upon.

Attitudes towards alcohol will also be examined for differences by gender. Males have been shown to have more positive attitudes towards alcohol than females (Kauffman, Silver & Poulin, 1997), however when examining a college student population specifically, the gender differences were no longer significant (Kilty, 1978). Though emerging adults tend to have less restrictive attitudes towards alcohol, no research has looked at whether there are gender differences within emerging adults' attitudes toward alcohol.

Research showing that the emerging adulthood age group is separate and distinct from other developmental periods is still lacking in areas related to the attitudes and perceptions of the emerging adult population. This study can contribute to the body of research that illustrates how emerging adulthood is unique from other developmental

periods. The results of this study may also impact how alcohol is portrayed in media, dependent upon the results and its reception.

Hypothesis

It is hypothesized that the addition of positive versus negative consequences to the positive alcohol use portrayal will have differential effects on the attitudes towards alcohol of emerging adults. The portrayals of alcohol use that include consequences will also have different effects on the emerging adults' attitudes compared to the portrayal of alcohol use that does not include a consequence at all.

Previous research with college student samples has shown that media can moderate attitudes towards alcohol. For example, Ingle and Furnham (1996) demonstrated that attitudes towards alcohol and TV viewing habits are not independent from each other. The age range for emerging adulthood (approximately 18-25 years) encompasses the legal drinking age of 21 years and thus emerging adults are able to obtain alcohol legally for the first time. During this period, emerging adults may solidify their attitudes towards alcohol through personal use and proximal observations.

Emerging adults have attitudes towards risky behaviors, including alcohol use, that are more similar to adolescents' attitudes in that they are more lenient and accepting of risky behaviors, than are adults' attitudes (DeHaan & Thompson, 2003). Emerging adults are still in a period of self-identity exploration that includes attitude formation (Arnett, 2000) and thus emerging adults' attitudes towards alcohol may be influenced through observations of alcohol use. The addition of different types of consequences in

connection to portrayals of alcohol use may influence the emerging adults' attitudes towards alcohol in a positive or negative direction based on the type of consequence. Specifically, a portrayal of alcohol use that includes positive consequences may influence an emerging adult's attitude towards alcohol positively and negative consequences may influence that attitude negatively.

The effects of no consequences in the portrayal of alcohol use can act as a mid-point to compare the effects of the inclusion of positive consequences or negative consequences to the positive portrayal by itself. The emerging adults presented with the portrayal of alcohol use that include positive consequences are predicted to yield positive attitudes towards alcohol. The emerging adults presented predicted with the portrayal of alcohol use that has negative consequences are predicted to yield the most negative attitudes towards alcohol.

The effects of the addition of consequences to the alcohol-use portrayal are also hypothesized to vary by gender in ways that reinforce what has been found in previous research (Kilty, 1978). Specifically, because previous research has found males to generally have more positive attitudes towards alcohol, males presented with the portrayal of alcohol use that includes positive consequences will have a more positive attitude than the females presented with the same portrayal of alcohol use. Conversely, when presented with the portrayal of alcohol use that includes negative consequences, females will have a more negative attitude towards alcohol than males in the same group. Males' and females' attitudes are not expected to differ in a no consequence condition.

Method

Design

This experiment utilized a 3X2 factorial design. The main independent variable of interest was the consequence of alcohol use and was manipulated through three experimental conditions: no consequence, positive consequence, or negative consequence. Drawing the vignette from a story-based visual medium (such as television shows and movies) simplifies the portrayal of alcohol into a written story that allows for precise experimental manipulation. The positive and negative consequence conditions used the same portrayal of alcohol use vignette as in the no consequence condition, except additional information depicting either a positive or negative was included in the vignette (see Appendix A).

The positive consequence vignette included short-term positive consequences to the alcohol use portrayal such as having a good time, popularity, and having sexual activity, and a long-term consequence of a romantic relationship. The negative consequence vignette included short-term negative consequences to the alcohol-use portrayal such as loss of memory and public humiliation resulting in mild depression, and a long-term consequence of poor academic performance.

The second independent variable of interest was the participants' gender. This variable has two levels: male and female.

The participants' attitudes towards alcohol as measured by the Francis Scale of Attitude Toward Alcohol (2005) was the dependent factor of interest (see Appendix B).

Participants

Using GPower 3.0 (Faul, Erdfelder, Lang, & Buchner, 2007), an ideal sample size of 159 people (53 per condition) was calculated for the main analysis using Cohen's (1992) criteria for power analysis. The sample was calculated for a one-way *F*-test with 3 conditions, power of .8, and an estimated medium (.25) effect size.

The sample of this study is made up of KnowledgePanel® panelists who take surveys online. Panelists are recruited to join the KnowledgePanel® using a probability-based address sampling frame that is representative of 97% of the U.S. population (Pineau & Dennis, 2004). The address-based sampling method captures cellphone only households that random-digit dialing techniques would miss. KnowledgePanel® recruitment also accounts for non-internet households in the sampling frame by providing laptops and internet connection upon joining the panel.

A random selection of 869 panelists aged 18 to 25 years received email invitations to participate in this project. By virtue of being a part of KnowledgePanel®, members consent to take surveys. Panelists can choose not to respond to surveys and can also break off or discontinue the survey at any time.

A 43% response rate yielded 376 completed interviews. Table 1 displays the demographic break down of the sample by gender, age, ethnicity and adulthood status. Males made up just over half of the sample (n=193). The participants' ages ranged from 18 to 25 years (M=21.64, SD=2.17). The sample of participants consisted of a mixture of

Whites (74.2%), Blacks (10.4%), Asians (2.9%), Hispanics (14.6%), Pacific Islanders (.8%), and some of mixed race (4.5%). Just over half of the participants self-identified themselves as emerging adults by answering "In some respects yes, in respects ways no" to the question "Do you feel you have reached adulthood?" (*n*=190).

Table 1
Summary of sample demographics

	N	***% or M(SD)***
Gender		
Male	193	51.3%
Female	183	48.7%
Age (18 to 25 years)	--	21.64 (2.17)
Ethnicity		
White	250	66.5%
Black	39	10.4%
Asian	11	2.9%
Hispanic	55	14.6%
Pacific Islanders	3	.8%
Native Americans	1	.3%
Other/Mixed Race	17	4.5%
Self-identified emerging adults	190	50.5%

Note. N=376

Of the 376 participants in this study, 50.5% self-identified themselves as emerging adults (*n*=190). Sixty-four participants indicated that they have children, 48 of which had self-identified themselves as adults (75%). Approximately 50.8% of the participants reported still living in their parents' household and 48.9% of the participants reported being financially dependent upon their parents.

Measures

Setting. This experiment was conducted using online surveys. The participants read the vignette and filled out the survey online at their leisure on their own computers.

Vignettes. The written vignettes were adapted from the 1998 movie "Can't Hardly Wait." The movie depicts a party held the evening after a high school graduation and follows multiple converging storylines of teens and their dramatic entanglements. The storyline of the vignettes drew from various situations in "Can't Hardly Wait" that the main characters found themselves in. For example, the negative consequence version of the vignette used the same negative consequence of reputation harm from alcohol use that was shown in one of the final scenes of the movie. The vignettes' readability scores were assessed using Microsoft Word and have a 5.3 Flesch-Kincaid Grade Level. The online readability calculator at Online-Utility.org assessed the vignettes to have a 6.16 Flesch-Kincaid Grade Level. The vignettes ranged between 729 and 911 words in length.

The participants read a vignette that depicted a positive portrayal of alcohol use that included a positive or negative consequence, or did not include a consequence at all and answered questions about the vignette before proceeding to the main dependent measure. The questions about the vignettes served the purpose of testing whether the participants were attending to the vignette as well as refresh the vignette content in the participants' minds before they fill out the dependent measure. The memory recall questions consisted of some that referred to general aspects of the vignette ("Who is the

main character of this story?") and others focused on details within the vignette ("What drink do both William and Mike have double-sized?").

Checking the accuracy of the participants' memory recall revealed that 70.6% of the participants answered 8 out of the 11 of the memory recall questions correctly. For 8 out of the 11 questions, at least 71.5% (and up to 90.4%) of the participants answered the question correctly. Based on the scores of the memory recall questions, the majority of participants read and recalled details within the vignettes without difficulty.

In addition to answering memory recall questions, the participants evaluated the vignettes based on how positive they felt the outcome of the story to be ("How positive was the outcome of William's night?"). The participants evaluated the vignettes on a 5-point Likert-type scale with the end points labeled "Very Bad" and "Very Good," and the midpoint labeled "Good." The scores for the positive consequence, negative consequence, and no consequence vignettes showed that the participants evaluated the positive outcomes of the three vignettes as significantly different ($F(2, 373)=55.37$, $p<.001$). The participants' mean evaluations of the three vignettes were also in the expected directions. The participants rated the outcome of the positive consequence vignette more positively than the no consequence and negative consequence vignette and the outcome of the no consequence vignette as more positive than the negative consequence vignette. Post-hoc analyses showed the participants rated the outcome of each of the three vignettes, the positive consequence vignette ($M=3.11$, $SD=1.3$), the no

consequence vignette (*M*=2.29, *SD*=1.1) and negative consequence vignette (*M*=1.55, *SD*=.95), as significantly different from the other two vignettes ($p<.05$).

Francis Scale of Attitude Towards Alcohol. For the main dependent measure, the participants reported their attitude toward alcohol on the Francis Scale of Attitude Toward Alcohol. The Francis Scale was originally shown to be a reliable measure of alcohol attitudes for both adult and adolescent populations in Europe (Francis, Fearn & Lewis, 2005). As previous research has shown emerging adults' attitude toward alcohol to be similar to those of adolescents' attitudes, the Francis scale was administered with minimal changes. A minor change was made to the text of one of the items, changing "Alcohol is responsible for an increase in football hooliganism" to "Alcohol is responsible for an increase in disruptive behavior at football games."

During pilot testing of the scale, some participants commented that the grammar of certain items seemed awkward when the word "drink" was used as a noun (ie. "Drink is the cause of many unhappy marriages."), even though the use is grammatically correct. The affected items were altered such that the word "drink" was turned into "drinking" (ie. "Drinking is the cause of many unhappy marriages).

The items of the Francis scale are scored on a 5-point Likert-type scale; the response scale was not changed from the original version. The scale points, from 1 to 5, are Strongly Agree, Agree, Uncertain, Disagree, and Strongly Disagree.

The original Francis scale rated very reliably with Cronbach's α =.89 and the modified scale used in this experiment also tested reliably (Cronbach's α =.90).

Procedure

The participants received email invitations containing a link to take the online survey. The survey path included demographic items, an alcohol-use vignette, the Views of Life Survey, a memory recall task about the vignettes, the Francis Scale of Attitude Towards Alcohol, and a short questionnaire about the participants' own alcohol use (see Appendices C, A, D, E, B, and F, respectively). Participants started the survey by answering a few demographic questions then reading one of the three alcohol portrayals (Appendices C & A). The participants read instructions on screen asking them to pay close attention while reading the vignette as they were to answer questions about the story later in the survey.

After reading one of the three alcohol portrayals (Appendix A), the participants responded to the Views of Life Survey (Appendix D; Reifman, Arnett, & Colwell, 2007). The contents of the survey are not directly related to the purpose of the current study, however the use of non-relevant tasks was meant to distract the participants from being too sensitized to the purpose of the study and prevent any social desirability issues.

Participants then answered memory recall questions about the previously read vignette (Appendix E). Some straightforward recall questions about the vignette were included as manipulation checks to make sure the participant was paying attention and absorbing the details of the vignette. Other questions dealt with the participant's overall impression of the main character as well as how believable the vignette was. This

memory recall task primed the participants to think of the alcohol portrayal without priming any suspicions as to the nature of the study.

After the memory recall task, the participants completed the Francis Scale of Attitude Toward Alcohol (Appendix B; Francis, Fearn & Lewis, 2005) as a measure of the effect of consequences in alcohol-use portrayals on the participants' attitude towards alcohol. Lastly, the participants answered a few questions about their own drinking habits.

At the end of the online survey, the participants read debriefing text explaining the true nature of the study and thanking them for their participation. For participating in this study, the KnowledgePanel® members received 1,000 points (equivalent to $1).

Results

Main Analyses

The main analyses did not include all participants of this study. The sample for the main analyses was restricted to include only participants who answered "In some respects yes, in some respects no" to the demographic item "Do you feel you have reached adulthood?" (*N*=190). Previous research has used this method of identifying emerging adults through their own perception of self in relation to adulthood (Nelson & Barry, 2005). Only participants who answered "In some respects yes, in some respects no" were flagged as emerging adults for analysis as the very nature of emerging adulthood is transition, therefore participants who clearly indicated their non-adult status were not included as emerging adults.

After removing three participants who skipped the entirety of the Francis Scale, 187 participants were included in the main analyses. Tables 2 and 3 summarize the results of the main analyses.

Table 2. *Summary of Means and Standard Deviations of Independent Variables*

Mean Francis Scale Score		*n*	*M(SD)*
Consequence Condition			
	No Consequence	66	2.71 (.63)
	Positive Consequence	63	2.69 (.7)
	Negative Consequence	58	2.6 (.6)
Gender			
	Male	110	2.66 (.61)
	Female	77	2.68 (.7)

Note. *N*=187 for cases included in main analysis

Table 3. *ANOVA Summary Table of Main Analysis*

	Sum of Squares	*df*	*Mean Square*	*F*	*p*	*partial eta-squared*
Condition	.53	2	.26	.63	.53	.007
Gender	.02	1	.02	.05	.83	>.001
Condition*Gender	.28	2	.14	.34	.71	.004

Note. *N*=187 for cases included in main analysis

Main effect of condition. The Emerging Adults' attitude toward alcohol did not vary significantly across conditions ($F(2, 181)=.63$, $p=.53$). Post-hoc analyses also did not reveal any significant difference in the mean attitude toward alcohol between the no consequence condition ($M=2.71$, $SD=.63$) and the positive consequence ($M=2.69$, $SD=.7$) and negative consequence conditions ($M=2.6$, $SD=.6$). Restricting the analyses to only participants that answered 8 or more of the memory recall questions

correctly did not reveal any significant results between the experimental conditions ($F(2, 120)=.41$, $p=.67$).

Main effect of gender. Males' ($M=2.66$, $SD=.61$) and females' ($M=2.68$, $SD=.7$) mean attitude toward alcohol scores did not differ significantly from each other ($F(1, 181)=.05$, $p=.83$).

Interaction effect. The interaction effect between participants' gender and condition was also not significant ($F(2, 181)=.34$, $p=.71$). Females' attitude toward alcohol measured lower in the negative consequence condition ($M=2.55$, $SD=.58$) than females in the no consequence ($M=2.74$, $SD=.74$) and positive consequence ($M=2.75$, $SE=.72$) conditions however the difference was not significant. Males' attitude towards alcohol remained consistent across the no consequence ($M=2.7$, $SD=.6$), negative consequence ($M=2.63$, $SD=.6$), and positive consequence ($M=2.63$, $SD=.7$) conditions.

Exploratory Analyses

Self-perception of adulthood status and attitude toward alcohol. An exploratory analysis was conducted to examine the relationship between self-perception of adulthood status and attitude toward alcohol. No significant difference was found between emerging adults and adults on mean Francis score ($F(1, 348)=.001$, $p=.99$).

Previous research has shown that the attitude toward alcohol of adults without children is similar to adolescents, however no significant difference was found between the attitudes toward alcohol of emerging adults without children ($M=2.68$, $SD=.63$) and the adults in the sample ($M=2.67$, $SD=.7$; $F(1, 334)=.005$, $p=.95$). Also, no difference

was found between the attitudes of the emerging adults with (M=2.61, SD=.8) and without children (M=2.68, SD=.63; $F(1, 334)$=.132, p=.72). That the attitudes toward alcohol of the adults (M=2.67, SD=.7) and emerging adults (M=2.67, SD=.63) in this sample are very closely matched is a point of interest as it conflicts with previous research on emerging adults' attitudes.

Age and attitude toward alcohol. Similar to the previous analysis on the participants' adulthood status and attitude toward alcohol, another exploratory analysis revealed no significant relationship between the participants' age and attitude toward alcohol (r=.03, p=.62).

Self-perception of adulthood and age. A third exploratory analysis revealed a significant age difference between self-identified adults and emerging adults ($t(355)$=7.38, p<.001). Participants that identified themselves as adults (M=22.54, SD=1.95) were older than the participants who identified themselves as emerging adults (M=20.96, SD=2.08).

Self-perception of adulthood and gender. Another exploratory analysis was conducted to examine the relationship between self-perception of adulthood status and gender. A significant relationship was found between participants' gender and their self-perception of adulthood status (r=-.15, p=.004). The gender distribution of the participants who answered "In some respects yes, in some respects no" to the adulthood item differs from the approximate 50-50 gender split of the overall sample and from the groups that answered "Yes" and "No" to the adulthood question ($\chi^2(2)$=9.4, p=.009).

Of the participants that indicated “No” to the question “Do you feel you have reached adulthood?” (*n*=18), 38.9% were male and 61.1% were female. Males made up 58.9% of the participants that answered “In some respects yes, in some respects no” to the adulthood question (*n*=112) and females made up the remaining 41.1% (n=78). Of the participants who answered “Yes” to the adulthood question (*n*=167), 43.7% were male and 56.3% were female. Figure1 shows the percentages of males and females within each response category (“Yes,” “No,” and “In some respects yes, in some respects no”) of the adulthood question.

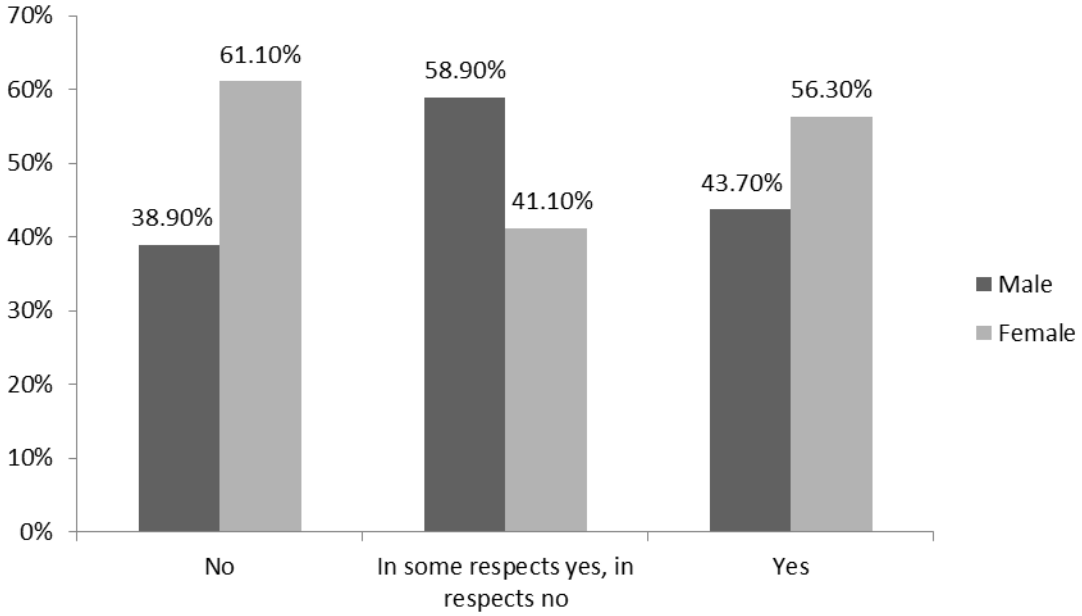

Figure 1. Percentage of males and females within each response category of “Do you feel you have reached adulthood” item.

Factorial analysis of drinker status and condition on mean Francis Score. A final exploratory analysis was conducted to examine the possible differences in attitude toward alcohol when examining the participants' drinking status and experimental condition. The binary item "Do you drink alcohol" was used as the drinker status flag. A significant effect of drinker status was found on mean Francis score ($F(1,362)=51.83$, $p<.001$). Drinkers reported a more positive attitude toward alcohol ($M=2.86$, $SD=.61$) than non-drinkers ($M=2.38$, $SD=.65$). No significant effect of condition or interaction between drinker status and condition was found.

When restricting this analysis to participants who answered 8 or more of the memory recall items correctly, drinkers again reported a significantly more positive attitude toward alcohol ($M=2.88$, $SD=.53$) than non-drinkers ($M=2.26$, $SD=.64$; $t(121)=5.77$, $p<.001$). However, there was no significant difference in attitude towards alcohol when examining participant's drinking status by experimental condition, nor a significant interaction between condition and participant drinking status after restricting the sample to only participants who answered 8 or more of the memory recall items correctly. Though no causal inferences can be concluded from this result, the significant relationship between drinker status and attitude toward alcohol is still worthy of note.

Discussion

The purpose of this study was to examine the factors that may influence emerging adults' attitude toward alcohol. The main hypothesis of this study, that emerging adults' attitudes toward alcohol vary by the different type of consequences included in alcohol-

use portrayals, was not supported. Analysis of the data did not yield any significant differences in the emerging adults' attitude toward alcohol by consequence condition nor any significant differences in attitude by gender. The interaction between consequence condition and gender did not yield any significant differences in the emerging adults' attitude toward alcohol as well.

Despite previous research indicating gender differences in alcohol attitudes (Kauffman, Silver & Poulin, 1997), no gender differences were found in the attitudes toward alcohol of the emerging adults in this study. Kilty (1978) found that previously significant gender differences in attitudes toward alcohol were no longer significant when studying a college student population. Compared to the community and prison population samples of the Kilty study, a general population sample of emerging adults reveals no differences in attitude toward alcohol by gender.

The overall effect of the three consequence conditions was in the expected directions. The attitudes of the participants in the negative consequence condition trended lower than the participants in the positive and no consequence conditions, but the differences were not significant. The expected difference between the positive consequence and negative consequence groups' attitudes toward alcohol was also not found.

The lack of a significant difference in attitude toward alcohol between the no consequence and positive consequence group might be attributed to the respective

vignettes. All of the vignettes portrayed a positive use of alcohol however only the positive consequence and negative consequence versions of the vignette included additional information. The positive consequence vignette had the same text as the no consequence vignette, with additional text portraying the positive consequence, thus, the tone of both vignettes was positive in nature. The participants evaluated the outcome of the positive consequence vignette as significantly more positive than that of the no consequence vignette, but the participants' attitudes toward alcohol did not vary between the two conditions. The participants in the no consequence and positive consequence conditions both made a positive evaluation of the vignette, regardless of the added consequences or lack thereof, and therefore the net effect on the participants' attitude toward alcohol was similar for both groups.

Even harder to explain is the lack of a significant difference in participants' attitude toward alcohol between the negative consequence condition and the no consequence and positive consequence conditions. The participants evaluated the outcome of the negative consequence vignette as less positive than both the no consequence and positive consequence vignettes. Despite a significantly lower evaluation, the negative consequence did not elicit a more negative attitude toward alcohol compared to the attitudes of the participants in the other conditions. In sum, it can be said that the participants who read the negative consequence vignettes tended to have more negative attitudes toward alcohol than the participants who read a vignette

without a negative consequence, but the effect of the negative alcohol-use consequence on attitude toward alcohol was minimal.

When this study was pilot tested using a paper survey and college student participants, the participants in the negative consequence condition reported a significantly more negative attitude toward alcohol compared to the no consequence condition. A possible consequence of using an online medium to collect data is the loss of experimental control. During pilot testing, the primary researcher and the college student participants were together in the same room and the participants are guided through each step of the experimental protocol by the researcher. The participants of this study completed the online survey at their leisure in their own settings and were able to stop and return to the survey at any time.

A closer examination into the amount of time spent on each screen of the survey reveals possible explanations for the lack of significant results in this study. Fifteen to 20% of the participants in each of the three conditions registered a length of time on the vignette display screens that was less than half of the median time spent by the total group. For example, in the positive consequence group, the median length of time spent on the vignette screens was 2.7 minutes; However 19.4% of those participants spent 1.37 minutes or less on the screens and 9% recorded less than half a minute on the screens. That is to say, a large portion of the participants quickly skimmed or outright skipped the display screens without reading the vignette. After eliminating those participants who spent less than half the median reading time on the vignettes screens, no significant

differences existed in attitudes toward alcohol between the participants in each condition. It is unclear whether requiring the participants to spend a certain amount of time on the vignette screens before moving forward in the survey would produce the desired effects.

Conducting this study using an online survey afforded access to a nationally representative sample and automated data collection however the loss of experimental control may have handicapped the effects of the experimental manipulations. One cannot be sure that each participant in this study had experienced the survey in the same way and read the vignettes with the same degree of attention. Any future online survey studies using vignettes should be aware of the different participant experience this type of medium affords and take appropriate measures to make sure the experimental manipulation is not lost in translation.

A natural extension of this study would be to examine how neutral alcohol-use portrayals may affect emerging adult attitudes toward alcohol when the included consequences vary positively and negatively, rather than the positive alcohol-use portrayals used in this study. Furthermore, studying the differences in attitudes toward alcohol when one is exposed to alcohol-use portrayals that vary positively and negatively in overall tone, rather than just included consequences, would also be of interest.

One of the exploratory analyses revealed a significant difference in attitudes toward alcohol between participants who indicated they did or did not drink alcohol. Those participants who indicated they drank alcohol reported a significantly more positive attitude toward alcohol than non-drinkers; however, this difference was not

accounted for in this study's original hypothesis. Future studies could include drinker-status as a variable of interest, as drinkers clearly showed a different attitude toward alcohol than non-drinkers, or as a covariate to account for the difference in attitude between the two groups.

Another of the exploratory analyses conducted revealed a significant relationship between gender and self-perceived adulthood status. Previous research has revealed that emerging adults tend to answer "in some respects yes, in some respects no" to the question of whether the respondents felt they had reached adulthood (Nelson & Barry, 2005). In this study, the participants who answered "in some respects yes, in some respects no" to the self-perception of adulthood question were mostly male, whereas nearly three-quarters of the participants that answered "no" and a majority of the group that answered "yes" were females. This finding is the opposite of what Nelson and Barry (2005) found where a larger proportion of females identified themselves as emerging adults. However, as the Nelson and Barry sample was already skewed heavily toward females, a direct comparison of the gender proportions is not appropriate. Further research should focus on possible gender differences in the transition to adulthood, as the results of this study suggest that females are more certain of whether they have reached adulthood than males.

It is important to note some strengths and limitations of the current study. The KnowledgePanel® sample showed a good cooperation rate, resulting in very little missing data. The panelist sample was also ethnically diverse due to the nationally

representative nature of the panel composition. For example, the January 2011 Current Population Study (CPS) reports the U.S. population's ethnic breakdown of 18-25 year olds as 62.1% White, 12.1% Black, 4.7% Asian, 17.4% Hispanic, 0.4% Pacific Islander, 1.1% Native American, and 2.1% Mixed/Other ethnicity. Compared to the CPS report, the ethnic breakdown of the participants in this study resembles the U.S. population of 18-25 year olds.

The emerging adults in this study were identified using a previously used method (Nelson & Barry, 2005) and showed that approximately half of the United States' 18 to 25 year old population perceives themselves to be an emerging adult.

Despite previous research showing emerging adults' attitudes as more similar to adolescents' attitudes toward alcohol than to adults' attitudes (DeHaan & Thompson, 2003), this study's sample of emerging adults and adults did not show differences in their attitudes toward alcohol. Even though some of the participants in this study identified themselves as having reached adulthood, their attitudes toward alcohol were no different than those participants who identified themselves as emerging adults. This finding may indicate the need for a better method to identify emerging adults rather than relying on self-identification. It is important to note that future research should be careful in identifying emerging adult techniques to ensure the sample in question accurately captures the unique emerging adult population in full.

Conclusion

The result of this research not only contributes to the body of knowledge that helps identify the unique emerging adult population as independent from adolescents and adults, but also furthers research into attitudes toward alcohol. Studies such as this may be important in how alcohol use is presented to young adults within the media culture. A case can be made that observations of alcohol use during this period in one's life may influence attitudes toward alcohol, the lasting and future effects of which are still to be determined. Any future research into these areas should consider both the relationship between developmental period and alcohol in media, as well as the possibility of lasting effects on attitude over time.

References

Arnett, J. J. (1997). Young people's conceptions of the transition to adulthood. *Youth & Society, 29*, 1-23.

Arnett, J. J (2000). Emerging adulthood: A Theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469-480.

Bahk, C. M. (1997). The impact of presence versus absence of negative consequences in dramatic portrayals of alcohol drinking. *Journal of Alcohol and Drug Education, 42*(3), 18-26.

Bernthal, M. J., Rose, R. L., & Kaufman, P. (2006). When norms collide: Normative conflict in the processing of public service announcements. *Journal of Nonprofit & Public Sector Marketing, 16*(1/2), 21-39.

Collins, R. L., Ellickson, P. L., McCaffrey, D., Hambarsoomians, K. (2007). Early Adolescent exposure to alcohol advertising and its relationship to underage drinking. *Journal of Adolescent Health, 40*, 527-534.

DeHaan, L. & Thompson, K. M. (2003). Adolescent and adult alcohol attitudes in a high alcohol consumption community. *Journal of Drug Education, 33*(4), 399-413.

Faul, F., Erdfelder, E., Lang, A.-G. & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.

Francis, L. J., Fearn, M., Lewis, C. A. (2005). Internal consistency reliability of the Francis Scale of Attitude Toward Alcohol among adolescents in Northern Ireland. *Psychological Reports, 97*, 317-324.

Ingle, H. & Furnham, A. (1996). Attitudes, knowledge, and use of alcohol in university students. *Counseling Psychology Quarterly, 9*(3), 309-323.

Kauffman, S. E., Silver, P., & Poulin, J. (1997). Gender differences in attitudes toward alcohol, tobacco, and other drugs. *Social Work, 42*(3), 231-241.

Kilty, K. M. (1978). Some effects of type of group and sex on attitudes toward alcohol and alcoholism. *British Journal of Addiction, 73*(1), 11-17

Kotch, J. B., Coulter, M. L., & Lipsitz, A. (1986). Does televised drinking influence children's attitudes towards alcohol? *Addictive Behaviors, 11*(1), 67-70.

Nelson, L. J. & Barry, C. M. (2005). Distinguishing features of emerging adulthood: The role of self-classification as an adult. *Journal of Adolescent Research, 20*(2), 242-262.

Pineau, V. & Dennis, J. M.. 2004. Methodology for Probability-Based Recruitment for a Web-Enabled Panel. Retrieved from http://www.knowledgenetworks.com/ganp/docs/Knowledge-Networks-Methodology.pdf

Reifman, A., Arnett, J.J., & Colwell, M.J. (2007). Emerging adulthood: Theory, assessment, and application. *Journal of Youth Development, 2*(1).

Schaie, W. (1977). Toward a stage theory of adult cognitive development. *International Journal of Ageing & Human Development, 8*(2), 129-138.

Appendix A: Vignettes

Vignette (with no consequence)
William is an average guy and good student who enjoys going out on weekends to parties in order to unwind. He maintains good grades and is well-liked around the campus. He carries a blood alcohol content (BAC) chart in his wallet, to always know how many drinks he can have before his judgment or behavior is seriously impaired. His friends all think of him as a dependable and likeable person with a wicked sense of humor.

Looking for a good scene on a Friday night, he decided to meet up with his best friend Mike at a house party thrown by the fraternity with the most boisterous reputation on campus. The moment he walked through the front door, his senses were assaulted by the boiling crowd pumped up by a live band pumping out punk at the moment. William made his way through the crowd slowly, towards the kitchen, nodding at acquaintances and high-fiving his buddies.

“Hey William! Over here!” Mike, waved from his spot next to the table piled high with red plastic cups and a multitude of bottles. He had to shout over the din of rhythmically thumping bass and screaming girls in sequined skirts.

“Is this the beer?” William approached a deep tub filled with ice.

“Uh…yeah,” (silence.) “…Do you want one?” Mike held out a cup.

William took it with a smile, “Man you wouldn’t believe the week I had. I had two midterms and a presentation that I totally wasn’t prepared for.” He took a long, deep drink and let out a satisfied burp. He was glad to kick off a weekend like this, with no deadlines hanging over his head. He got to actually enjoy his nights out and stay out late with his buddies getting into whatever fun they could find.

He reached for another drink and turned to Mike. “Cheers. To the weekends!” He tossed the drink back fast, then he started to pour another round for the both of them.

“My kinda pace man, haha” Mike took the cup from William’s outstretched hand. “I just don’t know if you can keep up with *me*.” Mike grinned, issuing the standard challenge he gave at the start of every weekend destined to be filled with their exploits.

“Let’s go man.” William crushed his plastic cup and threw it at Mike. Hard.

They started first with a round of jager bombs.

Appendix A: Vignettes continued

Then another. Then a round of kamikaze shots, double-sized. They sipped at beer in between the rounds, talking about their week. They had a lot to catch up on because their classes took up most of the days and their jobs took up the nights. By the fourth round of shots, two of their classmates had noticed them and William invited them to sit and judge their contest. He kept the conversation going, enjoying hanging out with his friends while intermittently tossing back drinks. Some other nights they might go out to find exciting shenanigans but that night was to be a more laid back kind of night. Last one awake won.

William wasn't sure how much time had passed when he took out his BAC chart. It waveredd a little in his vision and he blinked a couple times to clear his eyes. When he looked at the card again he felt his entire head swelling and pounding. He got up from his chair and slowly moved towards the hallway back into the living room where the crowds writhing in front of the band were. Mike moved to follow him, tripping over his chair.

William rubbed his eyes then handed the card to someone trying to squeeze past him to the bathroom, "Here, maybe this damn thing will work better for you." Then he wandered into the dancing throng, chanting to the thunderous rhythms of "Paradise City" by Guns N' Roses.

"I wonder why shots are so popular…hey, I can't feel my legs…." William gasped with repressed laughter and slapping at his thigh, "I can't feel my legs!" He yelled, suddenly lurching on his feet. He laughed wildly and jumped into the surging crowd of dancers in front of the stage. He kept jumping and slamming into the other dancers, flushed with energy. The frenzied dance floor and a chanting crowd of his best friends made up for a great Friday night party.

Positive Consequence

William jumped up on the stage to share a duet with the singer of the band. He knew all the words by heart and he was having the best time whipping up the crowds. He hopped back into the throng, grabbing a hold of a pretty brunette who had been watching him on the stage. He grabbed her shoulder and licked at her cheek. She giggled and returned with a kiss. Feeling like it might turn into more, William looked over at Mike. He gave a thumbs-up and turned his attention back to the bubbly girl gripping his arm and biting her lip.

Appendix A: Vignettes continued

They pushed their way into a bathroom and emerged 7 minutes later only slightly disheveled. “Hey,” William said, a bit out of breath, “Uh…What was your name?” He gave a low chuckle.“I’m Amanda,” she grinned, holding out her hand. William shook it, trying to be serious but holding back a laugh. He fumbled with his phone and held it out to Amanda.

William then decided to go out to dinner with Amanda the next night. He had a feeling she would be someone he’d like to see around more often. He was right. Amanda was a fun girl, smart and pretty. She liked to go out as much as he did and they started dating a week later. She even wrote him a letter every day he was away during a summer research survey. They are still dating.

Negative Consequence

When William came to, he felt himself strangely wracked with aches all over his body. He was cold and stiff from lying on the hard front lawn of the fraternity house all night. His eyes hurt from the sunlight streaming hard upon his face and he blinked rapidly trying to clear the spots from his vision.

“You doing okay there buddy?” A strange dark blob solidified in his central vision, speaking to him. “What’s your name?” William rolled to his side and found the back of another person, not wearing any clothes apparently. He vomited into his hands and had to be helped to his feet.

William had been ritualistically shamed by other party go-ers as a prank. He had been posed in a graphic position with his friend Mike, stripped down to his underwear. Crude drawings mottled his skin in permanent marker. Worst of all, pictures of his passed-out photoshoot were distributed all over the school’s network. William suffered mild depression over his behaviors after being filled in on the details of this incident and his grades slipped for that semester.

Appendix B: Francis Scale of Attitude Toward Alcohol

Please select the response that indicates how much you agree or disagree with the following statements:

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Q1. Young people should be discouraged from taking up drinking					
Q2. Alcohol is responsible for an increase in vandalism					
Q3. Having a drink with someone is a way of being friendly					
Q4. Drinking is the cause of many unhappy marriages.					
Q5. Drinking usually brings out the worst in people.					
Q6. Alcohol is responsible for an increase in disturbances at baseball games.					
Q7. Alcohol is responsible for an increase in social violence.					
Q8. Drinking is one of the main causes of immoral behavior.					
Q9. Alcohol is responsible for an increase in the breakdown of family life.					
Q10. Alcohol abuse is a growing problem today.					
Q11. Under-age drinking is a growing problem today.					
Q12. A drink makes many people more sociable.					
Q13. Alcohol is responsible for an increase in road traffic offenses.					

Appendix B: Francis Scale of Attitude Toward Alcohol continued

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Q14. It does some people good to get drunk once in a while.					
Q15. Alcohol helps to create a relaxed atmosphere.					
Q16. Alcohol is responsible for an increase in disruptive behavior at football games.					
Q17. Young people should be discouraged from taking up drinking					

Appendix C: Demographic Questions

Q1. Are you currently a college student?

1. Yes
2. No

[IF Q1=1 "YES"]

Q2. What is your major?

_____

Q6. Do you have children?

1. Yes
2. No

REL1. What is your religion?

1. Baptist—any denomination
2. Protestant (e.g., Methodist, Lutheran, Presbyterian, Episcopal)
3. Catholic
4. Mormon
5. Jewish
6. Muslim
7. Hindu
8. Buddhist
9. Pentecostal
10. Eastern Orthodox
11. Other Christian
12. Other non-Christian
13. None

Appendix C: Demographic Questions continued

Qrace3. Please check one or more categories below to indicate what **race(s)** you consider yourself to be.

1. White
2. Black or African American
3. American Indian or Alaska Native – *Type in name of enrolled or principal tribe*
4. Asian Indian
5. Chinese
6. Filipino
7. Japanese
8. Korean
9. Vietnamese
10. Other Asian – *Type in race*
11. Native Hawaiian
12. Guamanian or Chamorro
13. Samoan
14. Other Pacific Islander – *Type in race*
15. Some other race – *Type in race*

Q8. Are you financially independent from your parents?

1. Yes
2. No

Q9. Are you currently living in your parents' household?

1. Yes
2. No

Q10. Do you feel that you have reached adulthood?

1. Yes
2. No
3. In some respects yes, in some respects no

Appendix D: IDEA Instrument/Views of Life Survey

- First, please think about this time in your life. By "time in your life," we are referring to the present time, plus the last few years that have gone by, and the next few years to come, as you see them. In short, you should think about a roughly five-year period, with the present time right in the middle.

- For each phrase shown below, please place a check mark in one of the columns to indicate the degree to which you agree or disagree that the phrase describes this time in your life. For example, if you "Somewhat Agree" that this is a "time of exploration," then on the same line as the phrase, you would click the button in the column headed by "Somewhat Agree" (3).

Is this period of your life a…	Strongly Disagree (1)	Somewhat Disagree (2)	Somewhat Agree (3)	Strongly Agree (4)
1. time of many possibilities?				
2. time of exploration?				
3. time of confusion?				
4. time of experimentation?				
5. time of personal freedom?				
6. time of feeling restricted?				
7. time of responsibility for yourself?				
8. time of feeling stressed out?				
9. time of instability?				
10. time of optimism?				
11. time of high pressure?				
12. time of finding out who you are?				
13. time of settling down?				
14. time of responsibility for others?				
15. time of independence?				
16. time of open choices?				
17. time of unpredictability?				
18. time of commitments to others?				
19. time of self-sufficiency?				
20. time of many worries?				
21. time of trying out new things?				
22. time of focusing on yourself?				
23. time of separating from parents?				
24. time of defining yourself?				
25. time of planning for the future?				
26. time of seeking a sense of meaning?				

Appendix D: IDEA Instrument/Views of Life Survey continued

27. time of deciding on your own beliefs and values?				
28. time of learning to think for yourself?				
29. time of feeling adult in some ways but not others?				
30. time of gradually becoming an adult?				
31. time of being not sure whether you have reached full adulthood?				

Appendix E: Memory Recall/Manipulation Check Questions

The following questions refer to the vignettes you read previously. Please select the correct answer.

MEM1. Who is the main character of this story?
- a. Kevin
- b. Mike
- c. William
- d. Eric

MEM2. What is the name of the main character's best friend?
- a. Mike
- b. Kevin
- c. Eric
- d. James

MEM3. Where was the party?
- a. His apartment
- b. A fraternity house on campus
- c. Hotel
- d. A downtown club

MEM4. Why did William go out that night?
- a. It was his birthday.
- b. He had a hard week and as looking to unwind
- c. It was his friend's birthday
- d. To celebrate a recent win for the school's football team.

MEM5. What color were the cups on the table?
- a. red
- b. blue
- c. clear
- d. yellow

MEM6. To what does William toast to?
- a. To family
- b. To the weekend
- c. To passing midterms
- d. To health

Appendix E: Memory Recall/Manipulation Check Questions continued

MEM7. What drink do both William and Mike have double-sized?
a. jager bombs
b. tequila shots
c. kamikaze shots
d. vodka sodas

MEM8. How many midterms did William have that week?
a. one
b. two
c. three
d. four

MEM9. Who did William invite to sit with him and Mike?
a. Mike's little sister
b. his girlfriend
c. his classmate
d. fraternity brothers

MEM10. What did William do with his chart?
a. gave it to some guy
b. tore it up
c. lost it
d. forgot it

MEM11. What song did William rock out to?
a. "I Love Rock n' Roll" by Joan Jett
b. "Paradise City" by Guns N' Roses
c. "Don't Stop Believin'" by Journey
d. "Rock n' Roll All Nite" by KISS

MEM12. On a scale of 1 to 5, please select the number that indicates to what degree you agree with the following statements.

William seemed like a responsible person

Strongly Disagree				Strongly Agree
1	2	3	4	5

Appendix E: Memory Recall/Manipulation check questions continued

MEM13. William should cut back on his partying.

Strongly Disagree				Strongly Agree
1	2	3	4	5

MEM14. William seems like just an average guy.

Strongly Disagree				Strongly Agree
1	2	3	4	5

MEM15. The situation presented could likely have happened

Strongly Disagree				Strongly Agree
1	2	3	4	5

MEM16. William's behaviors were to be expected given the events

Strongly Disagree				Strongly Agree
1	2	3	4	5

MEM17. How positive was the outcome of William's night?

Very Bad		Good		Very Good
1	2	3	4	5

Appendix F: Alcohol use Questions

A1. The following are general questions about your alcohol use.

Do you drink alcohol?
1. Yes
2. No

SHOW A2-A7 IF A1=1 "YES"

A2. Do you engage in binge drinking? (5 or more drinks in a sitting)
1. Yes
2. No

A3. In the last two weeks, have you had more than 5 drinks in a sitting?
1. Yes
2. No

A4. Do you ever drink to get drunk?
1. Yes
2. No

A5. Please estimate the number of times you've been drinking in the last 2 weeks
_____

A6. Please estimate the number of drinks you had the last time you were drinking
_____

A7. Do you have a history of alcohol or drug problems in your family?
1. Yes
2. No