

THE RELATIONSHIP BETWEEN IMPULSIVITY, SENSATION-SEEKING, AND  
ALCOHOL USE IN EMERGING ADULTS

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ALCOHOL USE IN EMERGING ADULTS

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## **CHAPTER 1**

### **INTRODUCTION**

College students that fit within the developmental stage of emerging adults have been associated with drinking, but in reality the number of emerging adults who drink has been declining over the past 15 years. Three studies reported the following figures regarding this issue: in 1994, 72% of college-aged individuals drank alcohol (Engs, Hanson & Diebold, 1994) compared to 65% in 2014 (White & Hingson, 2014) and 60% in 2015; (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2015). Annually, 1,825 traditional college students (ages 18-24) have had alcohol-related deaths (NIAAA, 2015; Merrill & Carey, 2016). College-aged hospitalizations from only alcohol overuse rose 25% from 1999 to 2008 (White & Hingson, 2014). Finding alternatives to drinking may aid in reducing these incidents.

The current study focused on alcohol consumption, motives, and hazardous behavior exhibited by emerging adults and determined that these behaviors were correlated with sensation seeking and impulsivity characteristics. Based on previous studies (Cyders, Flory, Rainer, & Smith, 2009; LaBrie, Kenney, Napper, & Miller, 2014; Moser, Pearson, Hustad, & Borsari, 2014; Shin, Hong, & Jeon, 2012), a link between dangerous drinking habits and impulsivity and sensation seeking within emerging adults was indicated.

#### **Statement of the Problem**

Studies performed at institutions of higher education noted a relationship between certain personality characteristics found in emerging adults and consumption of alcohol. This study gathered information from that past research regarding those same personality characteristics and their relationship to a high presence of sensation seeking and impulse motives and the likelihood of engaging in hazardous activity when consuming alcohol.

### **Purpose of the Study**

This study focused on alcohol consumption, motives, and hazardous behavior exhibited by emerging adults to determine if these behaviors were correlated with sensation-seeking and impulsivity characteristics. Based on a review of previous studies, it was expected that there would be a link between dangerous drinking habits, impulsivity and sensation seeking within emerging adults. Previous research completed at institutions of higher learning showed a correlation between sensation-seeking, impulsivity and dangerous drinking habits. The purpose of this study was to better understand and bring awareness to the activities and motives of emerging adults and to find a key answer as to why emerging adults engaged in this dangerous activity.

### **Significance of the Study**

Previous research showed a relationship between sensation-seeking, impulsivity and dangerous drinking habits among university students. An element of significance was that the current study might indicate the need for additional research opportunities specifically related to smaller universities and colleges. The research completed during the current study could improve lives for students in the future large universities as well as in other smaller, more rural universities.

### **Assumptions**

The research that was available indicated a link between sensation-seeking and impulse motives and engaging in hazardous activity when consuming alcohol within the emerging adult developmental stage. One assumption was that this study would be able to gather sufficient data to draw helpful conclusions regarding specific character traits of university students and alcohol consumption and make recommendations for future research.

## **Delimitations**

One delimitation was that this study was very broad and included a wide array of research. Some studies focused on impulsivity and sensation-seeking as indicated by the content of questionnaires revolving around emerging adulthood and drinking activities. Other studies reviewed addressed a wider scope of urgency, perseverance, and positive urgency.

A second delimitation of this study was that participants in past studies answered subjectively, not objectively; and because they were self-reporting, their responses might not be completely accurate. Also, the study might have selection bias—participants might have been more apt to submit a survey depending on their propensity to consume alcohol.

## **Method of Approach**

Research was gathered with the use of Google Scholar, Karmann Library online, and Karmann Interlibrary loan. The databases used to gather literature for this paper were “ERIC,” “EBSCOhost,” “PsycArticles,” and “PubMed.” Search terms and phrases such as “Arnett Emerging Adults,” “Emerging Adults and Personality Traits,” “Emerging Adults Questionnaire,” “Drinking Motives,” “UPPS-P Impulsive Behavior Scale,” “Modified Drinking Motives Questionnaire-Revised (DMQ-R),” and “Drinking Games” were used for the current literature review. Researching the topics of college-aged adults, impulsivity, and sensation seeking related to drinking was initially very difficult until articles by J. Arnett were found, which gave the name “Emerging Adults” to the age range that was being researched for the current paper. The majority of the current research paper was a literature review of previously done research on the topics within the current paper. Conclusions were drawn from the research found; and recommendations were made for future research.

## **Definition of Terms**

*Binge drinking*, as defined by Bonar et al. (2012), is a “large but unspecific amount of alcohol [consumed] in a short period of time” (p. 192).

A *drinking game* is “an activity that has rules governing the consumption of alcoholic beverages” (Zamboanga, et al., 2013).

*Emerging adults* are individuals ages 18-24 who are not fully independent from their parents, allowing them to be in an exploration and transitional period in their lives. Members of this group do not see themselves as adolescents, but do not feel they are quite adults (Arnett, 2000; Arnett, 2005; Arnett, 2007).

## CHAPTER 2

### REVIEW OF LITERATURE

#### Introduction to Emerging Adulthood

Arnett (2000; 2007) suggested the need to view the period between adolescence and adulthood (between the ages of 18 and the late 20s) as a distinct life stage. Arnett defined this stage as “emerging adulthood.” The need for including this new developmental stage, according to Arnett (2007), was due to changes in the normative behaviors and responsibilities of this age group in industrialized societies. Arnett argued that “most young people now spend the period from their late teens to their mid-20s not settling into long-term adult roles, but trying out different experiences and gradually making their way toward enduring choices in love and work” (p. 69). Cultural changes, according to Arnett, were related to this new stage of “emerging adulthood.” Arnett also argued that the period of “emerging adulthood” and the individuals in this stage held the following characteristics: the need existed for more education to survive in an information-based economy; fewer entry-level jobs were available, even with an education; young people felt less rushed to marry because of the general acceptance of premarital sex, cohabitation, and birth control; and young women felt less rushed to have children given expanding career options and the availability of reproductive technology, if pregnancy was delayed beyond the most fertile years.

Arnett (2005) described emerging adulthood as a time of identity exploration, instability, identity confusion, and self-focus. Emerging adults often felt this time as “in-between;” they were neither adolescent nor adult. Arnett also described it as a time of unparalleled opportunity to transform one’s life. At the time of this study, emerging adults (Arnett, 2002; Arnett, 2007) also had a higher rate of participation in post-secondary education. A study sponsored by the

National Center for Education Statistics (Aud, KewalRamani, & Frohlich, 2011, p. vi) reported that in 2009, two thirds (66%) of males and three quarters (74%) of female students who completed high school enrolled in college directly after graduation, compared to about half (50%) of high school graduates in 1980.

### **Alcohol Consumption Among University Students**

Emerging adulthood, Arnett (2005) also noted, is a developmental period marked by the highest incidence of substance use, including alcohol consumption. According to a recent study sponsored by The National Institute on Drug Abuse (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2015, p. 364-365) alcohol consumption among emerging adults who attended college was higher than among those who did not, even though college-bound high school students were far less likely to drink alcohol than their non-college-bound peers. College students had a higher prevalence (35%) of heavy drinking (defined as five or more drinks in a row in the previous two weeks) than did their non-college attending age cohort (29%). While daily drinking reports were relatively low and did not differ greatly between college (4.3%) and non-college-enrolled (4.1%) young adults, more college students (40%) reported being drunk in the previous 30 days than did their non-college cohort (34%).

Twenty-two percent (22%) of male college students reported binge drinking, while young males not enrolled in college reported a lower percentage (18%) of binge drinking. Female college students, however, reported the same rate of binge drinking (7%) as females not attending college (Johnston et al., 2014, p. 361). Aud et al. (2011) in a long-term study, found that reported alcohol use was consistent from 1995 to 2009, hovering in the low 60% range (61% in 1995 and 62% in 2009); however, binge drinking rose from 30% to 42% in the same time span (p. 141). The Substance Abuse and Mental Health Services Administration (2013) found

consistent rates in emerging adult alcohol use: in 2012 and 2013 at around 60%. Reports of binge drinking dropped from 39.5% in 2012 to 37.9% in 2013 (p. 35). The Substance Abuse and Mental Health Services Administration (2014) reported that young adults reporting heavy drinking behavior decreased from 12.7% in 2012 to 11.3% in 2013 (p. 35).

### **Personality and Binge Drinking**

Bonar et al. (2012) completed a cohort study about binge drinking in which 400 college students participated. Fifty-seven percent (57%) of participants defined binge drinking as a “large but unspecified amount of alcohol in a short period of time” (p. 192). According to a 2015 national survey conducted by the National Institute on Alcohol Abuse and Alcoholism (NIAAA), almost two out of three college students have engaged in binge drinking. The NIAAA (2004, 2015) found that five drinks for men and four drinks for women in approximately two hours defined a binge. However, the number of drinks varied in regard to types of alcohol. For example, Bonar et al. (2012) found a higher quantity of beer was needed to constitute a binge as compared to the number of glasses of wine, shots, or mixed drinks. Additionally, the Substance Abuse and Mental Health Services Administration (2014) defined a heavy drinker as an individual who consumed five or more drinks in a two-hour period with regularity, one to five days per month. In college-aged students, drinking was a component of social activity and could lead to higher consumption of alcohol and negative consequences if repeated within a short period of time (Bosari et al., 2014).

Understanding the relationship between binges/heavy drinking and personality could reduce dangerous drinking behaviors in future young adults. A longitudinal cohort study (Loxton, Bunker, Dingle, & Wong, 2015), which focused on this relationship, was conducted at the beginning of orientation week and then again six months later. The data provided some

evidence to support the correlation between individuals exhibiting sensation- and impulse-seeking behaviors and their alcohol consumption. Piasecki et al. (2013) described dispositional drinking motives as self-focused motives (enhancement, coping) and external motives (social, conformity). Piasecki et al. (2013) found that persons who drank for self-focused reasons had heavier alcohol consumption associated with being “high,” while persons who drank for external or social factors presumably consumed alcohol in pursuit of valued interpersonal goals rather than alcohol effects (p. 364). This study further found that “[d]rinking to cope, on the other hand, has been associated with elevated rates of drinking problems that cannot be explained by consumption alone” (p. 364).

Loxton et al. used a Substance Use Risk Profile Scale designed to measure four personality traits: impulsivity, sensation seeking, anxiety-sensitivity, and hopelessness. Only the enhancement motive, used to mediate the relationship between alcohol consumption and impulsivity, was associated with each of the four drinking motives. In women motives that affected drinking had a direct correlation to their impulsive personality (Loxton et al., 2015). LaBrie, Kenney, Napper, and Miller (2014) supported their conclusion that a relationship existed between high sensation-seeking and predicting alcohol consumption even when drinking was controlled among college students. LaBrie et al. also found that college students who used alcohol to cope had a higher risk of alcohol use and problems associated with alcohol.

Researchers suggested numerous alternatives instead of drinking for high-risk emerging adults. LaBrie et al. (2014) suggested that students with a high sensation-seeking threshold could have benefited by being active in campus events and activities. These activities would include but were not limited to kayaking, paintballing, or engaging in sports that would provide stimuli that students might otherwise seek rather than engaging in risky behaviors using alcohol.

## **Drinking Games**

According to a study conducted by Johnson and Sheets (2004), in which 120 college men and 167 college women under 21 years of age were interviewed regarding their alcohol habits, each participant had played some sort of drinking game in the past year.

Johnson and Sheets (2004) concluded that the reasons students played drinking games were competition and effort to stave off the monotony of everyday life.

Participants who played to get ‘thrills,’ or for competition, and those who played in response to boredom, tended to drink more than others. No other reasons for play were related to total alcohol consumed while playing; neither did men and women differ in alcohol consumed while playing, holding reasons for play constant (p. 94).

Emerging adults played for many different reasons, but when the idea behind the game was purely consumption, amounts consumed were extremely elevated (Zamboanga et al., 2013).

## CHAPTER 3

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Introduction

This research focused on alcohol consumption, motives, and hazardous behaviors by emerging adults and determined that these behaviors were correlated with sensation seeking and impulsivity characteristics. The research design consisted of a review of literature. Researching the correlation between individuals in young adulthood and the use of alcohol consisted mainly of studies of alcohol consumption among university students.

#### Summary

At the time of this study, challenges of university life were numerous, and among them was the availability of alcohol. Many university students in the developmental stage of emerging adulthood often felt as though they were *in-between*; they were neither adolescent nor adult. Arnett (2000; 2007) believed that emerging adulthood was an important developmental stage that needed to be recognized by industrialized societies. Arnett (2005) described emerging adulthood as a time of identity exploration, instability, identity confusion, and self-focus. Arnett (2007) further noted that this developmental period marked the highest incidence of substance abuse, including alcohol consumption. The Substance Abuse and Mental Health Services Administration (2014) reported that young adults reporting heavy drinking behavior decreased from 12.7% in 2012 to 11.3% in 2013 (p. 35). For a university of 40,000 students, 11.3% would equal 4,520 students compared to a university with 10,000 students that would equal 1,130 students who would engage in heavy drinking behavior. Emerging adults who were attending college were often introduced to alcohol; this along with key personality characteristics often led to issues such as consistent binge drinking.

Bonar et al. (2012, p.192) defined binge drinking as a “large but unspecific amount of alcohol in a short period of time.” Understanding the relationship between binges/heavy drinking and personality might reduce dangerous drinking behaviors in future young adults. When a student is socializing with peers, even responsible students could lose count of how much alcohol was consumed and could lead to dangerous drinking behaviors. Heavy drinking games could elevate the need for sensation and lead to even higher consumption rates, becoming more dangerous for the student’s health.

College-aged men and women under the age of 21 responded to a study asking why they participated in drinking games, with the response being that they enjoyed the thrills. Emerging adults played drinking games for many different reasons, but when the idea behind the game was purely consumption, amounts consumed were elevated (Zamboanga et al., 2013). Johnson and Sheets (2004) concluded that the reasons students played drinking games were competition and attempts to stave off the monotony of everyday life. Venues for drinking games ranged from the dorm room to the bar to the backyard, offered camaraderie between two emerging adults to many at any given time, and occurred on any day of the week.

## **Conclusions**

Based on research, the general consensus was that a link existed between dangerous drinking habits, sensation-seeking and impulsivity characteristics among students enrolled in universities who participated in the studies. While researching the correlation between individuals in young adulthood and the use of alcohol, the information gathered showed not only the fact that alcohol usage was prominent on college campuses but that one of the primary goals was sensation seeking.

Researchers suggested numerous alternative activities that high-risk emerging adults could participate in rather than drinking. LaBrie et al. (2014) suggested that students with a high sensation-seeking threshold could have benefited by being active in campus events and activities. These activities would include but were not limited to kayaking, paintballing, or engaging in sports that would provide stimuli that students might otherwise seek rather than engaging in risky behaviors using alcohol.

Understanding Arnett's ideas behind emerging adults will help university personnel understand how to work with future generations as they enter the university system. Emerging adults are a demographic that refuses to be forced to evolve; they insist their evolution is done in their own time. Drinking alcoholic beverages has been a constant on college campuses for decades, but learning why emerging adults consume alcohol will aid in the future to find activities to consume college-aged students' time. How can college-aged students' lives be filled with things other than alcohol activities?

A certain amount of onus needs to be put on each emerging adult because it cannot be society's problem alone. Emerging adults are legally adults, and they must take ownership for actions within their lives. Many in this group believe that once they graduate from college and/or are ready to become employed, a job should be waiting for them. Emerging adults may forget that the work force is saturated with talent and job applicants must go through the same process as everyone else. This researcher finds it interesting to observe this demographic as their demands are so short sighted.

## **Recommendations**

Understanding that emerging adults consume alcohol for the primary reasons of feeling the effects of sensation and satisfying the motive of impulsivity will help future researchers in the quest to find a solution to the alcohol consumption epidemic.

All universities must be taken into account, not just the large institutions that find it easy to involve participants in studies but the small institutions as well. Research in small communities with colleges and universities is recommended. Small communities have fewer activities to keep students busy, so the students might be more likely to consume alcohol than to find constructive activities that do not involve alcohol. Alcohol has been a crutch for many years, for many people and for many different reasons; the key is finding something constructive to accomplish before the thought of alcohol crosses one's mind; this researcher recommends this idea to be at the forefront of society's mind as a whole. Finding activities that college-aged students enjoy more than alcohol and the sensation received would be another area worth researching. If students would not feel the need to drink because of the activity in which they are participating, the student and the university might become more successful.

## REFERENCES

- Arnett, J. J. (1997). Young people's conceptions of the transition to adulthood. *Youth & Society*, 29(1), 3-23. doi:10.1177/0044118X97029001001
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480. doi:10.1037/0003-066X.55.5.469
- Arnett, J. J. (2005). The developmental context of substance use in emerging adulthood. *Journal of Drug Issues*, 35(2), 235-254. doi:10.1177/002204260503500202
- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1(2), 68-73. doi:10.1111/j.1750-8606.2007.00016
- Aud, S., KewalRamani, A., and Frohlich, L. (2011). *America's youth: Transitions to adulthood* (NCES 2012-026). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Bonar, E., Young, K. M., Hoffmann, E., Gumber, S., Cummings, J. P., Pavlick, M., Rosenberg, H. (2012). Quantitative and qualitative assessment of university students' definitions of binge drinking. *Psychology of Addictive Behaviors*, 26(2), 187-193. doi: 10.1037/a0026440
- Borsari, B., Peterson, C., Zamboanga, B. L., Correia, C., Olthuis, J., Ham, L. S., & Grossbard, J. (2014). The hazardous drinking games measure (HDGM): A multi-site implementation. *American Journal of Drug Alcohol Abuse*, 40(5), 395-402. doi:10.3109/00952990.2014.924522
- Cyders, M. A., Flory, K., Rainer, S., & Smith, G. T. (2009). The role of personality dispositions to risky behavior in predicting first year college drinking. *Addiction*, 104(2). doi: 10.1111/j.1360-0443.2008.02434.x

- Cyders, M. A., Smith, G. T., Spillane, N. S., Fischer, S., Annus, A. M., & Peterson, C. (2007). Integration of impulsivity and positive mood to predict risky behavior: Development and validation of a measure of positive urgency. *Psychological Assessment, 19*(1), 107-118. doi: <http://dx.doi.org/10.1037/1040-3590.19.1.107>
- Engs, R. C., Hanson, D.J., Diebold, B.A. (1996) The drinking patterns and problems of a national sample of college students, 1994, *Journal of Alcohol Drug Education*, Spring, 41(3):13-33. Retrieved November 16, 2015, from <http://www.indiana.edu/~engs/articles/jade.htm>
- Grant, V. V., Stewart, S. H., O'Connor, R. M., Blackwell, E., & Conrod, P. J. (2007). Psychometric evaluation of the five-factor Modified Drinking Motives Questionnaire - Revised in undergraduates. *Addictive Behaviors, 32*(11), 2611-2632. doi: 10.1016/j.addbeh.2007.07.004
- Johnson, T. J., & Sheets, V. L. (2004). Measuring college students' motives for playing drinking games. *Psychology of Addictive Behaviors, 18*(2), 91–99. doi:10.1037/0893-164X.18.2.91
- Johnston, L.D., O'Malley, P.M., Bachman, J.G., Schulenberg, J.E.& Miech, R. A.(2015). Monitoring the future National survey results on drug use, 1975–2014: Volume 2, College students and adults ages 19–55. Ann Arbor: Institute for Social Research, The University of Michigan.
- LaBrie, J. W., Kenney, S., Napper, L. E., & Miller, K. (2014). Impulsivity and alcohol-related risk among college students: Examining urgency, sensation seeking and the moderating influence of beliefs about alcohol's role in the college experience. *Addictive Behaviors, 39*(1), 159-164. doi:10.1016/j.addbeh.2013.09.018

- Loxton, N. J., Bunker, R. J., Dingle, G. A., & Wong, V. (2015). Drinking not thinking: A prospective study of personality traits and drinking motives on alcohol consumption across the first year of university. *Personality and Individual Differences, 79* (June), 134-139. doi: 10.1016/j.paid.2015.02.010
- Merrill, J. E., & Carey, K. B. (2016). Drinking over the lifespan: Focus on college ages. *Alcohol Research: Current Reviews, 1-12*. Retrieved from (10-23-2015)  
<http://www.arcr.niaaa.nih.gov/arcr/arcr381/article12.pdf>
- Moser, K., Pearson, M. R., Hustad, J. T., & Borsari, B. (2014). Drinking games, tailgating, and pregameing: Precollege predictors of risky college drinking. *American Journal of Drug and Alcohol Abuse, 40*(5), 367-373. doi: 10.3109/00952990.2014.936443
- National Institute on Alcohol Abuse and Alcoholism (2004). NIAAA council approves definition of binge drinking. *National Institute on Alcohol Abuse and Alcoholism Newsletter, Winter*(3), 3. Retrieved November 16, 2015, from  
[http://pubs.niaaa.nih.gov/publications/Newsletter/winter2004/Newsletter\\_Number3.pdf](http://pubs.niaaa.nih.gov/publications/Newsletter/winter2004/Newsletter_Number3.pdf)
- National Institute on Alcohol Abuse and Alcoholism (2015, October). *College drinking fact sheet*. Retrieved from National Institute on Alcohol Abuse and Alcoholism:  
<http://pubs.niaaa.nih.gov/publications/CollegeFactSheet/CollegeFactSheet.pdf>
- PhenX team (2009). *Disinhibiting behaviors–Impulsivity–Adult protocol* . Retrieved November 16, 2015, from [https://www.phenx.org/Portals/0/phenx-content/consensus/psychosocial/02\\_Disinhibiting\\_Behaviors\\_Impulsivity\\_Adult\\_9-2-2010.pdf](https://www.phenx.org/Portals/0/phenx-content/consensus/psychosocial/02_Disinhibiting_Behaviors_Impulsivity_Adult_9-2-2010.pdf)
- Piasecki, T. M., Cooper, M. L., Wood, P. K., Sher, K. J., Shiffman, S., & Heath, A. C. (2014). Dispositional drinking motives: Associations with appraised alcohol effects and alcohol

- consumption in an ecological momentary assessment investigation. *Psychological Assessment*, 26(2), 363-369. doi: 10.1037/a0035153
- Reifman, A., Arnett, J. J., & Colwell, M. J. (2007, Summer). Emerging adulthood: Theory, assessment, and application. *Journal of Youth Development*, 2(1), Article 0701FA003.
- Shin, S., Hong, H., & Jeon, S. (2012). Personality and alcohol use: The role of impulsivity. *Addictive Behaviors*, 37(1), 102-107. doi: 10.1016/j.addbeh.2011.09.006
- Substance Abuse and Mental Health Services Administration. Results from the 2013 National Survey on Drug Use and Health: Summary of national findings, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.
- White, W., & Hingson, R. (2014). The burden of alcohol use: Excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Review*, 35(2), 201-218.
- Williams, A., & Clark, D. (1998). Alcohol consumption in university students: The role of reasons for drinking, coping strategies, expectancies, and personality traits. *Addictive Behaviors*, 23(3), 371-378. doi: 10.1016/S0306-4603(97)80066-4
- Zamboanga, B. L., Pearce, M. W., Kenney, S. R., Ham, L. S., Woods, O. E., & Borsari, B. (2013). Are “extreme consumption games” drinking games? Sometimes it's a matter of perspective. *American Journal of Alcohol Abuse*, 39(5), 275-279. doi: 10.3109/00952990.2013.827202