9-11-2013

# The freshman experience

Stephanie Mannon

# THE
# FRESHMAN EXPERIENCE

by
Stephanie B. Mannon

A Thesis

Submitted to the
Department of Psychology
College of Science and Mathematics
In partial fulfillment of the requirement
For the degree of
Master of Arts
at
Rowan University
May 23, 2013

Thesis Chair: DJ Angelone, Ph.D.

**Dedication**

*I would like to dedicate this manuscript to those loved ones whom have supported me throughout my academic journey.*

## Acknowledgments

I would like to express my appreciation to the following individuals and parties for their guidance, support, and feedback throughout this research: Dr. DJ Angelone, thesis chair; Dr. Amy Hoch, thesis committee member and clinical supervisor; colleagues & mentors at Rowan University Counseling & Psychological Services Center; members of ASSeRT research laboratory; professors and faculty of the Clinical Mental Health Counseling M.A. program; and my classmates and cohort at Rowan University.

**Abstract**

Stephanie B. Mannon
THE
FRESHMAN EXPERIENCE
2013
DJ Angelone, Ph.D.
Master of Arts in Clinical Mental Health Counseling

The purpose of this exploratory research was to investigate if change in sexual risk-taking behavior between high school and college can be predicted as a function of the interaction of person and situation traits. College, conceptualized as a backspace (situation) construct, and personality traits (sensation-seeking, neuroticism, extraversion) conducive to deviant behavior were examined. While significant risky behavior was reported for all students (n = 252), hierarchical regression analyses revealed that higher levels of the specified personality traits in combination with on-campus backspace residential status was not predictive of greater change in engagement in sexual risk-taking behavior. Implications for future research and prevention efforts are discussed.

## Table of Contents

## List of Tables

# Chapter 1: The Freshman Experience

Sex plays a major role in the lives of American college students. In fact, approximately 75% of all college students are actively engaging in oral, anal, or vaginal sex. Also, female college students think about sex at least 10 times a day, while their male counterparts report thoughts about sex as often as 19 times each day (Fisher, Moore, & Pittenger, 2011; Siegel, Klein, & Roghmann, 1999). There are many young Americans attending college with estimates of over 20 million enrolled in 2009. This reflects a national enrollment of more than 40% of the entire US population of 18 to 24-year olds (US Department of Education, 2011). In addition, enrollment rates have been steadily rising, with a 45% increase in full-time enrollment over the course of the past decade (US Department of Education, 2011).

## Risky Behavior

Coupled with the high rate of college enrollment is the high rate of engagement in risky behavior for college students. These risky behaviors comprise poor spending habits, dysregulated eating, violence, substance use, and sexual activity (Ahern, 2009; Calvert, Bucholz, & Steger-May, 2010; Centers for Disease Control and Prevention, 2010; Crockett, Raffaelli, & Shen, 2006; Ravert, Schwartz, Zamboanga, Kim, Weisskirch, & Bersamin, 2009; Siegel, Klein, & Roghmann, 1999; Taylor-Seehafer & Rew, 2000; US Department of Health and Human Services, 2011; Xiao, Serido, & Shim, 2012; Zapolski, Cyders, & Smith, 2009). For example, young adults' (i.e., 18 to 29 years) credit scores are an average of 100 points lower than their middle-aged counterparts (i.e., 50+ years) in the U.S. (BCS Alliance, 2005). There are both short term and long term consequences to risky credit card use and borrowing patterns. Younger individuals may accrue mass sums

of debt that follow them for a long time, but this "spend now, pay later mentality" may also lead to negative patterns of behavior that persist into adulthood (Xiao, Serido, & Shim, 2012).

Of all risky behaviors, college students are most likely to engage in activities that put their health in jeopardy. For example, 95% of individuals with an eating disorder are 18-24 years old (ANAD, 2012). Furthermore, 22% of full-time college students between the ages of 18 and 22 years engaged in illicit drug use during 2010, and an additional 6% of this population also reported nonmedical use of prescription drugs (US Department of Health and Human Services, 2011). Likewise, risky drinking behavior persists as a popular activity on college campuses, with greater than 50% of all binge drinking (defined as 4 drinks for a woman or 5 drinks for a man in a two-hour time frame) accounted for by 18- to 20-year olds nationwide (Centers for Disease Control and Prevention, 2010).

In spite of this, these risky behaviors are highly prevalent, and may be associated with a greater likelihood of violence and aggression, criminality, accidental injury, school-related problems, and engagement in other health jeopardizing behaviors (Calvert, Bucholz, & Steger-May, 2010). In turn, voluntary engagement in dangerous activities leads to the deaths of thousands of these individuals each year (Katz, Fromme, & D'Amicio, 2000). College students between the ages of 18 to 24 are in a critical developmental window. As a result of this critical time in development, they are particularly vulnerable to engaging in health jeopardizing behaviors. Therefore, college is an important time in which this population may be studied to better understand the implications of such risky behavior.

Perhaps the most significant issue for college students is engagement in risky sexual behavior. Risky sexual activity can be defined in various ways, including having multiple partners, failing to use protection, or inconsistently using protection (Crockett, Raffaelli, & Shen, 2006). Of the nearly 75% of college students who engage in sexual intercourse, 65% engage in sex without a condom (Siegel, Klein, & Roghmann, 1999; Zapolski, Cyders, & Smith, 2009). Furthermore, adolescents with certain personality types are more likely to have sex with multiple partners. In addition, college students who have unprotected vaginal intercourse are also more likely to engage in unprotected anal sex, a particularly dangerous health jeopardizing behavior (Ahern, 2009; Crockett, Raffaelli, & Shen, 2006).

There are both short-term and long-term consequences associated with risky sexual behavior. For example, engagement in risky sex increases the chances of an unwanted pregnancy or contraction of a sexually transmitted infection (STI). In fact, the biological immaturity of the reproductive organs of young women places them at greater immediate risk for the contraction of STIs compared to older females. That is, young women possess a cervical immaturity and have not fully developed immune-protective factors in the reproductive mucus. This ultimately puts them at an increased risk for contraction of an infection (Taylor-Seehafer & Rew, 2000). On the other hand, there are several long-term consequences associated with risky sex, including: financial burdens (for the costs of an unplanned pregnancy, medical expenses, fertility treatments, or adoptions), emotional distress (due to relationship conflicts or personal regret), and an increased risk for oral cancer (Ahern, 2009). Other long-term consequences may include infertility later in life as the product of an STI and its negative consequences for the

reproductive system (Calvert, Bucholz, & Steger-May, 2010). In sum, there are many negative consequences for engaging in risky behavior that are preventable. Thus, there is a need for future research to assist the development of prevention mechanisms for young adults during this critical developmental period.

### 1.1 Factors Associated with Risky Sex: The Situation

Given the high incidence and serious consequences of risky sexual behavior for college students, researchers have attempted to understand the influences of this behavior. One theory suggests that risky behaviors might occur at a greater prevalence in college students due to a type of environment referred to as a "backspace" and a behavior commonly exhibited in this environment referred to as "playful deviance." A *backspace* can be conceptualized as any environment or atmosphere that differs from one's home setting. Additionally, the backspace is thought to be conducive to, and also encouraging of, behavior that deviates from one's personal norms. Thus, *playful deviance* describes the actual behaviors or temporary transgressions that one may engage in while in a backspace (Goffman, 1963; Redmon, 2003). In fact, there is an increased prevalence of risky behavior (i.e. playful deviance) in backspace setting since socially inappropriate behavior is not only permitted in this environment, but actually encouraged due to the lack of reinforcers from their normal environment (Milhausen, Reece, & Perera, 2006).

Playful defiance occurs in a wide variety of settings. There is freedom from restrictions one might experience in a home setting (e.g. judgments from family or peers that reinforce a desired behavior or role) when in a backspace. This increases the likelihood of deviant behaviors such as public nudity, sex, masturbation, or other public sexual actions. Further, this playful deviance is actually encouraged through the sense of

anonymity, expectations associated with the festival, and reinforcement of the performer role of those who engage in these public displays of taboo behavior (Milhausen, Reece, & Perera, 2006; Redmon, 2003). For example, at Mardi Gras, men who have sex with men demonstrated increased sexual risk-taking behaviors. These behaviors included engaging in intercourse with multiple partners without knowing their STI status, failing to disclose their own STI status, engaging in drug use and binge drinking, and practicing sex without condoms. In fact, 48% of all men who have sex with men (MSM) engaged in anal sex with a new partner of unknown HIV status; in addition, half of MSM who engaged in sex at Mardi Gras did not disclose their own HIV status to all of their sexual partners while they were there (Benotsch et al., 2007).

In much the same way, study-abroad students may also engage in playful deviance. That is, the study-abroad environment can be conceptualized as a backspace based on shared characteristics listed above (e.g., liberation from the judgments of normed social influences, a novel setting conducive to experimentation with behavior that deviates from or transgresses the norm). The behaviors of students studying abroad support this theory as evidenced by significant increases in heavy drinking. This drinking was associated with both intentions and perceptions of norms of the study-abroad environment. Further, American college students who studied abroad increased their risky drinking practices more than twofold in the study-abroad backspace context compared to their drinking at home (Pedersen, Larimer, & Lee, 2010). Furthermore, study abroad students, on average, acquired as many new sexual partners in 10 days while overseas as they had in the past six months at home (Bellis, Hughes, Thomson, & Bennett, 2004).

Spring break locales also appear to serve as backspaces conducive to playful deviance, and students traveling for spring break demonstrated evidence of increased risk-taking activity while away. Engagement in new, casual sexual relationships and participation in unprotected sexual activity were among those risky behaviors exhibited by individuals during travel. Risky behavior in this backspace travel setting was also associated with characteristics of the environment that supported the idea that casual sex is common (e.g., perpetual party atmosphere, high alcohol consumption, sexually suggestive contests and displays, perception of freedom from at-home restrictions, a relaxation of inhibitions, a focus on having a good time, and high alcohol consumption) (Maticka-Tyndale, Herold, & Mewhinney, 1998; Ribeiro, Durrenberger, Yarnal, & Chick, 2009). Furthermore, males were eleven times more likely to have unprotected anal sex with multiple new partners while on vacation, compared to being at home (Benotsch et. al., 2007).

International travelers similarly increased their playfully deviant behavior while in a new environment (i.e., the backspace). Specifically, these backpackers had unprotected sex with partners they had just met. Furthermore, the risky sexual behaviors were attributed to factors that characterized the backspace context or "situation," such as an emphasis on meeting new individuals, flexibility in planning one's schedule, and emphasis on participation in recreational activities (Egan, 2001). Interestingly, theories of this backspace facilitating risky behavior are supported by the fact that 40% of those who had casual sex (i.e. sex with multiple partners or a with a new, non-regular partner) had no history of casual sex, prior to backpacking (Egan, 2001).

Collectively, the Mardi Gras, spring break, backpacking, and other leisurely travel situations demonstrate the facets of a "backspace." Yet, while risky behavior has been documented in these specific contexts, there is a paucity of research examining such activity in first year college students. That is, there are no previous studies examining freshman year as a backspace conducive to risky sexual behavior. This time period is important to study because it comprises the primary adjustment and transition tasks of these young adults.

### 1.2 Factors Associated with Risky Sex: The Person

In addition to the situation, there are several person factors that may play a role in behavior outcomes, such as risky sex. There are many ways to define a "person variable," but the common factor is that these are unique traits of an individual, representing characterological or dispositional factors of a person. There are also a variety of ways person factors can be developed, ranging from genetics, to the culture or environment in which one was raised, to learning and patterns of reinforcement. While various theories account for the etiology of these person factors, such traits can be understood as factors that are unique to the "person" or individual differences prior to entering any given situation. Person factors may range from one's unique personality traits to one's previous history of activities and behaviors (Egan, 2001). A person factor might include high or low levels of a specific personality trait. Twin studies, for example, have indicated a genetic link to risky sexual activity, of which 33% can be accounted for by such genetics alone (Zietsch, Verweij, Bailey, Wright, & Martin, 2010).

In some cases, specific personality traits have been associated with engagement in risky sexual behavior. One such trait is extraversion, which involves one's social

behaviors and tendencies. People with high levels of this trait are often very active with others and uninhibited, have a keen desire for excitement, and enjoy spontaneity or chance taking; whereas those with low levels may be more solitary, prefer quiet, intimate engagements, and be unlikely to act on impulse (Eysenck & Eysenck, 1985). In addition, extraversion is related to risky substance use and risky sexual practices (Cooper, Agocha, & Sheldon, 2000). In fact, there is an association between extraversion and risky sexual behaviors, such that higher levels of extraversion increase the likelihood of engaging in risky sex. One explanation could be that those with higher levels of extraversion have an increased likelihood of engaging in risky behavior in order to enhance their positive feelings. This may be due to the more outgoing and assertive dispositions of highly extroverted individuals, which provides them with the ability to create opportunities for risky sexual partnerships (Cooper, Agocha, & Sheldon, 2000).

Another personality trait associated with risky sex is neuroticism, which involves one's emotional lability. Those with elevated levels may be extremely sensitive to stress, and may become easily or frequently worried, anxious, or irritable. By contrast, those with lower levels of this trait are typically better at self-regulation, and more adaptable or flexible (Eysenck & Eysenck, 1985). Similar to extraversion, the neuroticism trait has been associated with risky substance and sexual practices (Cooper, Agocha, & Sheldon, 2000). Furthermore, those with high levels of neuroticism appear to engage in risky behavior in order to cope with unpleasant, uncomfortable mood. In addition to using sex as a coping mechanism, sex with various partners offers a means of reassuring highly neurotic individuals of their worth, value, or attractiveness (Cooper, Agocha, & Sheldon, 2000; Donohew, Bardo, & Zimmerman, 2004; Katz, Fromme, & D'Amico, 2000).

Neuroticism has also directly predicted risky sexual behavior, accounting for 10% of the variance of this health-jeopardizing act (Cooper, Agocha, & Sheldon, 2000). Moreover, those who score lower on neuroticism have approximately 50% fewer risky sexual behaviors than those who are elevated on this personality trait (Cooper, Agocha, & Sheldon, 2000).

The third personality trait most commonly linked to risky sex is sensation-seeking. This personality trait involves one's desire and readiness for varied types of experiences. Those with higher levels of sensation-seeking often possess a drive to seek out new stimuli that might elicit strong physical or emotional arousal, while those with lower levels typically prefer more familiar settings and experiences (Ravert, Schwartz, Zamboanga, Kim, Weisskirch, & Bersamin, 2009). This personality trait is associated with engagement in health jeopardizing behaviors (Katz, From, & D'Amico, 2000). A relationship between high levels of the sensation-seeking personality trait and participation in risky behavior has been supported in numerous studies, and a sense of impulsivity or sensation-seeking interacts with extraversion and neuroticism traits to further predict motives for such risky behavior. Coupled with this, specific personality traits appear to play a role in emotional dysregulation which leads to a greater likelihood for engagement in risky sexual behavior. Impulsivity-sensation-seeking, for example, has been linked to participation in a variety of behavior problems, including unsafe sexual activity involving multiple partners and failed or inconsistent condom use (Cooper, Wood, Orcutt, & Albino, 2003). Collectively, elevated levels of these three personality traits suggests a higher rate of participation in risky behavior, especially risky sexual

activity, due to poor impulse control, and elevated levels of sensation-seeking also predict other risky acts such as binge drinking (Cooper, Agocha, & Sheldon, 2000).

### 1.3 Theoretical Models

In sum, research has consistently demonstrated that both personal and environmental factors can influence risky behavior. One model that can assist an understanding of this risky sex in backspace situations is the Triandis Model of Interpersonal Behavior. This model takes into account both person and situation factors in the prediction of intentions to engage in risky sex, as well as subsequent behaviors. This theoretical approach accounts for one's personal beliefs, intentions, previous experience, and the situational or environmental conditions. In addition, it has been used several times to predict risky sexual behavior (Milhausen, Reece, & Perera, 2006). However, one concern with the Triandis Model of Interpersonal Behavior is the emphasis placed on intentions, because most of the research utilizing this model has failed to document the predictive utility of this factor. Accurate reporting may be less likely to occur in a person who has already engaged in risky sexual behavior due to cognitive dissonance. That is, a person who has previously engaged in risky sexual behavior may be unlikely to report that s/he did *not intend* to behave this way, after already having engaged in the act.

A further concern of research using the Triandis model is the lack of a control group in the examination of playful deviance in backspace settings. Instead, much of the previous research has focused on those behavioral pursuits that take place in a backspace, but has not compared them to the behavioral pursuits of those *not* in a backspace, in a controlled study. Therefore, the current study seeks to compare groups by using students

living on campus in the backspace relative to those whom reside off campus with parents or guardians.

An alternative model that may assist our understanding of particular behaviors is the Person by Situation Model (Funder & Colvin, 1991). This model suggests that one's behavior is based on a combination of personal and situational (or environmental) factors and that the confluence of both factors may enhance the likelihood of risky sex occurring (Taylor-Seehafer, 2000). When applied to the context of the freshman experience (i.e., the first time at college), students engage in a high level of sexual activity, including risky sexual activity. It appears that one reason for this is the nature of the context, or "backspace" in which they find themselves. There is also research to suggest that certain "person" factors also increase the likelihood of engaging in risky sexual behavior. As stated, previous attempts to examine these factors have been limited by a heavy focus placed on participant intentions. Using a Person by Situation Model, however, it may be possible to capture a more complete picture of a participant, by using a combination of both person and situation factors to predict the specified behavior. These "person" factors can be characterized by previous engagement in risky behavior and personality traits. In the same vein, "situation" factors can be characterized by residence (i.e. at college in the *backspace*, or at home with guardians). Thus, it is hypothesized that higher levels of the specified personality traits (i.e. extraversion, neuroticism, sensation-seeking) in combination with peer residential status will be predictive of greater change in engagement in sexual risk-taking behavior for first-semester freshmen.

## Chapter 2: Method

### 2.1 Participants

The present study was specifically interested in identifying those factors that are predictive of the *change* in risky sexual activity upon students' entry into the college context. Thus, for the purposes of this study, college freshmen were examined. Non-college students and non-freshmen were excluded from the sample. Additionally, first year students who have previously attended an alternative university for college credit, including transfer students, were excluded from the study in order to specifically assess the change in behavior upon entering the university setting for the first time. Consistent with the literature, the present study sought to examine "risky sexual behavior" in terms of multiple partners and use of protection. That is, risky sex was defined by having multiple partners, failure to use protection against pregnancy and sexually transmitted infections, and inconsistent use of protection.

The sample (n = 252) included first-year college students from a mid-sized East-coast state university and was 43.3% male (n = 109) and 56.7% female (n = 143). Participants reported a mean age of 18.3 years (SD = .55). Slightly more than half of the sample identified as European/European American (56%), and the remainder of the sample self-described their ethnicity as follows: 6.3% African/African American, 7.5% Hispanic/Hispanic American, and 22.2% "other." When asked to indicate sexual orientation, 86.1% of participants described themselves as exclusively heterosexual. In terms of relationship status, 56.3% were single, 17.9% were dating (seeing one or more persons without commitment to monogamy), and 25% were in monogamous relationships. Participants reported an average of 2.3 lifetime sexual partners. In just the

past two months (September and October) at college, 16% of the sample reported having sex without protection against pregnancy, and 21% reported doing so without protection against STIs. In addition, 21% endorsed engaging in sex with one or more new partners.

This sample also comprised of two subgroups, broken down by residential status; these included commuters (n = 49) and residents (n = 203). Commuters included first-year students who lived at home with their parent(s) or legal guardian(s) and commuted to the university, and accounted for 19.4% of the combined sample. Residents include first-year students who lived on campus in university-owned housing or in an off-campus residence with peers, and accounted for 80.6% of the combined sample.

## 2.2 Measures

### Situational Characteristics

In accordance with the Person x Situation Model, measures included assessments of personal characteristics and situational characteristics. Situational characteristics included residential status: whether the individual resides with his or her parents or legal guardians, or whether the individual resides on-campus or with peers off-campus, as an independent. Participants were provided with a dichotomous multiple-choice item requiring the selection of one of these two options. They responded to a single question, "What is your residential status?" with answer choices "with parents guardians" or "on campus."

### Personal Characteristics

Personal characteristics of each participant included measures of risk behaviors prior to, and since entering college, as well as measures of individual personality traits.

*Cognitive Appraisal of Risky Events Questionnaire* (CARE-R, Fromme et. al., 1997). A revised version of the CARE was used to measure risk behaviors. The specific risk behaviors assessed included sexual behavior, drug use, alcohol use, and victimization (females only) and perpetration (males only). While this measure was primarily used for data regarding the frequency of sexual behaviors, the other risk behaviors assessed were used as covariates. This 28-item measure requires participants to indicate the frequency of engaging in a specified behavior (e.g. having sex without using a condom). Responses are coded on a graded scale (0, 1, 2-4, 5-9, 10-20, 21-30, 31+). Participants were asked each of the 28 items twice: the first time the question was asked, participants were directed to respond about the frequency of the specified behavior during high school in the months of April and May 2012; the second time, they were asked to respond about the frequency of the behavior during their freshman year in the months of September and October 2012. Responses were summed for the items corresponding to participants' experience prior to entering college to yield a total "Pre" score for each type of risky behavior. Likewise, responses were summed to yield a total "Post" score for each type of risky behavior since entering college. For each summed score, higher scores were indicative of higher levels of risky behavior for each time (Pre or Post), respectively.

Drug use, alcohol use, victimization, and perpetration comprised the covariates assessed on the CARE-R. For history of drug use, scores range from 7 to 56. Cronbach's alpha for the current study was $\alpha = .59$. For alcohol use, scores range from 8 to 64. Cronbach's alpha for the current study was $\alpha = .80$. For victimization (females only), scores range from 5 to 40, and Cronbach's alpha for the current study was $\alpha = .72$. For

perpetration (males only), scores range from 5 to 35, and Cronbach's alpha for the current study was $\alpha = .86$.

The dependent variable in this study is the change in sexual risk-taking behaviors. It was obtained by subtracting the "Pre" score for risky sexual behavior (possible scores ranged from 12 to 84) from the "Post" score for risky sexual behavior (possible scores ranged from 12 to 84). This provided the difference or overall change score for risky sexual behavior. Cronbach's alpha for the current study was $\alpha = .76$.

*Zuckerman-Kuhlman Personality Questionnaire* (ZKPQ, Zuckerman, 2002). The ZKPQ was used to measure sensation-seeking (Zuckerman, 2002). A modified 10-item version of the sensation-seeking subscale measure was used. Specifically, item #19 of the ZKPQ sensation-seeking subscale, which asks about one's frequency of changing interests, was omitted due to transcription error. Therefore, scores from this modified version represent the sum of the 10 sensation-seeking items and does not include the additional 6 impulsivity items. The measure requires participants to respond to items developed to detect a tendency to seek out exciting or novel experiences without typically allotting much consideration to potential consequences. Responses are coded as true-or-false, with higher numbers of "true" responses corresponding to higher levels of sensation-seeking. Potential scores on this measure range from a minimum of 0 to a maximum of 10. Cronbach's alpha has been established adequately in previous research, ranging from $\alpha = .70$ to .80 (Katz & D'Amico, 2000; Zuckerman, 2002). Cronbach's alpha for the current study was $\alpha = .77$.

*Eysenck Personality Questionnaire* (EPQ-R, Eysenck & Eysenck, 1985). The EPQ-R was used to measure neuroticism using the neuroticism subscale from the revised

version. In addition, the lie subscale of this instrument was used to attain a measure of social desirability (Eysenck & Eysenck, 1985). This 12-item measure asks participants to respond to statements that are intended to assess emotional reactivity. Responses are coded as yes-or-no, with higher scores indicative of higher emotional hypersensitivity. Potential scores on this measure range from a minimum of 0 to a maximum of 12. Cronbach's alpha has been established adequately in previous research, with internal reliability ranging from $\alpha = .78$ to .90 (Cooper & Sheldon, 2000; Costa & McCrae, 1995). Cronbach's alpha for the current study was $\alpha = .83$. A measure of extraversion was assessed using the extraversion subscale from the same instrument. An 11-item version was used due to transcription error. Therefore, scores from this modified version represent the sum of 11 extraversion items as opposed to the original 12 items. This measure asks participants to respond to statements that are intended to assess social inhibition, spontaneity, and interpersonal ease. Responses are coded as yes-or-no, with higher scores indicative of higher levels of extraversion. Potential scores on this measure range from a minimum of 0 to a maximum of 11. This measure has established good psychometric properties, including an internal reliability ranging from $\alpha = .78$ to .90, and validation in both a variety of measure forms (e.g. short, revised) and populations (e.g. validated in more than five countries) (Cooper & Sheldon, 2000; Costa & McCrae, 1995; Francis, Lewis, Ziebertz, 2006). Cronbach's alpha for the current study was $\alpha = .85$.

Items from all three scales measuring personality traits were first individually summed to yield a total score for each trait, with higher scores indicating higher levels of that risk-taking personality trait. Analyses were then run separately for each personality trait, including extraversion, neuroticism, and sensation-seeking.

## 2.3 Procedure

Ethical clearance to conduct the study was obtained from the Institutional Review Board of Rowan University. Participants were students from the freshmen class recruited in two ways: 1) via SONA, the department's electronic student participant pool, and 2) via email sent to all freshmen containing a link to the online survey. All participants were informed of the study in a written description, and those who agreed to participate were provided with an informed consent prior to completing the anonymous online survey. All participants received the same, identical survey, with all items and measures in the following order: demographic questions, *CARE-R*, *ZKPQ*, *EPQ-R*. After completing the survey, participants were debriefed in writing. Those participating via SONA were awarded research credit for their Psychology courses, and those participating via the emailed survey link were offered the opportunity to enter their name into a drawing for one of two $50 Amazon gift cards, selected at random. Participants who chose to enter their name for a chance to win a gift card did so upon completion of the survey, and their data was not individually identifiable or connected to their entry in the drawing.

## Chapter 3: Results

Table 1 presents intercorrelations, means, and standard deviations for gender, sensation-seeking, extraversion, neuroticism, victimization history (females only), perpetration history (males only), drug history, alcohol history, and the behavioral change score in risky sexual behavior between high school and college as a function of residential status. Overall, higher sensation-seeking was associated with high drug use, alcohol use, and victimization history in residents. High extraversion was also associated with high alcohol history for residents. For commuters, reports of greater alcohol history

Table 1

Intercorrelations, Means, and Standard Deviations for Relevant Variables as a Function of Residential Status

| | Measure | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Gender | — | -.12 | .11 | .22** | | -.02 | -.02 | | .09 | | |
| 2. | SS | -.03 | — | ..30** | -.14* | .27** | .20 | .32** | .28** | .01 | 4.82 | 2.69 |
| 3. | Extra | .22 | .14 | — | -.26** | .08 | .18 | .10 | .32** | -.04 | 6.94 | 3.33 |
| 4. | Neuro | -.02 | | -.31* | — | -.02 | -.10 | -.06 | -.10 | -.06 | 6.55 | 3.60 |
| 5. | PreVictim | | .26 | .47** | -.24 | — | | .35** | .55** | -.12 | 6.07 | 1.81 |
| 6. | PrePerp | | .58** | .27 | | | — | .24* | .22* | -.22* | 5.15 | .93 |
| 7. | PreDrug | -.01 | .28 | .38** | -.09 | .33 | .54* | — | .45** | -.04 | 7.00 | 2.18 |
| 8. | PreAlcohol | .10 | .44** | .53** | -.27 | .59** | .42 | .69** | — | -.01 | 11.06 | 4.97 |
| 9. | DiffScore | .05 | .01 | -.11 | -.13 | .26 | -.05 | -.24 | -.21 | — | 1.71 | 5.15 |
| M | | | 4.72 | 6.78 | 6.45 | 6.07 | 5.37 | 7.16 | 11.29 | 2.03 | | |
| SD | | | 2.66 | 3.24 | 3.39 | 2.37 | 2.26 | 2.55 | 4.54 | 5.59 | | |

Note. Intercorrelations for residents (n=203) are presented above the diagonal, and intercorrelations for commuters (n=49) are presented below the diagonal. Mean and standard deviations, minimums, and for residents are presented in the vertical columns, and means and standard deviations for commuters are presented in the horizontal rows. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. Gender = 1 male, 2 female; SS = Sensation Seeking (Zuckerman Kuhlman Personality Questionnaire); Extra = Extraversion (Eysenck Personality Questionnaire); Neuro = Neuroticism (Eysenck Personality Questionnaire); PreVictimization = History of Victimization (Cognitive Appraisal of Risky Events); PrePerp = History of Perpetration (Cognitive Appraisal of Risky Events); PreDrug = History of Drug Use (Cognitive Appraisal of Risky Events); PreAlcohol = History of Alcohol Use (Cognitive Appraisal of Risky Events); DiffScore = Difference in measures of sexual risk-taking behavior between college and high school. **p<.01. *p<.05.

were associated with higher levels of sensation-seeking, extraversion, history of victimization (for females only), and history of drug use. Higher levels of sensation-seeking were also associated with greater history of perpetration for male commuters; while higher levels of extraversion were associated with greater history of drug use for all commuters, and victimization history (for females only) in commuters. Behavior change scores for risky sex were not significantly correlated with any of the personality traits for residents or commuters.

Upon examination of the personality traits of participants, the combined sample fell in the moderate range on sensation-seeking personality, with a mean score of 4.7 (SD = 2.7); and participants scored in the moderate range on measures of both extraversion and neuroticism, with means of 6.8 and 6.5 (SD = 3.2 and SD = 3.4), respectively. In terms of self-reported risky behaviors prior to entering college, the combined sample also endorsed a moderate level of risky sexual behavior, with a mean of 14.3 (SD = 4.4). Participants also endorsed low levels of alcohol use with a mean of 11.2 (SD = 4.6) prior to school, and drug use with a mean score of 7.2 (SD = 2.5). After the first two months of participants' freshmen year, the combined sample reported a slight increase in risky sexual behavior, with a mean of 16.3 compared to 14.3 in high school; they also indicated a slight increase in alcohol use with a mean of 11.6 compared to 11.2 in high school, as well as a slight increase in drug use with a mean of 7.2 compared to 7.1 in high school.

Two independent samples t-tests were run to examine the differences on personality traits by residential status and by gender (please refer to Table 2 and Table 3). The first t-test suggested no significant differences in the change in risky sexual behavior for commuters compared to residents. However, females (M = 6.97) compared to males

Table 2

Person Characteristics for Residents and Commuters

| | Residents M (SD) | Commuters M (SD) | t | P |
|---|---|---|---|---|
| DifferenceScore | 1.907 (5.601) | 1.946 (5.201) | .047 | .963 |
| SS | 4.802 (2.679) | 4.759 (2.815) | -.103 | .918 |
| EPQR_Extra | 6.820 (3.232) | 6.808 (3.308) | -.023 | .981 |
| EPQR_Neuro | 6.522 (3.414) | 6.346 (3.613) | -.328 | .743 |
| EPQR_ lie | 6.663 (3.234) | 6.327 (3.092) | -.676 | .500 |
| PreVictim | 6.112 (2.343) | 5.941 (1.705) | -.397 | .692 |
| PrePerp | 5.340 (2.157) | 5.130 (0.869) | -.456 | .649 |
| PreDrug | 7.133 (5.510) | 6.891 (2.079) | -.660 | .510 |
| PreAlcohol | 11.248 (4.558) | 10.873 (4.819) | -.539 | .590 |
| PostVictim | 5.941 (1.801) | 5.546 (1.252) | -1.184 | .238 |
| PostPerp | 5.141 (1.054) | 5.143 (0.910) | .006 | .995 |
| PostDrug | 7.186 (2.810) | 7.130 (2.829) | -.131 | .896 |
| PostAlcohol | 11.814 (4.562) | 10.463 (4.777) | -1.923 | .056 |

SD: standard deviation

P: significance

Table 3

Person Characteristics for Males and Females

| | Males M (SD) | Females M (SD) | t | P |
|---|---|---|---|---|
| DifferenceScore | 1.365 (4.723) | 2.400 (6.071) | -1.518 | .130 |
| SS | 50136 (2.572) | 4.553 (2.769) | 1.735 | .084 |
| EPQR_Extra | 6.275 (3.405) | 6.275 (3.404) | -2.371 | .018 |
| EPQR_Neuro | 5.826 (3.445) | 6.966 (3.370) | -2.661 | .008 |
| EPQR_ lie | 6.431 (3.035) | 6.725 (3.316) | -.728 | .467 |
| PreDrug | 7.214 (2.525) | 7.019 (2.382) | .652 | .515 |
| PreAlcohol | 11.077 (5.255) | 11.248 (4.849) | -.305 | .761 |
| PostDrug | 7.179 (2.901) | 7.203 (2.766) | -.068 | .945 |
| PostAlcohol | 11.214 (4.433) | 11.784 (4.756) | -.992 | .322 |

SD: standard deviation

P: significance

(M=5.83) were more neurotic. Females (M=7.23) compared to males (M=6.28) and were also more extraverted. An independent t-test showed that the difference between genders was significant.

**Inferential Analyses**

In an effort to more fully clarify how person factors (i.e. personality traits) may interact with situation factors (i.e. residential status) to affect change in engagement in risky sexual behavior between high school and college, a series of three hierarchical linear regression analyses were used. That is, further analyses were conducted to assess whether the independent variables were predictive of change in sexual risk-taking behavior. Nominal independent variables were coded as follows: (a) residential status: 1 = commuter, 2 = resident; (b) participant gender: 1 = male, 2 = female. Hierarchical linear regression analyses were conducted separately for each of the three personality traits (sensation-seeking, neuroticism, and extraversion) (please refer to Table 4). In each regression, covariates were entered in the first block. Potential covariates included gender and social desirability as assessed on the *CARE-R.* In the second block, main effects were examined. More specifically, the specific personality trait (respective to the appropriate, separately hierarchal linear regression) and residential status was examined to determine if either was significantly predictive of change in sexual risk-taking behavior, prior to the addition of the interaction term. In the third block, the interaction of *both* the identified personality trait and residential status were explored to determine if residential status (either with peers [i.e. "residents"] or with parents/legal guardians [i.e. "commuters"]) significantly interacted with personality to predict change sexual risk-

Table 4

Hierarchical Linear Regressions Analyses Predicting Change in Sexual Risk Taking Behavior Between High School and College Related to Personality Traits and Residential Status

| | | SS | | | Neuro | | | Extra | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Predictor | | β | t | $R^2$ | β | t | $R^2$ | β | t | $R^2$ |
| Step 1 | | | | .006 | | | .006 | | | .006 |
| | EPQR_lie | .004 | .058 | | .004 | .058 | | .004 | .058 | |
| | Gender | .079 | 1.258 | | .079 | 1.258 | | .079 | 1.258 | |
| Step 2 | | | | .009 | | | .019 | | | .014 |
| | Pers_Trait | .004 | .065 | | -.102 | -1.588 | | -.069 | -1.087 | |
| | Res_Status | .053 | .844 | | .056 | .895 | | .054 | .864 | |
| Step 3 | | | | .009 | | | .019 | | | .015 |
| | Interaction | .021 | .075 | | -.030 | -.109 | | .163 | .581 | |

Note: SS = sensation seeking personality trait; Neuro = neuroticism personality trait; Extra = Extraversion personality trait; EPQR_lie = social desirability scale. Pers_Trait is each personality trait centered (either sensation seeking, neuroticism, or extraversion). Res_Status is residential status. Interaction is the interaction term.

taking behavior. Thus, the ultimate goal was to identify whether the confluence of these variables was predictive of change in sexual risk-taking behavior.

*Sensation-seeking*. The results of step one indicated that the variance accounted for ($R^2$) with the first two predictors equaled .006, which was not significantly different from zero ($F (2, 257) = .798, p < .05$). The change in variance accounted for ($\Delta R^2$) was equal to .009, which was not a statistically significant increase in variance accounted for over the step one model. In the third step, the interaction term was entered (interaction of sensation seeking and residential status. The change in variance accounted for was equal to .009, offering no additional significant differences to the model. Thus, no main effects or interactions were significant for sensation-seeking.

*Neuroticism*. The results of step one indicated that the variance accounted for ($R^2$) with the first two predictors equaled .006, which was not significantly different from zero ($F (2, 257) = .798, p < .05$). The change in variance accounted for ($\Delta R^2$) was equal to .019, which was not a statistically significant increase in variance accounted for over the step one model. In the third step, the interaction term was entered (interaction of sensation seeking and residential status. The change in variance accounted for was equal to .019, offering no additional significant differences to the model. Thus, no main effects or interactions were significant for neuroticism.

*Extraversion*. The results of step one indicated that the variance accounted for ($R^2$) with the first two predictors equaled .006, which was not significantly different from zero ($F (2, 257) = .798, p < .05$). The change in variance accounted for ($\Delta R^2$) was equal to .014, which was not a statistically significant increase in variance accounted for over the step one model. In the third step, the interaction term was entered (interaction of

sensation seeking and residential status. The change in variance accounted for was equal to .015, offering no additional significant differences to the model. Thus, no main effects or interactions were significant for extraversion.

## Chapter 4: Discussion

The current study sought to examine whether higher levels of the specified personality traits (i.e. sensation-seeking, extraversion, neuroticism) in combination with peer residential status would be predictive of greater change in engagement in sexual risk-taking behavior for first-semester freshmen. Results failed to support this hypothesis as the interaction of residential status in the backspace (i.e., living on campus or with peers) with elevated levels of any of the three personality traits (sensation-seeking, neuroticism, and extraversion) did not predict statistically significant change in risky sexual behavior between high school and college. Such findings are interesting, as the body of literature on both "backspace" as well as the three personality traits under review offered support for the proposed hypothesis.

One possible explanation for this may be students' underlying motivation for travel into the backspace or their expectations about what might occur in college, for example. That is, college may differ from other situations and locations previously conceptualized as backspaces in that individuals traveling to backspaces whom expect a party atmosphere or leisurely vacation may differ from students going to college with a primary focus on commitment to education and the pursuit of professional aspirations. Consequently, motivations and expectancies might offer a promising new variable for further research.

It may also be the case that the lack of change in behavior from high school to college may be better accounted for by a definition of behavior that focuses on continuity of behavior throughout the lifespan or one's development. In other words, rather than conceptualizing a given behavior (such as risky sex) as the product of the "nature and

nurture" interaction, it may make more sense to more directly focus on prior behaviors to predict future behaviors. Understood this way, one can make sense of findings from the current study as the continuation of behavioral patterns that were previously begun in high school, suggesting that person factors may explain more of the variance than the interaction of person and situation. Consequently, such factors as victimization, perpetration, and risky drug and alcohol use may serve as key variables to understand the behavior of the college freshman.

Perhaps one of the most important aspects of the current study is the exploratory nature; virtually no research has examined the first experience in college as a backspace. That is, this is the first study to examine the change in risky sexual behaviors as one leaves high school and begins the freshman year of college. Therefore, more studies are needed to clarify the nature of the freshman experience in the backspace construct of college.

It is also possible that the current sample may represent a conservative population, endorsing an average of 2.3 lifetime sexual partners, while national data suggests that the typical American college student has an average of more than 8 sexual partners (National Institute on Alcohol Abuse and Alcoholism, 2005). As a result, the sample's reported participation in risky sexual behavior may also be conservative and underestimate the change in actual risky sexual behavior upon beginning college. This may skew the ability to generalize such findings on a national level. In essence, because the sample was already more conservative than the national average in terms of previous sexual behavior, it might have been less likely that this group would exhibit a significant increase in their health jeopardizing behaviors, based on the trends of their past behaviors.

Similarly, almost a quarter of the sample identified commitment to a monogamous relationship. Thus, while the definition of risky sexual behavior remained consistent with the literature in terms of 1) multiple partners, 2) failure to use protection, 3) inconsistent use of protection, it is possible that one quarter of participants' commitment to monogamy in the current study reduced the overall scores on measures of risky sexual behavior given the criterion of multiple partners. This may suggest benefit of either excluding monogamy partner status, or using this as a covariate, in future research examining risky sex defined in this way.

While the sample size offered more than adequate power (a power analysis required a minimum 200 participants for significant power, and the current sample was comprised of n = 252), the distribution of the sample may help explain the lack of significance of residential status as offering additional predictive utility to the model. Approximately 80% of the sample endorsed backspace residence, while the remaining 20% resided at home with their parents or guardians. As a result, findings in terms of change in risky behavior could be skewed as a result of restricted range, and future studies would do well to examine a sample more evenly split on residence or control for uneven sample sizes.

The current study featured a retrospective design that allowed for the collection of behavioral data from the last two months of high school, in addition to the first two months of college, in order to compute the behavioral change score for participation in risky behavior. However, it may be possible that the self-report data could be influenced by poor memory that is subject to bias. This is particularly critical as participants were asked to quantify a variety of very specific behaviors in two separate two-month time

frames. Because these quantified behaviors were used to assess risky sex and compute the dependent variable (of change in risky sexual behavior), inaccurate reporting could dramatically change overall findings of this research. Future research may benefit from utilizing a longitudinal design in order to assess behavior at time points directly after the time frame being assessed and reduce the potential for inaccurate reporting due to problems associated with memory.

Contrary to the Person by Situation Model, which suggests that each of these constructs, alone, might be predictive, it is assumed that the interaction of the two offers greater, maximized predictive utility. Thus, these results suggest that although elevated levels of the sensation-seeking, extraversion, and neuroticism personality traits (the person factors) and residence on campus at college in the backspace (the situation factor) may be individually linked to risky behavior, the interaction of these might not strengthen the predictive utility for such behavior. Such results were interesting because the literature suggests that the interaction of these factors would be significant, as evidenced by prior research on the backspace construct while on vacation, studying abroad, backpacking, or at Mardi Gras (Bellis, Hughes, Thomson, & Bennett, 2004; Benotsch et al., 2007; Egan, 2001; Maticka-Tyndale, Herold, & Mewhinney, 1998; Milhausen, Reece, & Perera, 2006; Pedersen, Larimer, & Lee, 2010; Ribeiro, Durrenberger, Yarnal, & Chick, 2009). It thus appears that each of these factors may represent distinct categories of risk taking.

What results of this study may highlight is that in spite of the null findings for increases in risky behavior on campus for college students since the end of their high school careers—these findings may speak to the nature of the "freshmen experience." As

evidenced by other experiences assessed in this sample, risky sexual behavior *is* in fact occurring in the college setting at a high rate. In the current sample, more than 20% reported having sex without protection against sexually transmitted infections in just the first two months of college, for example. In essence, then, it may be the full immersement in the college setting, as a whole, rather than the physical location—as the "backspace" that facilitates engagement in risky behavior, specifically risky sexual behavior.

References

Ahern, N. R. (2009). Risky behavior of adolescent college students. *Journal Of Psychosocial Nursing And Mental Health Services*, *47*(4), 21-25. doi:10.3928/02793695-20090401-02

Aluja, A., Rossier, J., García, L. F., Angleitner, A., Kuhlman, M., & Zuckerman, M. (2006). A cross-cultural shortened form of the ZKPQ (ZKPQ-50-cc) adapted to English, French, German, and Spanish languages. *Personality And Individual Differences*, *41*(4), 619-628. doi:10.1016/j.paid.2006.03.001

Bailey, J. A., Haggerty, K. P., White, H. R., & Catalano, R. F. (2011). Associations between changing developmental contexts and risky sexual behavior in the two years following high school. *Archives Of Sexual Behavior*, *40*(5), 951-960. doi:10.1007/s10508-010-9633-0

Baker, R. W., McNeil, O. V., & Siryk, B. (1985). Expectation and reality in freshman adjustment to college. *Journal of Counseling Psychology,* 32(1), 94-103. doi:10.1037/0022-0167.32.1.94

BCS Alliance. (2005). How your age affects your credit score. Retrieved from http://www.bcsalliance.com/credit_averagescores.html

Bellis, K., Hughes, K., Thomson, R., Bennett, A. (2004). Sexual behavior of young people in international tourist resorts. *Sex Transm Infect, 80,* 43-47.

Benotsch, E. G., Nettles, C. D., Wong, F., Redmann, J., Boschini, J., Pinkerton, S. D., & Mikytuck, J. J. (2007). Sexual risk behavior in men attending Mardi gras celebrations in New Orleans, Louisiana. *Journal Of Community Health: The Publication For Health Promotion And Disease Prevention*, *32*(5), 343-356. doi:10.1007/s10900-007-9054-8

Best, A., Stokols, D., Green, L. W., Leischow, S., Holmes, B., & Buchholz, K. (2003). An Integrative Framework for Community Partnering to Translate Theory Into Effective Health Promotion Strategy. *American Journal Of Health Promotion*, *18*(2), 168-176.

Britt, D. W., & Campbell, E. Q. (1977). Assessing the linkage of norms, environments, and deviance. *Social Forces*, *56*(2), 532-550. doi:10.2307/2577739

Calvert, W. J., Bucholz, K., & Steger-May, K. (2010). Early drinking and its association with adolescents' participation in risky behaviors. *Journal Of The American Psychiatric Nurses Association*, *16*(4), 239-251. doi:10.1177/1078390310374356

Centers for Disease Control and Prevention. (2010). *Alcohol and public health* [Fact

sheet]. Retrieved from CDC website: http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

Cooper, M., Agocha, V., & Sheldon, M. S. (2000). A motivational perspective on risky behaviors: The role of personality and affect regulatory processes. *Journal Of Personality*, *68*(6), 1059-1088. doi:10.1111/1467-6494.00126

Cooper, M., Wood, P. K., Orcutt, H. K., & Albino, A. (2003). Personality and the predisposition to engage in risky or problem behaviors during adolescence. *Journal Of Personality And Social Psychology*, *84*(2), 390-410. doi:10.1037/0022-3514.84.2.390

Costa, P. T., & McCrae, R. R. (1995). Primary traits of Eysenck's P-E-N system: Three- and five-factor solutions. *Journal Of Personality And Social Psychology*, *69*(2), 308-317. doi:10.1037/0022-3514.69.2.308

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:10.1037/1040-3590.19.1.107

Crockett, L. J., Raffaelli, M., & Shen, Y. (2006). Linking Self-Regulation and Risk Proneness to Risky Sexual Behavior: Pathways through Peer Pressure and Early Substance Use. *Journal Of Research On Adolescence*, *16*(4), 503-525. doi:10.1111/j.1532-7795.2006.00505.x

Dankoski, M. E., Payer, R., & Steinberg, M. (1996). Broadening the concept of adolescent promiscuity: Male accountability made visible and the implications for family therapists. *American Journal Of Family Therapy*, *24*(4), 367-381. doi:10.1080/01926189608251048

Donohew, L., Bardo, M. T., & Zimmerman, R. S. (2004). [Personality and Risky Behavior: Communication and Prevention]. In R. M. Stelmack (Ed.), *On the Psychobiology of Personality: Essays in Honor of Marvin Zuckerman* (pp. 223-245). Amsterdam: Elsevier.

Egan, C. (2001). Sexual behaviors, condom use and factors influencing casual sex among backpackers and other young international travelers. *The Canadian Journal of Human Sexuality, 10(1-2),* 41-58.

Eysenck, H. J., & Eysenck, S. (n.d). Eysenck Personality Questionnaire [Revised].

Fisher,T., Moore, Z., & Pittenger, M. (2011): Sex on the Brain?: An Examination of Frequency of Sexual Cognitions as a Function of Gender, Erotophilia, and Social Desirability, *Journal of Sex Research*, 49:1, 69-77

Francis, L. J., Lewis, C. A., Ziebertz, H. G. (2006) The short-form revised Eysenck personality questionnaire (EPQ-S): A German edition. Social Behavior and Personality, 34 (2), 197-204

Funder, D. C., & Colvin, C. (1991). Explorations in behavioral consistency: Properties of persons, situations, and behaviors. *Journal Of Personality And Social Psychology,* 60(5), 733-794. Doi:1037/0022-3514.60.5.773

Fuqua, J., Stokols, D., Gress, J., Phillips, K., & Harvey, R. (2004). Transdisciplinary Collaboration as a Basis for Enhancing the Science and Prevention of Substance Use and 'Abuse'. *Substance Use & Misuse*, *39*(10-12), 1457-1514. doi:10.1081/JA-200033200

Goffman, E. (2003). Impression management: The presentation of self in everyday life. In J. M. Henslin (Ed.) , *Down to earth sociology: Introductory readings (12th ed.)* (pp. 118-128). New York, NY US: Free Press.

Joireman, J., & Kuhlman, D. M. (2004). [The Zuckerman-Kuhlman Personality Questionnaire: Origin, Development, and Validity of a Measure to Asses an Alternative Five-Factor Model of Personality]. In R. M. Stelmack (Ed.), *On the Psychobiology of Personality* (pp. 49-64). Amsterdam: Elsevier.

Katz, E. C., Fromme, K., & D'Amico, E. J. (2000). Effects of outcome expectancies and personality on young adults' illicit drug use, heavy drinking, and risky sexual behavior. *Cognitive Therapy And Research*, *24*(1), 1-22. doi:10.1023/A:1005460107337

Landis, D., Triandis, H., Adamopoulos, J. (1978). Habit and behavioral intentions as predictors of social behavior. *The Journal of Social Psychology, 106,* 227-237.

Maticka-Tyndale, E., Herold, E. S., & Mewhinney, D. (1998). Casual sex on spring break: Intentions and behaviors of Canadian students. *Journal Of Sex Research*, *35*(3), 254-264. doi:10.1080/00224499809551941

Milhousen, R., Reece, M., Perera, B. (2006). A theory-based approach to understanding sexual behavior at Mardi Gras. *The Journal of Sex Research, 43*(2), 97-106.

National Association of Anorexia Nervosa and Associated Disorders. (2012). *Eating Disorders Statistics*. Retrieved from ANAD website: http://www.anad.org/get-information/about-eating-disorders/eating-disorders-statistics/

National Institute on Alcohol Abuse and Alcoholism. (2005). *Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence* (M. L. Cooper, Author). Retrieved from http://www.collegedrinkingprevention.gov/supportingresearch/journal/cooper.aspx

O'Hare, T. (2005). Risky sex and drinking contexts in freshman first offenders. *Addictive Behaviors*, *30*(3), 585-588. doi:10.1016/j.addbeh.2004.07.002

Pedersen – Perceived behavioral alcohol norms predict drinking for college students while studying abroad

Pedersen, E., Larimer, M., Lee, C. (2010). When in Rome: Factors associated with changes in drinking behavior among American college students studying abroad. *Psychology of Addictive Behaviors*, *24*(3), 535-540.

Ravert, R. D., Schwartz, S. J., Zamboanga, B. L., Kim, S., Weisskirch, R. S., & Bersamin, M. (2009). Sensation seeking and danger invulnerability: Paths to college student risk-taking. *Personality And Individual Differences*, *47*(7), 763-768. doi:10.1016/j.paid.2009.06.017

Redmon, D. (2003). Playful deviance as an urban leisure activity: Secret selves, self-validation, and entertaining performances. *Deviant Behavior*, *24*(1), 27-51. doi:10.1080/10639620390117174

Ribeiro, N., Durrenberger, E., Yarnal, C., Chick, G. (2009). "I just wanted to get away": An analysis of spring breakers' travel motivations. Proceedings of the 2009 Northeastern Recreation Research Symposium.

Schmitz, P. G. (2004). On the Alternative Five-Factor Model: Structure and Correlates. In R. M. Stelmack (Ed.) , *On the psychobiology of personality: Essays in honor of Marvin Zuckerman* (pp. 65-87). New York, NY US: Elsevier Science. doi:10.1016/B978-008044209-9/50006-3

Scott-Sheldon, L. J., Carey, M. P., & Carey, K. B. (2010). Alcohol and risky sexual behavior among heavy drinking college students. *AIDS And Behavior*, *14*(4), 845-853. doi:10.1007/s10461-008-9426-9

Serras, A., Saules, K. K., Cranford, J. A., & Eisenberg, D. (2010). Self-injury, substance use, and associated risk factors in a multi-campus probability sample of college students. *Psychology Of Addictive Behaviors*, *24*(1), 119-128. doi:10.1037/a0017210

Siegel, D., Klein, D., & Roghmann, K. (1999, November). Sexual behavior, contraception, and risk among college students. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/10551664#

Sheth, J. (1982). Some comments on triandis model of choice behavior in marketing. *Research in Marketing, Supplement 1* (pp. 163-167). JAI Press Inc.

Stokols, D. (1995). The paradox of environmental psychology. *American Psychologist*, *50*(10), 821-837. doi:10.1037/0003-066X.50.10.821

Stokols, D. (2003). The ecology of human strengths. In L. G. Aspinwall, U. M. Staudinger, L. G. Aspinwall, U. M. Staudinger (Eds.) , *A psychology of human strengths: Fundamental questions and future directions for a positive psychology* (pp. 331-343). Washington, DC US: American Psychological Association. doi:10.1037/10566-023

Stokols, D., Grzywacz, J. G., McMahan, S., & Phillips, K. (2003). Increasing the Health Promotive Capacity of Human Environments. *American Journal Of Health Promotion*, *18*(1), 4-13.

Taylor-Seehafer, M., & Rew, L. (2000). Risky sexual behavior among adolescent women. *Journal Of The Society Of Pediatric Nurses*, *5*(1), 15-25. doi:10.1111/j.1744-6155.2000.tb00082.x

Testa, M., Hoffman, J. H., & Livingston, J. A. (2010). Alcohol and sexual risk behaviors as mediators of the sexual victimization–revictimization relationship. *Journal Of Consulting And Clinical Psychology*, *78*(2), 249-259. doi:10.1037/a0018914

US Department of Education. (2011). *Fast facts: enrollment*. Retrieved from National Center for Education Statistics website: http://nces.ed.gov/fastfacts/display.asp?id=98

US Department of Health and Human Services. (2011, September). *Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings*. Retrieved from Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality website: http://www.samhsa.gov/data/NSDUH/2k10NSDUH/2k10Results.htm#2.9

Weaver, J. B., III, & Kiewitz, C. (2007). [Eysenck Personality Questionnaire]. In R. A. Reynolds, R. Woods, & J. D. Baker (Authors), *Handbook of Research on Electronic Surveys and Measurements* (pp. 360-363). Idea Group Reference.

Xiao, J., Serido, J., & Shim, S. (2012). Financial education, financial knowledge, and risky credit behavior of college students. In D. J. Lamdin (Ed.) , *Consumer knowledge and financial decisions: Lifespan perspectives* (pp. 113-128). New York, NY US: Springer Science + Business Media.

Zapolski, T. B., Cyders, M. A., & Smith, G. T. (2009). Positive urgency predicts illegal drug use and risky sexual behavior. *Psychology Of Addictive Behaviors*, *23*(2), 348-354. doi:10.1037/a0014684

Zietsch, B. P., Verweij, K. H., Bailey, J. M., Wright, M. J., & Martin, N. G. (2010). Genetic and environmental influences on risky sexual behaviour and its relationship with personality. *Behavior Genetics*, *40*(1), 12-21. doi:10.1007/s10519-009-9300-1

Zuckerman, M. (2002). [Zuckerman-Kuhlman Personality Questionnaire (ZKPQ): An alternative five-factorial model]. In B. De Raad & M. Perugini (Eds.), *Big Five Assessment* (pp. 377-396). Hogrefe & Huber Publishers.

Zuckerman, M. (2008). Personality and sensation seeking. In G. J. Boyle, G. Matthews, D. H. Saklofske (Eds.) , *The SAGE handbook of personality theory and assessment, Vol 1: Personality theories and models* (pp. 379-398). Thousand Oaks, CA US: Sage Publications, Inc.

Zuckerman, M. (2008). Zuckerman-Kuhlman Personality Questionnaire (ZKPQ): An operational definition of the Alternative Five Factorial Model of Personality. In G. J. Boyle, G. Matthews, D. H. Saklofske (Eds.) , *The SAGE handbook of personality theory and assessment, Vol 2: Personality measurement and testing* (pp. 219-238). Thousand Oaks, CA US: Sage Publications, Inc.