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“I Got Your Back”: Friends’ Understandings Regarding College Student Spring Break Behavior

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Abstract

Behaviors that pose threats to safety and health, including binge drinking and unprotected sex, increase during a week-long break from university. Understandings with peers regarding these behaviors may be important for predicting behavior and related harms. College students ($N = 651$; 48% men) reported having understandings with their friends regarding alcohol use (59%) and sexual behavior (45%) during Spring Break. These understandings were to engage in behaviors characterized by risk (e.g., get drunk [23.5%], have sex with someone new [5.2%]) and protection (e.g., drink without getting drunk [17.8%], use condoms [15.8%]). After controlling for previous semester behavior and going on a Spring Break trip, Get Drunk Understandings predicted a greater likelihood of binge drinking and alcohol-related consequences; No/Safe Sex Understandings predicted condom use; and Sex Understandings predicted not using condoms. Understandings with friends regarding Spring Break behavior may be important proximal predictors of risk behaviors and represent potential targets for event-specific prevention.

Keywords

Spring Break; Alcohol use; Sexual behavior; Peer influence; Consequences

Introduction

Celebrations and vacations often include event-specific behavioral health risks, including heavy drinking and sexual behavior. Even short-term increases in these behaviors, however, can produce significant and lifelong negative consequences. Such event-specific risks involving alcohol use have been documented for occasions when individuals plan to drink and consume more alcohol than normal, such as collegiate sporting events (Neal and Fromme 2007), 21st birthdays (Rutledge et al. 2008), and annual holidays such as New

Year's Eve (Del Boca et al. 2004). Similarly, leisure travel is a context in which people across the world often engage in higher than normal risk behaviors (e.g., Bellis et al. 2004; Rogstad 2004). For college students, Spring Break is an annual event providing opportunities to travel and spend time with friends without the usual demands of classes and coursework. This phenomenon of peer-oriented travel has also extended to younger ages, such as high school students' "Beach Week" vacations (Schwartz et al. 1999). Given the variety of events that are associated with specific increases in risk behaviors, it is important to understand what may predict risk behavior during these types of occasions.

Spring Break

During the break from classes and academic commitments, college students have choices regarding how to spend their Spring Break vacations. For many students, especially those who travel with peers, Spring Break is associated with elevated levels of alcohol use and sexual behavior. In fact, opportunities to drink alcohol and to have sex have been shown to be the two strongest motivators for going on Spring Break trips and for choosing particular destinations (Sönmez et al. 2006). During Spring Break, students who go on trips with their friends tend to consume significantly more alcohol and experience more negative effects of drinking than those who do not go on trips (Grekin et al. 2007; Lee et al. 2006; 2009). Sönmez et al. (2006) reported that 68% of vacationers reported drinking more alcohol during Spring Break than they would have at home. Among a convenience sample of Spring Break travelers, men reported an average of ten drinks consumed in the previous evening and women reported an average of six (Smeaton et al. 1998). Acute negative effects of alcohol, such as passing out (9%), are relatively common among college students who travel during Spring Break (Lee et al. 2009). Overall, the week of Spring Break appears to be an event that represents a peak in risk for all drinkers, not just the heaviest drinkers (Greenbaum et al. 2005).

In addition to other risks associated with drinking, alcohol use may be associated with sexual behavior. For example, 53% of college students reported that alcohol influenced their sexual decisions during Spring Break (Sönmez et al. 2006). Although there is scant research on sexual behavior in particular contexts, Spring Break is a documented high risk time period for college student sexual behavior. Maticka-Tyndale et al. (1998) found that, among college students planning a beach trip, 76% of men and 19% of women *intended* to have sex with someone they met on a Spring Break trip. After the trip, 15% of men and 13% of women reported *engaging* in sex with someone they would meet on their trip. In another study of college students, 42% of men and 18% of women preparing for a Spring Break trip intended to "experiment sexually" and afterward about 30% reported having sex with someone they had met on Spring Break (Sönmez et al. 2006). In general, college students do not consistently use condoms (Civic 1999; Kiene et al. 2008; Patrick and Maggs 2009; Scholly et al. 2005) and this generalizes to Spring Break, when students are unlikely to use condoms consistently, particularly with regular partners (Maticka-Tyndale and Herold 1999). The combination of sexual experimentation and lack of consistent condom use during Spring Break may lead to a greater risk of long-term consequences (e.g., sexually transmitted diseases [STDs]), demonstrating the importance of understanding and addressing Spring Break behavioral changes.

To understand whether these risks are specific to Spring Break, it is necessary to examine event-specific behaviors in the context of previous behaviors. The majority of previous studies examining behavior during Spring Break have utilized one-time convenience samples. Therefore, very little is known regarding the predictors of Spring Break behavior above and beyond individuals' typical patterns of behavior and activity involvement. To conclude that Spring Break represents a period of heightened risk for all students that is worthy of scarce prevention resources, it is essential to rule out spurious causal effects by

which highly risk prone individuals are simply drawn to pursue their usual lifestyles together in a single location (Lee et al. 2006). Two previous studies have documented a within-person spike in alcohol use during Spring Break. Lee et al. (2006) used self-reported data across 10 weeks to document that individuals who went on Spring Break trips both drank more during the regular semester and evidenced significant increases in alcohol use behavior during Spring Break. Grekin et al. (2007) utilized prospective data spanning 3 years, with data on Spring Break and non-Spring Break weeks at each wave. Results showed that students who vacationed with friends reported large increases in drinking during Spring Break, whereas other participants tended to have either small increases or even decreases in alcohol use during this period. These studies provide evidence for the event-specific risk of increased alcohol consumption during Spring Break, although very little is known regarding for whom Spring Break is particularly risky. To our knowledge, no previous prospective studies predicting Spring Break sexual behavior have controlled for previous behavior.

Understandings with Friends

Spring Break is a social event for most college students. One possible explanation for increases in Spring Break risk behavior is that students and their friends agree to spend their time away from school in particular ways. Whether college students on Spring Break come to understandings with their peers regarding their planned use of alcohol and sexual behavior may be especially important to understand for this type of event. Documenting students' understandings with friends, or mutual agreements to engage in or avoid certain behaviors during Spring Break, provides a lens into these peer interactions. Available research indeed shows that forming understandings with friends to have casual sex has been shown to be predictive of casual sex intentions and behaviors among Canadian and American college students (Apostolopoulos et al. 2002; Sönmez et al. 2006), particularly among women (Maticka-Tyndale et al. 1998). There is a lack of empirical research regarding similar types of understandings surrounding intentions to engage in alcohol use, and whether understandings predict behavior.

Friends, and understandings with friends, may either encourage or discourage health risk and protective behaviors. An important component of programs to promote Spring Break health is documenting and encouraging existing protective behavioral strategies focused on both alcohol use (e.g., spacing drinks; Martens et al. 2005) and sexual behavior (e.g., carrying condoms; Bryan et al. 2002). Evidence suggests that, at least for drinking, engaging in protective behaviors may decrease the negative consequences experienced from alcohol use (Benton et al. 2004). In addition to investigating whether an understanding was made, it may also be important to know what college students say. In particular, the ways in which students agree to look out for each other on Spring Break will provide basic information regarding the utilization of protective behaviors. Identifying existing strategies of caring for one's self and one's friends, therefore, is an important first step toward prevention and health promotion strategies aimed at supporting and increasing naturally occurring protective behaviors. To address noted gaps in the literature, the present study investigates the understandings students make to engage in risk behaviors and to take precautions in the domains of alcohol use and sexual behavior during Spring Break.

Differences in Behavior by Gender, Activities, and Goals

Given the documented differences in alcohol use and sexual behavior by gender and social involvement, differences in understandings may also be anticipated. Men generally consume alcohol more frequently and in greater quantity per occasion than do women (Johnston et al. 2009; Wilsnack and Wilsnack 2002). However, reports of more prevalent sexual behavior by men than women have been questioned (e.g., Lefkowitz and Gillen 2005). Gender differences in sexual behavior may be found in longer time intervals that are more affected

by cognitive aggregation biases, but not in shorter time periods involving more recent behavior (Brown and Sinclair 1999). Regarding Spring Break, both male and female college students in focus groups reported that drinking is the main objective, but sex would be a bonus (Mewhinney et al. 1995). Men may both anticipate and report experiencing more alcohol use and sexual behavior than women on Spring Break (Maticka-Tyndale and Herold 1997). However, in other studies, more men than women *intended* to have casual sex, but similar percentages of men and women reported actually having casual sex on Spring Break (Maticka-Tyndale et al. 1998; Sönmez et al. 2006). Therefore, gender differences in understandings about behavior and differences in actual behaviors were investigated in the current study.

Participating in social life is a primary goal of most first-year college students. Such social goals and activities are developmentally normative for college students (e.g., Cantor et al. 1991; Salmela-Aro et al. 2007; Salmela-Aro and Nurmi 1997). However, among college students, viewing the social goal of making new friends as important is also a known predictor of planning to drink more (Rhoades and Maggs 2006) and reporting more important reasons for sex, including self-focused (e.g., because it is enjoyable) and partner-focused (e.g., to express love) reasons (Patrick et al. 2007). Furthermore, membership in social activities, such as fraternities and sororities, is associated with more engagement in risk behaviors including alcohol use, sex under the influence of alcohol, and having more sexual partners (Scott-Sheldon et al. 2008), as well as increased risk for alcohol dependence (Grekin and Sher 2006). Therefore, importance of friendship goals and fraternity/sorority membership were also included as predictors of Spring Break behavior, to evaluate whether Spring Break understandings with friends were important predictors beyond these known positive predictors of alcohol use and sexual behavior.

Research Aims and Hypotheses

Based on previous research regarding high-risk Spring Break behaviors among college students, we had four research aims. First, we aimed to document potential gender differences in reporting understandings with friends, engaging in risk behaviors, and experiencing negative consequences of Spring Break alcohol use and sexual behaviors. Based on extant research, we anticipated that men would be more likely than women to have understandings to engage in alcohol use and sexual behaviors, would engage in more alcohol use, and would experience more negative alcohol consequences, whereas women would be more likely than men to have understandings regarding safer behaviors and would engage in more protective behaviors. Sexual behavior differences by gender have not been consistently shown and were not hypothesized. Second, we sought to investigate how students reported looking out for each other on Spring Break, based on responses to open-ended questions. This research aim was exploratory and descriptive in nature. Third, we examined whether types of Spring Break understandings differed by previous behaviors, friendship goals, fraternity/sorority membership, and going on a Spring Break trip. Based on prior work, we hypothesized that individuals who had engaged in more alcohol use and sexual behavior in the past, who had important friendship goals, and who were involved in fraternities or sororities would be more likely to have understandings with their friends to engage in alcohol use and sexual behaviors and less likely to have understandings to engage in safer behaviors. Finally, we aimed to document whether understandings with friends were unique predictors of Spring Break risk behaviors (i.e., binge drinking, no condom use) and alcohol- and sex-related consequences. We hypothesized that understandings with friends would significantly predict behaviors and consequences (i.e., positive associations with understandings to engage in alcohol and sex; negative associations with understandings to engage in safer behaviors), even after controlling for previous behaviors.

Methods

Participants and Procedures

The University Life Study utilized a longitudinal design, with surveys in each of two semesters per academic year (approximately 6 months apart). The current analyses include data from Semester 1 (S1; Fall 2007) and Semester 2 (S2; Spring 2008) of students' first year of college. In the fall semester, a stratified random sampling procedure was used to achieve a diverse sample of first-year students with respect to gender and race/ethnicity. Eligible first-year students were US citizens or permanent residents, under age 21, and residing within 25 miles of the campus. In S1, the students were mailed an informational letter that included a description of the study, a pen, and a \$5 cash incentive. Five days later, an email message was sent to each student with an active hyperlink to the web-based baseline survey. In S2, students completed the survey 1 day to 3 weeks after the Spring Break vacation period. Students who provided data for the semester surveys received a \$20 incentive per semester. Based on self-reports to questions about race and Hispanic/Latino ethnicity, the sample can be described as 25.2% Hispanic/Latino American, 27.2% European American Non-Hispanic/Latino [NHL], 23.3% Asian American NHL, 15.4% African American NHL, and 8.9% Multiracial NHL. The final sample (48.1% men) had an average age of 18.92 years ($SD = .42$) and 12.2% reported being affiliated with a fraternity or sorority at S2.

In total, 746 students (65.6% response rate) completed the S1 survey. Students who participated did not differ from non-participants based on Registrar data on race/ethnicity or age; but men were less likely to participate than women ($\chi^2(1, n = 1137) = 20.54, p < .001$). Of those who completed the S1 survey, 651 also completed the post-Spring Break (S2) survey, yielding an 87.4% retention rate. Students who were retained at S2 did not differ from attriters on self-reported race (i.e., African American, Asian American, European American), Hispanic/Latino ethnicity, gender, age, S1 binge drinking, S1 condom use, or importance of friendship goals (all χ^2 and F -tests non-significant at $p < .05$ threshold).

Measures

Previous Binge Drinking (S1)—Following National Institutes of Health guidelines, a gender-specific definition of binge drinking during the fall semester was employed (NIAAA 2003; Wechsler et al. 1995). Men (women) reported the number of occasions in the past 2 weeks on which they had 5+ (4+) standard drinks in a row containing any kind of alcohol. Responses were dichotomized to reflect whether students ever engaged in binge drinking during the 2 weeks (1 = *Yes*, 0 = *No*).

Previous Condom Use (S1)—In the fall semester, participants were asked, “In the past 12 weeks, how frequently have you used a condom when you had vaginal and/or anal sex?” with a response scale of *Never* to *Every time* (adapted from Wave 1 of The National Longitudinal Study of Adolescent Health; see Harris et al. 2008). A dichotomous variable was created (1 = *Never*, 0 = *Occasionally to Every time*).

Friendship Goals (S1)—During the fall semester, participants were asked to complete the statement, “When you think of all of your goals for this semester, making friends is important to you” with a 4-point response scale of *Not at all* to *Very* (Rhoades and Maggs 2006). This variable was strongly negatively skewed, thus a dichotomous variable was created as 1 = *Very important* and 0 = *Less important* (i.e., anything less than very important).

Fraternity/Sorority Membership (S2)—Participants completed a checklist indicating their extracurricular activity participation during spring semester. Affiliation with a social fraternity/sorority was coded as 1 = *Yes*, 0 = *No*.

Spring Break Trip (S2)—Participants were told that, “For this survey, we are defining Spring Break as the 10 days from Friday, March 7 through Sunday, March 16, 2008.” Students were then asked, “Where did you spend Spring Break (10 days total)?” There were six options (i.e., “in the town where the college is located, at home/friend’s home with family, on vacation with family/friend’s family, on a Spring Break trip with friends, on a service project/volunteer work trip, other”) and participants were asked to indicate the number of days (if any) they spent in each location. Students were coded as going on a Spring Break Trip if they stated that they were on a trip with friends for at least 1 day, 1 = *Yes*, 0 = *No*.

Spring Break Understandings with Friends (S2)—All participants, regardless of how they reported spending their Spring Break vacation, were asked, “Did you and your friends have a common understanding about [drinking, sex] on Spring Break?” (adapted from Apostolopoulos et al. 2002). Five options were listed for understandings about drinking, with instructions to check all that applied: *no understanding*, *to get drunk*, *to not get drunk*, *to drink but not get drunk*, and *to look out for each other while drinking* (followed by an open-ended text box asking “how?”). Seven options were listed for understandings about sex, with instructions to check all that applied: *no understanding*, *to have sex with current partner*, *to not have sex with current partner*, *to have sex with someone new*, *to not have sex with someone new*, *to use a condom if having sex*, and *to look out for each other* (followed by an open-ended text box asking “how?”).

Responses to these items were grouped into four types of understandings. Safe Drinking Understanding (1 = *Yes*, 0 = *No*) was defined as reporting any of: *to not get drunk*, *to drink but not get drunk*, and *to look out for each other while drinking*. Get Drunk Understanding was reporting drinking *to get drunk*. No/Safe Sex Understanding was reporting any of: *to not have sex with current partner*, *to not have sex with someone new*, *to use a condom if having sex*, and *to look out for each other*. Sex Understanding was reporting *to have sex with current partner* or *to have sex with someone new*.

Open-ended responses describing how students planned to look out for each other were coded for content. This portion of the analysis was used for descriptive purposes only to identify ways students look out for each other. For the questions about common understandings about drinking and sex, students who selected the response *to look out for each other* received a follow-up open-ended question: “How?” The authors examined students’ responses to develop a list of major categories and sub-categories (following procedures used by Lefkowitz 2005). All responses were coded by each of three trained undergraduate students. Reliability was assessed with three pairwise kappas for each category, one for each possible pair of coders. Codes with a final kappa of less than .60 (three for alcohol and none for sex, mostly due to extremely infrequent occurrence) were dropped from further analysis. Final codes are based on group resolutions. For codes included in the present descriptions, the average kappa across all categories was .84 (range = .61–1.00). Each *look out for each other* category was coded as 1 = *Present in response*, 0 = *Not present*.

Spring Break Behaviors (S2)—Gender-specific criteria for binge drinking, as described previously, were used. Men (women) reported the number of days during Spring Break on which they had 5+ (4+) drinks containing any kind of alcohol within a 2-hour period (Wechsler et al. 1995). Responses were dichotomized to reflect whether students engaged in

any binge drinking during Spring Break (1 = *Yes*, 0 = *No*). Students were also asked on how many occasions they had vaginal and/or anal sex during Spring Break. Responses were dichotomized to reflect whether students had sex during Spring Break (1 = *Yes*, 0 = *No*).

Spring Break Consequences—Alcohol use consequences were assessed only among participants who drank alcohol during Spring Break. Students were asked, “During Spring Break, on how many days did the following happen to you as a result of drinking?” Responses were dichotomized to reflect whether students experienced any of four alcohol-related consequences (i.e., “lose control of yourself, have a hangover, get in trouble with the police, pass out”). Sexual Behavior Consequences were assessed only among participants who had vaginal or anal sex during Spring Break. Students were asked, “During Spring Break, on how many days did the following happen to you as a result of having sex?” Responses were dichotomized to reflect whether students experienced any of the five sex-related consequences (i.e., “worry about pregnancy, worry about exposure to HIV/AIDS, worry about exposure to another STD, wish you hadn’t had sex, worry another partner could find out”).

Results

Descriptive Findings

Across the 10 days of Spring Break, college students in the present sample spent at least 1 day: at a family home (either their family or friends’ family; 90%), in the town where the college is located (23%), on a Spring Break trip with friends (13%), on vacation with family or friends’ family (11%), on a service project or volunteer work trip (2%), or somewhere else (6%; e.g., at a friend’s college). Forty-eight percent spent at least 1 day with a romantic partner or potential romantic partner. Of those who went on a Spring Break trip with their friends, students reported going with an average of 4.8 friends ($SD = 4.0$, range 1–20) for an average of 5.5 days ($SD = 2.9$, range of 1–10).

Frequencies of endorsement of each type of understanding, of alcohol use and sexual behaviors, and of experienced consequences, are shown for the full sample and by gender in Table 1. Understandings about alcohol use were made by 59% of students and about sexual behavior by 45%. Nearly one in four students had an understanding that they would get drunk during Spring Break and 5% had an understanding to have sex with someone new during Spring Break. In total, 43% had a Safe Drinking Understanding, 31% had a No/Safe Sex Understanding, 24% had a Get Drunk Understanding, and 18% had a Sex Understanding.

During Spring Break, 45% of students reported any alcohol use and 31% of students reported at least one episode of binge drinking. In addition, 20% of students had sex and 9% of students had sex without a condom during Spring Break (i.e., 45% of those who had sex did so without a condom at least once). Students also reported experiencing negative alcohol- and sex-related consequences during Spring Break. Among the students who drank or had sex, students were most likely to report a hangover as a consequence of using alcohol (32% of those who drank; 45% of those who binge drank) and to worry about pregnancy as a consequence of sexual behavior (20% of those who had sex).

Gender Differences in Understandings, Behaviors, and Consequences

The first aim was to document gender differences, as shown in Table 1. Differences in prevalence of understandings, behaviors, and consequences were compared using One-Way ANOVAs. With respect to risky understandings, men had higher rates than women of making understandings to get drunk and to have sex with someone new. In the domain of

protective understandings, men had higher rates of having understandings to use a condom if having sex, and women had higher rates of understandings to not get drunk, not have sex with someone new, and not have sex with a current partner, which partially supported hypotheses. No other understanding variables differed by gender.

Although men and women did not differ in rates of going on Spring Break trips, they did differ in 3 of 12 reported behaviors and consequences. More men than women reported binge drinking during Spring Break, and more women than men reported having had sex without a condom. Among those who had sex, more men reported worrying about pregnancy. All other reported consequences of alcohol use and sexual behavior were similar for men and women, which was contrary to our hypotheses.

Open-Ended Reports of Looking Out for Friends

The second research aim was to describe open-ended reports of students' understandings about how to look out for each other during Spring Break. About 13% ($n = 84$) of students reported having an understanding about looking out for each other while drinking. Of these, about half ($n = 45$) provided open-ended information describing these understandings. The most commonly reported major category of looking out for friends while drinking was to *be mindful of friends' safety or well being* ($n = 32$, e.g., "make sure they were ok"). Subcategories of safety/well being included traveling in packs or not letting friends be alone ($n = 7$, e.g., "we stayed together and made sure we knew where everyone was"), assigning a designated driver ($n = 6$), taking care of friends who were too drunk or sick ($n = 6$, e.g., "make sure no one got too drunk and if they did - to take care of them"), not drinking and driving ($n = 4$), and avoiding poor choices ($n = 3$; e.g., "not letting friends make stupid decisions"). The next most common major category of looking out for friends was *encouraging moderation or responsible drinking* ($n = 14$, e.g., "monitor each others' intake"), such as avoiding getting drunk or too sick ($n = 7$, e.g., "to get buzzed - but not too drunk"). Other categories of response occurred very infrequently (i.e., less than 2 times) and are therefore not described.

Only 5.7% ($n = 37$) of students reported having an understanding about looking out for each other in regard to sexual behavior. About one-third ($n = 13$) of these provided additional information describing how. The most commonly described approaches were *determining the type of sexual partner* ($n = 3$, e.g., "no creeps," "no ugly women") and *looking out for friends' safety or well being* ($n = 3$, e.g., "don't leave a friend with a stranger"). Participants also reported *discouraging sex* ($n = 2$, e.g., "no sex") and *avoiding sexual regret* ($n = 2$, e.g., "make sure no one was going to do anything they would regret"). Other responses occurred even less frequently and are not described.

Differences in Likelihood of Having Understandings

The third aim was assessed using logistic regression to predict the likelihood of students having Spring Break understandings as a function of gender, very important friendship goals, previous semester behavior (binge drinking/no condom use), current fraternity/sorority membership, and going on a Spring Break trip with friends. Results predicting drinking understandings are presented in Table 2. Similar to the findings reported in research aim 1, but independent from the associations of all other variables in the model, men had 42% lower odds of having a Safe Drinking Understanding and 59% greater odds of having a Get Drunk Understanding compared to women. Moreover, students who reported that friendship goals were very important had 32% lower odds of having a Safe Drinking Understanding than individuals with less important friendship goals, and students who reported binge drinking the prior semester had 10 times the odds of making a Get Drunk Understanding for Spring Break, but were no less likely to make a Safe Drinking

Understanding, compared to students who did not binge drink the previous semester. Members of fraternities/sororities had almost two times the odds of having a Get Drunk Understanding compared to non-members. In addition, students who went on a Spring Break trip with friends had 2 times the odds of making a Get Drunk Understanding and 2 times the odds of having a Safe Drinking Understanding compared to students who did not go on a trip. These results were consistent with hypotheses.

Results for understandings regarding sexual behavior are presented in Table 3. No/Safe Sex and Sex Understandings did not differ by gender, importance of friendship goals, or condom use during the previous semester. However, members of fraternities/sororities were more than twice as likely to have a Sex Understanding as non-members. Students who went on a Spring Break trip had more than two times the odds of making a No/Safe Sex Understanding and of making a Sex Understanding compared to students who did not go on a trip.

Predicting Spring Break Behaviors and Consequences

The fourth aim was to examine whether understandings with friends were predictive of actual engagement in Spring Break behaviors and experiences of consequences (Tables 4, 5). Logistic regression was used to predict Spring Break behaviors (i.e., binge drinking, no condom use) and Spring Break consequences (i.e., negative drinking consequences, negative sex consequences). Models included personal characteristics (i.e., gender, importance of friendship goals, previous semester behavior, current fraternity/sorority membership) and Spring Break trip entered on Step 1 and Spring Break Understandings (i.e., Safe Drinking and Get Drunk Understandings or No/Safe Sex and Sex Understandings) entered on Step 2. On a third step, interactions of Gender by each of the Spring Break-specific predictors were tested. Only one (Gender $\times$ Trip predicting alcohol-related consequences) out of 12 interactions tested was significant, so the interactions are not presented or interpreted.

For Spring Break binge drinking, students who reported binge drinking the previous semester had nearly 15 times the odds of binge drinking during Spring Break compared to students who did not binge drink the previous semester. Participants who went on a Spring Break trip with friends had nearly 4 times the odds of binge drinking during Spring Break compared to students who did not. In addition, Spring Break understandings (Step 2) were significantly predictive of Spring Break binge drinking. In particular, students who had a Get Drunk Understanding had over 20 times the odds of binge drinking during Spring Break compared to students who did not have an understanding about drinking. For negative alcohol-related consequences on Spring Break, students who had engaged in binge drinking the previous semester had nearly 9 times the odds of experiencing consequences compared to those who had not engaged in binge drinking previously. In addition, students who had a Get Drunk Understanding had 4 times the odds of experiencing negative alcohol-related consequences on Spring Break compared to students with no understanding. These results are consistent with hypotheses.

For Spring Break condom use, participants who reported having sex without a condom during the prior semester had nearly 11 times the odds of having sex without a condom during Spring Break, compared to those who consistently used condoms the prior semester. Going on a Spring Break trip with friends was not predictive of having sex without a condom during Spring Break. However, both types of Spring Break understandings (Step 2) were significant predictors. Students who had a No/Safe Sex understanding had about 1/3 the odds of not using a condom during Spring Break (i.e., were more likely to use condoms), and students who made a Sex Understanding had nearly 9 times the odds of not using a condom on Spring Break, compared to those who did not have a sex understanding, consistent with hypotheses. The only significant predictor of experiencing negative sex-related consequences during Spring Break was importance of friendship goals: students with

very important friendship goals were less likely to report experiencing sex-related consequences on Spring Break. Spring Break understandings were not uniquely associated with negative sex-related consequences, contrary to hypotheses.

Discussion

Adolescent risk behavior differs by context. In fact, some events, such as Spring Break, are known to be associated with more extreme and potentially dangerous levels of alcohol use and sexual behavior (Grekin et al. 2007; Lee et al. 2006; 2009; Maticka-Tyndale et al. 1998; Sönmez et al. 2006). Given their importance for the health of youth, these specific contexts deserve research attention. In particular, understanding what predicts this more extreme behavior has the potential to reduce severe negative consequences among young people, including injury, death, and unwanted pregnancy. Given the pivotal role of peer relationships in adolescents' lives (Brown et al. 1997; Brown and Larson 2009; Steinberg and Morris 2001), the shared intentions of college students and their friends regarding alcohol use and sexual behavior during Spring Break should be considered as a predictor of actual behavior.

About half of the students had understandings with friends about Spring Break behaviors, regardless of whether they went on Spring Break trips with friends. Moreover, the formation of these understandings was associated with their health behaviors and experiences, including binge drinking, sex without a condom, and alcohol-related negative consequences. Not all students had the same likelihood of having understandings with friends about their alcohol use and sexual behavior on Spring Break. In particular, men were more likely than women to have specific understandings with their friends to get drunk and to have sex with someone new, consistent with prior research documenting men's expectations and intentions (Maticka-Tyndale and Herold 1997; Maticka-Tyndale et al. 1998; Sönmez et al. 2006). Men were also more likely than women to have understandings to use condoms. Women were more likely than men to have understandings to avoid getting drunk and to *not* have sex with current and new partners. These gender differences may, in part, be due to a societal sexual double standard for men and for women (see Crawford and Popp 2003). This double standard encourages sexual behavior for men more than for women, and thus may lead men to feel that they should plan to have sex and women to feel that they should plan to limit their sexual behavior, particularly in discussions with friends. Men, as the gatekeepers of condom use, may be more likely to focus these understandings on using condoms. In addition, students who went on a Spring Break trip had greater odds of having all types of drinking and sex understandings with their friends, likely because these conversations occurred while planning for their trip.

In open-ended responses, students were most likely to say that, when they look out for each other on Spring Break, they are mindful of their friends' safety or well-being while drinking by traveling together, having a designated driver, and caring for friends who get sick. A smaller number of students also reported that they look out for each other in sexual situations, such as by monitoring the type of partner. Further research regarding what adolescents and young adults do naturally to help protect their friends in potentially risky situations might prove very fruitful so that these naturally occurring protective strategies can be enhanced in intervention programs targeting high-risk events. This is especially important given that change in protective behavioral strategies has been shown to mediate the effectiveness of intervention programs (Larimer et al. 2007).

In terms of actual behaviors and consequences, during the 10 days of Spring Break, 37% of men (25% of women) binge drank, and 6% of men (12% of women) reported having sex without a condom. In addition, negative consequences of drinking were common. Among

students who drank, about one out of three had a hangover and one out of eight passed out. These rates of negative consequences on Spring Break are even higher than those reported elsewhere (Lee et al. 2009). In addition, only one in five students who had sex worried about pregnancy. Interestingly, men were more likely than women to worry about pregnancy. This may be because women who are concerned about pregnancy have the option to use hormonal contraceptive methods (e.g., the pill), whereas men may not know whether their partner reliably used such a method, resulting in increased worrying about a partner's pregnancy. However, these gender differences in behaviors and consequences all became non-significant with the inclusion of additional predictors in the models.

The majority of existing research on Spring Break has used convenience samples with one-time, cross-sectional designs. However, in the present prospective study, previous behavior was among the strongest predictors of Spring Break behavior. These results indicate that intervening with individuals who typically exhibit greater risk behavior may also decrease binge drinking and unsafe sex practices during Spring Break. In addition, similar to Grekin et al. (2007), going on a Spring Break trip was a unique predictor of binge drinking. However, going on a Spring Break trip was not a unique predictor of the assessed alcohol and sex consequences or of sexual behaviors. This may be a result of little variance in Spring Break sexual behaviors among first year college students, low prevalence of negative consequences of sex, or a selection of items that did not measure students' primary negative experiences. In addition, other influences (i.e., relationship status, partner characteristics and behaviors, understandings with romantic partners, friends' behavior) may be more important than simply going on a trip for predicting engagement in sexual behaviors and experiencing negative consequences.

Friendship goals emerged as both a risk and protective factor. Students who reported very important friendship goals were less likely to have understandings with friends to drink safely, similar to the finding of Rhoades and Maggs (2006) that friendship goals were associated with planned drinking. However, these students were also less likely to report negative sex-related consequences on Spring Break. Similarly, Patrick et al. (2007) found that viewing friendship goals as important was predictive of remaining a sexual abstainer during the first semester of college, as well as associated with having more important self- and other-focused reasons for sex and more important concerns regarding pregnancy and STDs. As an explanation, one might speculate that students who place more importance on establishing new friendships may become more broadly socially integrated in the campus environment, may build higher-quality relationships with others and thereby receiving social support for more responsible sexual practices, or may simply be placing relatively more emphasis on friendship than on dating or sexual relationships. Future research should seek to replicate this finding and examine competing hypotheses about the mechanisms underlying the apparently positive and negative functions of friend-related goals.

As hypothesized, members of fraternities and sororities emerged as a potentially at-risk group. These individuals were more likely to have understandings with their friends to get drunk and to have sex on Spring Break. Past research has also documented both event-specific excessive drinking behaviors (e.g., at "Springfest" in Dorsey et al. 1999) and long-term risks associated with fraternity/sorority membership, including greater risk for alcohol dependence (Grekin and Sher 2006) and having a greater number of sexual partners (Scott-Sheldon et al. 2008). Many fraternity and sorority environments provide an official avenue for students who are interested in drinking to select into Greek affiliation and thereby gain access to alcohol and parties in a context that may both tolerate and encourage heavy alcohol use behaviors (Park et al. 2009). In addition, much of the drinking occurring among fraternity and sorority members may be context-driven. For example, binge drinking tends to decrease after students transition out of college and out of fraternity or sorority

involvement (McCabe et al. 2005; Park et al. 2008). However, given the powerful role of the fraternity and sorority context, intervention at the group level regarding understandings with friends may be especially important for this population.

Having particular types of understandings with friends was associated with self-reported behavior, as expected. That is, students who had an understanding that they and their friends would get drunk were much more likely to do so, as well as to experience negative alcohol-related consequences along the way, even controlling for individual differences in their behavior the previous semester. Students who had understandings to abstain from sex or engage in safer sex were less likely to report sex without a condom, and those who had understandings to have sex were more likely to report sex without a condom. This is consistent with available cross-sectional research, which has found that understandings to engage in casual sex predicted casual sex intentions and behaviors (Apostolopoulos et al. 2002; Maticka-Tyndale et al. 1998; Sönmez et al. 2006). The current study is among the first to document the same associations with understandings for heavy alcohol consumption. In total, these results suggest that, prior to Spring Break, students and their friends discuss their intended behaviors in ways that meaningfully impact, or at least reflect, their actual behaviors. Although students going on Spring Break trips with friends were both more likely to have understandings with their friends and more likely to engage in heavy alcohol use (but not risky sexual behavior), students who did not go on trips also had understandings with their friends about behavior. For many students, Spring Break is an anticipated time of freedom from responsibilities that affords opportunities to experiment with risk behaviors they may or may not have engaged in previously. Portrayals of college students' partying behavior in the media (e.g., MTV Spring Break) perpetuate these myths and expectations.

The Need for Intervention

Alcohol use varies across the year, with particular increases in drinking during holidays (Del Boca et al. 2004). Known increases in potentially dangerous levels of alcohol use and sexual risk related to particular events provide an opportunity for intervention. Event-specific interventions are a relatively new paradigm for intervention research, although campuses that are already employing these strategies are doing so largely without evidence for their effectiveness (Neighbors et al. 2007). Therefore, empirical analysis of behaviors during Spring Break and other high risk events (e.g., major sporting and tailgating events, New Year's, and local holidays), in addition to the potential efficacy of event-specific programs, is required. Event-specific predictors of use, such as understandings with friends, may be especially important to understand, particularly those that have the potential to *reduce* harm. This study suggests that focusing on friends, peer groups, social networks, and organizations (e.g., fraternity/sorority, service-oriented clubs) to identify their collective intentions for Spring Break behavior may be especially important for understanding individuals' Spring Break health behaviors. Intervention programs that incorporate multiple members of social groups and seek to change peer group understandings regarding risk and protective Spring Break behaviors should be empirically tested for efficacy. These efforts should build upon available knowledge regarding who is most likely to have particular understandings (e.g., men were more likely than women to have understandings to get drunk, students going on trips were more likely to have all four types of understandings with their friends) and what types of protective measures are already valued and enacted (e.g., caring for friends' safety and well-being, traveling in groups; see Benton et al. 2004; Bryan et al. 2002; Delva et al. 2004; Martens et al. 2005).

Protective behavioral strategies are an important ingredient for intervention programs. As noted above, Larimer et al. (2007) found that the effect of a brief intervention on reducing alcohol use behaviors was mediated by increased engagement in protective behaviors. In general (i.e., not during Spring Break), students who engaged in protective behaviors, such

as having a designated driver and hanging out with trusted friends, have been found to be less likely to experience negative consequences from drinking compared to students who drank the same amount but did not engage in protective strategies (Benton et al. 2004), although this association may hold only for women (Delva et al. 2004). Future research on event-specific protective strategies and intervention efforts to promote them is needed.

Limitations and Future Directions

The current study is the first to document both Spring Break behaviors and consequences for alcohol use and sexual behavior among college students, while controlling for previously reported behaviors. In addition, the focus on whether students form understandings with their friends regarding which behaviors they will engage in is a new and emerging research area. There are, however, some limitations. First, students were asked to report about understandings after Spring Break, so it is possible that their Spring Break experiences altered their memories of prior understandings. Second, understandings were not clearly defined for individuals, so the question was open to some interpretation. Third, the extent to which students discussed their behavior with their friends, the level of agreement between friends, and the perceived commitment to pursuing these intentions is unknown. In addition, the present measure of understandings to engage in sex referred only to engaging in sexual behavior; the level of health risk involved is unknown given that the questions did not specify sex with or without protective measures.

Future research should assess whether understandings with friends and event-specific risk behaviors change developmentally across adolescence and early adulthood. Measurement designs that capture daily variation in risk and protective behaviors may provide particularly useful information regarding health risks and opportunities for intervention. In addition, our results suggest the importance of understanding the processes underlying how groups of friends influence each others' behaviors. Following groups of friends (i.e., social networks) before, during, and after special occasions associated with risk behaviors such as football games, New Year's, 21st birthdays, and graduation may provide important information regarding how understandings for both risk and protective factors are formed and the extent to which they are socially enforced.

This study documents the importance of context and peers for adolescent risk behavior. The Spring Break context is associated with increases in risk behaviors, after controlling for previous behavior. These high risk alcohol and sexual behaviors have the potential to cause significant long-term harm. In addition, mutual agreements with friends regarding acceptable behavior likely play an important role in establishing expectations and intentions to engage in both risky and protective behaviors during particular events. Further research regarding how friends form understandings regarding behavior is needed. Such research has great potential to inform well-timed intervention with maximum impact to promote the health and well-being of adolescents.

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References

- Apostolopoulos Y, Sönmez S, Yu CH. HIV-risk behaviours of American spring break vacationers: A case of situational disinhibition? *International Journal of STD and AIDS* 2002;13:733–743. [PubMed: 12437892]

- Bellis MA, Hughes K, Thomson R, Bennett A. Sexual behaviour of young people in international tourist resorts. *Sexually Transmitted Infections* 2004;80:43–47. [PubMed: 14755035]
- Benton SL, Schmidt JL, Newton FB, Shin K, Benton SA, Newton DW. College student protective strategies and drinking consequences. *Journal of Studies on Alcohol* 2004;65:115–121. [PubMed: 15000510]
- Brown, BB.; Dolcini, MM.; Leventhal, A. Transformations in peer relationships at adolescence: Implications for health-related behavior. In: Schulenberg, JE.; Maggs, JL.; Hurrelmann, K., editors. *Health risks and developmental transitions during adolescence*. New York: Cambridge University Press; 1997. p. 161-189.
- Brown, BB.; Larson, J. Peer relationships in adolescence. In: Lerner, RM.; Steinberg, L., editors. *Handbook of adolescent psychology*. 3. New York: Wiley; 2009. p. 74-103.
- Brown RR, Sinclair RC. Estimating number of lifetime sexual partners: Men and women do it differently. *Journal of Sex Research* 1999;36:292–297.
- Bryan A, Fisher JD, Fisher WA. Tests of the mediational role of preparatory safer sexual behavior in the context of the theory of planned behavior. *Health Psychology* 2002;21:71–80. [PubMed: 11846347]
- Cantor N, Norem J, Langston C, Zirkel S, Fleeson W, Cook-Flannagan C. Life tasks and daily life experience. *Journal of Personality* 1991;59:425–451.
- Civic D. The association between characteristics of dating relationships and condom use among heterosexual young adults. *AIDS Education and Prevention* 1999;11:343–352. [PubMed: 10494358]
- Crawford M, Popp D. Sexual double standards: A review and methodological critique of two decades of research. *Journal of Sex Research* 2003;40:13–26. [PubMed: 12806528]
- Del Boca FK, Darkes J, Greenbaum PE, Goldman MS. Up close and personal: Temporal variability in the drinking of individual college students during their first year. *Journal of Consulting and Clinical Psychology* 2004;72:155–164. [PubMed: 15065951]
- Delva J, Smith MP, Howell RL, Harrison DF, Wilke D, Jackson DL. A study of the relationship between protective behaviors and drinking consequences among undergraduate college students. *Journal of American College Health* 2004;53:19–27. [PubMed: 15266726]
- Dorsey AM, Scherer CW, Real K. The college tradition of “drink ‘til you drop”: The relation between students’ social networks and engaging in risky behaviors. *Health Communication* 1999;11:313–334.
- Greenbaum PE, Del Boca FK, Darkes J, Wang C, Goldman MS. Variation in the drinking trajectories of freshmen college students. *Journal of Consulting and Clinical Psychology* 2005;73:229–238. [PubMed: 15796630]
- Grekin ER, Sher KJ. Alcohol dependence symptoms among college freshmen: Prevalence, stability, and person–environment interactions. *Experimental and Clinical Psychopharmacology* 2006;14:329–338. [PubMed: 16893276]
- Grekin ER, Sher KJ, Krull JL. College spring break and alcohol use: Effects of spring break activity. *Journal of Studies on Alcohol and Drugs* 2007;68:681–688. [PubMed: 17690801]
- Harris, KM.; Halpern, CT.; Entzel, P.; Tabor, J.; Bearman, PS.; Udry, JR. The national longitudinal study of adolescent health: Research design. 2008. URL: <http://www.cpc.unc.edu/projects/addhealth/design>
- Johnston, LD.; O’Malley, PM.; Bachman, JG.; Schulenberg, JE. Monitoring the future national survey results on drug use, 1975–2008. Volume I: Secondary school students (NIH Publication No. 09–7402). Bethesda, MD: National Institute on Drug Abuse; 2009.
- Kiene SM, Tennen H, Armeli S. Today I’ll use a condom, but who knows about tomorrow: A daily process study of variability in predictors of condom use. *Health Psychology* 2008;27:463–472. [PubMed: 18643004]
- Larimer ME, Lee CM, Kilmer JR, Fabiano PM, Stark CB, Geisner IM, et al. Personalized mailed feedback for college drinking prevention: A randomized clinical trial. *Journal of Consulting and Clinical Psychology* 2007;75:285–293. [PubMed: 17469886]
- Lee CM, Lewis MA, Neighbors C. Preliminary examination of spring break alcohol use and related consequences. *Psychology of Addictive Behaviors* 2009;23:689–694. [PubMed: 20025375]

- Lee CM, Maggs JL, Rankin LA. Spring break trips as a risk factor for heavy alcohol use among first-year college students. *Journal of Studies on Alcohol* 2006;67:911–916. [PubMed: 17061009]
- Lefkowitz ES. “Things have gotten better”: Developmental changes among emerging adults after the transition to university. *Journal of Adolescent Research* 2005;20:40–63.
- Lefkowitz, ES.; Gillen, MM. “Sex is just a normal part of life”: Sexuality in emerging adulthood. In: Arnett, JJ.; Tanner, JL., editors. *Emerging adults in America: Coming of age in the 21st century*. Washington, DC: American Psychological Association; 2005. p. 235-255.
- Martens MP, Ferrier AG, Sheehy MJ, Corbett K, Anderson DA, Simmons A. Development of the protective behavioral strategies survey. *Journal of Studies on Alcohol* 2005;66:698–705. [PubMed: 16329461]
- Maticka-Tyndale E, Herold ES. The scripting of sexual behaviour: Canadian university students on Spring Break in Florida. *The Canadian Journal of Human Sexuality* 1997;6:317–328.
- Maticka-Tyndale E, Herold ES. Condom use on Spring-Break vacation: The influence of intentions, prior use, and context. *Journal of Applied Social Psychology* 1999;29:1010–1027.
- Maticka-Tyndale E, Herold ES, Mewhinney D. Casual sex on spring break: Intentions and behaviors of Canadian students. *The Journal of Sex Research* 1998;35:254–264.
- McCabe SE, Schulenberg JE, Johnston LD, O’Malley PM, Bachman JG, Kloska DD. Selection and socialization effects of fraternities and sororities on US college student substance use: A multi-cohort national longitudinal study. *Addiction* 2005;100:512–524. [PubMed: 15784066]
- Mewhinney DM, Herold ES, Maticka-Tyndale E. Sexual scripts and risk-taking of Canadian university students on Spring Break in Daytona Beach, Florida. *The Canadian Journal of Human Sexuality* 1995;4:273–288.
- Neal DJ, Fromme K. Hook em horns and heavy drinking: Alcohol use and collegiate sports. *Addictive Behaviors* 2007;32:2681–2693. [PubMed: 17662537]
- Neighbors C, Walters ST, Lee CM, Vader AM, Vehige T, Szigethy T, et al. Event-specific prevention: Addressing college student drinking during known windows of risk. *Addictive Behaviors* 2007;32:2667–2680. [PubMed: 17616260]
- NIAAA. Task force on recommended alcohol questions: National Council on alcohol abuse and alcoholism recommended sets of alcohol consumption questions. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism; 2003.
<http://www.niaaa.nih.gov/Resources/ResearchResources/TaskForce.htm>
- Park A, Sher KJ, Krull JL. Risky drinking in college changes as fraternity/sorority affiliation changes: A person-environment perspective. *Psychology of Addictive Behaviors* 2008;22:219–229. [PubMed: 18540719]
- Park A, Sher KJ, Wood PK, Krull JL. Dual mechanisms underlying accentuation of risky drinking via fraternity/sorority affiliation: The role of personality, peer norms, and alcohol availability. *Journal of Abnormal Psychology* 2009;118:241–255. [PubMed: 19413401]
- Patrick ME, Maggs JL. Does drinking lead to sex? Daily alcohol-sex behaviors and expectancies among college students. *Psychology of Addictive Behaviors* 2009;23:472–481. [PubMed: 19769431]
- Patrick ME, Maggs JL, Abar CC. Reasons to have sex, personal goals, and sexual behavior during the transition to college. *Journal of Sex Research* 2007;44:240–249. [PubMed: 17879167]
- Rhoades BL, Maggs JL. Do academic and social goals predict planned alcohol use among college-bound high school graduates? *Journal of Youth and Adolescence* 2006;35:913–923.
- Rogstad KE. Sex, sun, sea, and STIs: Sexually transmitted infections acquired on holiday. *British Medical Journal* 2004;329:4–7. [PubMed: 15231589]
- Rutledge PC, Park A, Sher KJ. 21st birthday drinking: Extremely extreme. *Journal of Consulting and Clinical Psychology* 2008;76:511–516. [PubMed: 18540744]
- Salmela-Aro K, Aunola K, Nurmi J. Personal goals during emerging adulthood: A 10-year follow up. *Journal of Adolescent Research* 2007;22:690–715.
- Salmela-Aro K, Nurmi J. Goal contents, well-being, and life context during transition to university: A longitudinal study. *International Journal of Behavioral Development* 1997;20:471–491.

- Scholly K, Katz AR, Gascoigne J, Holck PS. Using social norms theory to explain perceptions and sexual health behaviors of undergraduate college students: An exploratory study. *Journal of American College Health* 2005;53:159–166. [PubMed: 15663064]
- Schwartz RH, Milteer R, Sheridan MH, Horner CP. Beach week: A high school graduation rite of passage for sun, sand, suds, and sex. *Archives of Pediatric and Adolescent Medicine* 1999;153:180–183.
- Scott-Sheldon LAJ, Carey KB, Carey MP. Health behavior and college students: Does Greek affiliation matter? *Journal of Behavioral Medicine* 2008;31:61–70. [PubMed: 17999173]
- Smeaton GL, Josiam BM, Dietrich UC. College students' binge drinking at a beach-front destination during spring break. *Journal of American College Health* 1998;46:247–254. [PubMed: 9609971]
- Sönmez S, Apostolopoulos Y, Yu CH, Yang S, Mattila A, Yu LC. Binge drinking and casual sex on spring break. *Annals of Tourism Research* 2006;33:895–917.
- Steinberg L, Morris AS. Adolescent development. *Annual Review of Psychology* 2001;52:83–110.
- Wechsler H, Dowdall GW, Davenport A, Rimm EB. A gender-specific measure of binge drinking among college students. *American Journal of Public Health* 1995;85:982–985. [PubMed: 7604925]
- Wilsnack SC, Wilsnack RW. International gender and alcohol research: Recent findings and future directions. *Alcohol Research & Health* 2002;26:245–250. [PubMed: 12875033]

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Table 1

Percent who reported Spring Break understandings, behaviors, and consequences

	Total	Men	Women	Gender <i>F</i> -test
Alcohol use understandings				
No understanding	40.9%	41.5%	40.2%	0.11
To get drunk	23.5	29.4	18.0	11.81**
To <i>not</i> get drunk	18.3	13.7	22.5	8.41**
To drink but not get drunk	17.8	16.0	19.5	1.40
To look out for each other	12.9	11.2	14.5	1.59
Sexual behavior understandings				
No understanding	55.3	55.0	55.6	0.03
To have sex with someone new	5.2	8.6	2.1	14.38***
To use a condom if having sex	15.8	18.8	13.0	4.16*
To <i>not</i> have sex with someone new	12.4	7.7	16.9	12.83***
To have sex with current partner	14.1	12.8	15.4	0.91
To <i>not</i> have sex with current partner	9.4	6.7	11.8	5.05*
To look out for each other	5.7	4.2	7.1	2.64
Spring Break behaviors				
Took Spring Break trip with friends	12.6	15.0	10.4	3.21
Binge drank	31.1	37.3	25.3	11.03**
Had sex without a condom	9.4	6.1	12.4	7.80**
Alcohol use consequences ^a				
Lost control	14.5	13.9	15.1	0.08
Hangover	32.1	35.1	28.8	1.33
Trouble with the police	2.4	2.6	2.2	0.07
Passed out	12.4	13.2	11.5	0.20
Sexual behavior consequences ^b				
Worried about pregnancy	20.4	29.3	14.6	4.76*
Worried about HIV/AIDS	5.4	8.6	3.4	1.88
Worried about other STDs	6.2	6.9	5.7	0.09
Wished had not had sex	6.2	3.5	7.9	1.13
Worried a partner would find out	6.8	6.9	6.7	0.00

^a Assessed only among participants who drank during Spring Break ($n = 290$, $F(1, 288)$)^b Assessed only among participants who had sex during Spring Break ($n = 147$; $F(1, 145)$)* $p < .05$,** $p < .01$,*** $p < .001$ for ANOVA gender differences ($N = 651$, $F(1, 649)$) unless otherwise noted)

Table 2

Logistic regression results predicting Spring Break drinking understandings

	Safe drinking understanding (OR [CI])	Get drunk understanding (OR [CI])
Male gender	0.58 [0.42, 0.80]**	1.59 [1.05, 2.42]*
Friendship goals (S1)	0.68 [0.49, 0.96]*	1.23 [0.78, 1.92]
Binge drinking (S1)	0.98 [0.70, 1.36]	10.43 [5.89, 18.46]***
Fraternity/sorority membership (S2)	0.60 [0.35, 1.03]	1.89 [1.10, 3.23]*
Spring Break trip (S2)	2.39 [1.46, 3.89]***	1.74 [1.01, 3.01]*

OR odds ratio, CI confidence interval, S1 Semester 1 (Fall), S2 Semester 2 (Spring). $N = 646$.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$

Table 3

Logistic regression results predicting Spring Break sex understandings

	No/safe sex understanding (OR [CI])	Sex understanding (OR [CI])
Male gender	0.92 [0.65, 1.30]	1.13 [0.73, 1.75]
Friendship goals (S1)	0.82 [0.57, 1.17]	1.39 [0.88, 2.20]
No condom use (S1)	0.58 [0.28, 1.19]	1.99 [1.00, 3.99]
Fraternity/sorority membership (S2)	0.89 [0.51, 1.54]	2.23 [1.28, 3.86] **
Spring Break trip (S2)	2.67 [1.65, 4.30] ***	2.13 [1.25, 3.62] **

OR odds ratio, CI confidence interval, S1 Semester 1 (Fall), S2 Semester 2 (Spring). $N = 648$.

**
p < .01,

p < .001

Table 4

Logistic regression results predicting Spring Break binge drinking and alcohol-related consequences

	Spring Break binge drinking (OR [CI])	Spring Break alcohol-related consequences (OR [CI])
Step 1	$\chi^2 = 207.17^{***}$	$\chi^2 = 35.46^{***}$
Male gender	1.43 [0.95, 2.15]	1.12 [0.66, 1.88]
Friendship goals (S1)	1.06 [0.69, 1.63]	1.25 [0.71, 2.19]
Binge drinking (S1)	14.57 [8.58, 24.74] ^{***}	8.92 [3.38, 23.52] ^{***}
Fraternity/sorority membership (S2)	1.69 [0.97, 2.94]	1.11 [0.59, 2.11]
Spring Break trip (S2)	3.93 [2.19, 7.06] ^{***}	1.66 [0.89, 3.09]
Step 2	$\chi^2 = 142.24^{***}$	$\chi^2 = 28.03^{***}$
Safe drinking understanding (S2)	1.58 [0.95, 2.64]	0.88 [0.49, 1.58]
Get drunk understanding (S2)	20.48 [11.59, 36.19] ^{***}	3.96 [2.23, 7.03] ^{***}

OR odds ratio, CI confidence interval, S1 Semester 1 (Fall), S2 Semester 2 (Spring). $N = 640$ for Spring Break Drinking and $n = 288$ for Spring Break alcohol-related consequences (only assessed for those who drank during Spring Break).

 $p < .001$

Table 5

Logistic regression results predicting Spring Break condom use and sex-related consequences

	Spring Break sex without condom use (OR [CI])	Spring Break sex-related consequences (OR [CI])
Step 1	$\chi^2 = 54.41^{***}$	$\chi^2 = 9.48$
Male gender	0.56 [0.30, 1.05]	1.90 [0.87, 4.17]
Friendship goals (S1)	0.74 [0.41, 1.34]	0.41 [0.19, 0.92] [*]
No condom use (S1)	10.51 [5.30, 20.86] ^{***}	0.77 [0.28, 2.11]
Fraternity/sorority membership (S2)	1.14 [0.48, 2.73]	1.86 [0.65, 5.35]
Spring Break trip (S2)	1.14 [0.50, 2.63]	0.80 [0.27, 2.41]
Step 2	$\chi^2 = 48.56^{***}$	$\chi^2 = 0.62$
No/safe sex understanding (S2)	0.31 [0.14, 0.71] ^{**}	1.05 [0.45, 2.46]
Sex understanding (S2)	8.50 [4.43, 16.31] ^{***}	0.74 [0.34, 1.59]

OR odds ratio, CI confidence interval, S1 Semester 1 (Fall), S2 Semester 2 (Spring), $N = 648$ for Spring Break sex without condom use and $n = 145$ for Spring Break sex-related consequences (only assessed among those who had sex on Spring Break).

^{*}
 $p < .05$,

^{**}
 $p < .01$,

^{***}
 $p < .001$