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Differences in Weekday versus Weekend Drinking among Nonstudent Emerging Adults

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Abstract

The current investigation sought to examine "day of the week" drinking of an at-risk sample of nonstudent emerging adults and whether specific factors are associated with differential drinking patterns. Our study aims were to: (1) identify differences in weekday versus weekend drinking, (2) examine specific expectancies (i.e., sociability, tension reduction) and demographic factors (e.g., age, sex) as relating to weekend versus weekday drinking after controlling for harmful drinking and holiday drinking. Participants were 238 (63.4% men, 35.7% women; *M* age = 21.92 years) heavy drinking noncollege-attenders recruited from the community. They reported daily drinking for the previous 30 days and completed measures of harmful drinking, alcohol expectancies, and demographic information. Results showed that more drinks were consumed on the weekends (i.e., Thursday to Saturday) than weekdays, with 63% of drinks consumed on weekends. Multilevel modeling analyses indicated that weekday drinking was associated with tension reduction expectancies, social expectancies, sex, and age. Weekend drinking increases were related to social expectancies but not tension reduction expectancies. Our final model indicated that, after controlling for the effect of holiday drinking, the within-person weekday/weekend distinction explained 18% of the total variance. In general, our findings highlight the importance of alcohol expectancies and drinking contexts in understanding the drinking behaviors of nonstudents. The differential role of tension reduction and social facilitation expectancies on drinking throughout the week imply different cognitive pathways are involved in weekday versus weekend drinking and both types of expected alcohol effects should be targets of risk-reduction efforts with nonstudent drinkers.

Keywords

Alcohol; nonstudents; emerging adults; weekend; weekday

Emerging adults (i.e., between the approximate ages of 18 and 25 years) drink more heavily than any other age group in the U.S. (Substance Abuse and Mental Health Services Administration, 2014). While researchers have been addressing this critically important

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public health concern over the last two decades, the majority of research conducted within this age group has been limited to college student samples. This is especially concerning given that 59% of the emerging adult population in the U.S. is not enrolled in college (U.S. Census Bureau, 2014). Nonstudents are at greater risk of experiencing alcohol-related problems, including symptoms of alcohol dependence, despite similar consumption rates as college students (Barnett et al., 2003; see Carter, Obremski Brandon, & Goldman, 2010 for a review). Because nonstudents may be less likely to mature out of risky drinking behaviors (White, Labouvie, & Papadaratsakis, 2005) and there is a lack of research in this vulnerable population, further investigation into nonstudents' drinking patterns is warranted.

A cognitive factor strongly linked to drinking behavior is one's beliefs regarding the expected effects of alcohol consumption or one's alcohol expectancies. Stronger, more favorable perceptions about alcohol are predictive of the amount and frequency of alcohol consumed (Brown, Goldman, & Christiansen, 1985; Goldman, Brown, Christiansen, & Smith, 1991). Consistent with social learning theory's concept of reciprocal determinism (Bandura, 1969, 1977), one's drinking behavior also can impact one's alcohol expectancies (Maisto, Carey, & Bradizza, 1999). Thus, holding more positive beliefs about alcohol can increase alcohol consumption, and reciprocally, positive drinking experiences can further strengthen one's expectations about alcohol's effects (Aas, Leigh, Andersen, & Jakobsen, 1998; Smith, Goldman, Greenbaum, & Christiansen, 1995).

Two commonly held perceptions about alcohol are its ability to reduce tension (i.e., tension reduction expectancies) and to enhance social interactions (i.e., sociability expectancies). Drinking as a way to cope or reduce stress and tension is consistently associated with alcohol use and negative consequences (e.g., Goldsmith, Thompson, Black, Tran, & Smith, 2012; Pabst, Kraus, Piontek, Mueller, & Demmel, 2014). It may be that stronger tension reduction expectancies prompt an individual to drink, and the temporary stress reduction experienced when drinking may reinforce the likelihood of drinking in the future when stressed. This pattern of drinking to cope with emotional dysregulation, over time, can be associated with alcohol abuse (Holahan, Moos, Holahan, Cronkite, & Randall, 2001) and dependence (Crum et al., 2013).

Prior research on social expectancies and alcohol-related problems has been mixed. While some findings indicate that social expectancies are related to use frequency but not problem drinking (Brown, 1985), others have found a direct (Ham, Bacon, Carrigan, Zamboanga, & Casner, in press; Turrisi, Wiersma, & Hughes, 2000), or indirect link with problem drinking through heavy alcohol consumption and typical drinking quantity (Pabst et al., 2014). Those with stronger beliefs that alcohol can facilitate social interactions tend to drink in social situations (e.g., parties), rather than alone (Engels, Wiers, Lemmers, & Overbeek, 2005).

To date, there has been scant research investigating the extent to which alcohol expectancies are predictive of drinking patterns among nonstudents. Tension reduction expectancies may be particularly salient to nonstudents, given their increased life stressors such as employment and family obligations as compared to college students (Paschall, 2003; Slutske et al., 2004). Social expectancies are found to be highly relevant in young adult populations (e.g., Pabst et al., 2014), and may thus be salient to nonstudent samples as well. These types of alcohol

beliefs may play a differential role depending on one's drinking patterns, such as drinking on weekdays versus weekend days.

A burgeoning literature supports that drinking varies on weekdays as compared to weekends. Lower rates of alcohol use occur during the week (i.e., Sunday through Wednesday) which subsequently become elevated during the end of the week and on the weekend (i.e., Thursday through Saturday; Del Boca, Darkes, Greenbaum, & Goldman, 2004; Hoeppner et al., 2012; Labhart & Kuntsche, 2014; Maggs, Williams, & Lee, 2011; Tremblay, Graham, Wells, Harris, Pulford, & Roberts, 2010; Wood, Sher, & Rutledge, 2007). While similar findings have been observed in the general population (Kushnir & Cunningham, 2014), we are aware of only two studies that examined “day of the week” drinking patterns that included nonstudent participants specifically. Goldman, Greenbaum, Darkes, Brandon, and Del Boca (2011) investigated drinking patterns of 18-19 year-olds by assessing daily drinking over a calendar year. It was found that Sunday through Wednesday evenings were characterized by lower levels of drinking rates which steadily increased through Saturday night. Considerable variation in drinking occurred week to week and as a function of holidays (e.g., July 4th, New Year's Eve) and events (e.g., spring break, local festivals). This pattern held true regardless of college enrollment status. Also, males and females were equally likely to drink in any given week over the course of a year, though when they drank, females consumed less than men.

Another study assessed daily binge drinking patterns over a 5-year period in a community-based sample of emerging adults (Reich, Cummings, Greenbaum, Moltisanti, & Goldman, 2015). Some key findings of this study showed that known decreasing trends of drinking over the emerging adulthood developmental period may be attributed to decreased participation in binge drinking occasions rather than decreased binge drinking intensity (i.e., BAC reached in the episode) as they aged. It also found that the percentage of binge drinkers varied by day of the week, with rates lowest on Sunday and highest on Saturday; however, binge drinking intensity among drinkers fluctuated minimally across days of the week. No differential patterns in either binge drinking participation rates or drinking intensity were noted based on sex or college status (i.e., college status defined as enrolling in 9 or more credits at study enrollment). Despite the focused examination of drinking over time with the inclusion of nonstudents in investigations by Goldman et al. (2011) and Reich et al. (2015), additional research targeting nonstudents specifically remains imperative due to the generally limited research on nonstudents and their heightened risk for alcohol-related harms.

We are unaware of any studies to date examining daily drinking behavior and the extent to which key alcohol expectancies account for within-person variability in a nonstudent population. The current investigation utilized drinking data collected using the Timeline Follow-back procedure (Sobell & Sobell, 1992) assessed over a 30-day timeframe. In contrast to aggregate drinking data which only allows examination of averages across all individuals over time (i.e., inter-person variability), daily drinking data permits researchers to investigate how the behavior may vary within each individual (i.e., intra-person variability) and in a variety of situations (e.g., weekend, weekday). Another advantage to

daily drinking data is that it allows for exploration of the way in which between-subjects factors (e.g., alcohol expectancies) account for these within-subject drinking differences.

The overall purpose of the present study was to examine "day of the week" drinking patterns of nonstudent emerging adults and whether specific factors are associated with differential drinking situations. More specifically, our first aim was to identify differences in weekday versus weekend drinking. We hypothesized that alcohol consumption would be lower on weekdays as compared to weekends. Our second aim was to examine whether specific expectancies would predict weekend versus weekday drinking. We hypothesized that expectancies of tension reduction would be associated with stronger weekday drinking while expectancies of social facilitation would relate to increases in weekend drinking after considering the association with one's harmful alcohol use level (i.e., AUDIT score) and holiday drinking. We also examined standard demographic variables, including age, sex, ethnicity, employment status, and parent status as factors associated with increased weekend drinking given each have been shown to relate to differential drinking patterns (Cleveland, Mallett, White, Turrisi, & Favero, 2012; Goldman et al., 2011; Labouvie & Bates, 2002; Leonard & Rothbard, 1999; Maggs et al., 2011). We expected that younger, male, Caucasian, employed, and non-parent emerging adults would show greater increases from weekday to weekend drinking.

Method

Participants and Procedure

Data were collected from 238 participants from a mid-size city in southeastern United States (63.4% men). The mean age of the sample was 21.92 (*SD* = 2.09; median = 22.00) years. The majority of these participants were single/never married (70.6%), African-American (52.1%), employed (56.3%), non-parents (69.7%). Most participants had their high school diploma/GED equivalent (86.9%). Descriptive statistics for the entire sample and separately by sex are reported in Table 1.

Participants were recruited from the community via online (e.g., www.Craigslist.com, www.Facebook.com) and local newspaper advertisements for two separate studies (i.e., two phases of a larger study). The current data were collected as part of a larger study to develop a brief alcohol intervention for high-risk emerging adult drinkers who are noncollege-attenders. As such, to be eligible for the study, participants must: (1) be between 18 to 25 years old; (2) not have a history of college attendance; (3) have engaged in at least two heavy drinking episodes (4+/5+ drinks for women/men) in the past month (e.g., Collins, Carey, & Sliwinski, 2002; Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994); (4) consume less than 40 standard drinks weekly (e.g., Lau-Barraco & Dunn, 2008); and (5) have no history of alcohol treatment.

Engaging in at least two heavy drinking episodes over the past 30 days is consistent with the criteria established by Wechsler et al. (1994), which defines high-risk drinking as either the consumption of five or more drinks on one occasion in the past two weeks or the consumption of five or more drinks for men/four or more for women on one occasion. Individuals with consumption above 40 standard drinks weekly, or who report a history of

previous treatment for alcohol or drug abuse, were excluded as these individuals may not be suitable for brief intervention approaches (e.g., Darkes & Goldman, 1993, 1998; Lau-Barraco & Dunn, 2008).

Data collection occurred in-person at the research site. In exchange for participation, participants were compensated $40 to $60, depending on the phase of the study. The present study was approved by the university's Institutional Review Board and followed the American Psychological Association (2002) guidelines.

Measures

Alcohol use—Past 30-day alcohol use was assessed using the Timeline Follow-back (TLFB; Sobell & Sobell, 1992). The TLFB is a calendar-based method in which one estimates the number of standard drinks (i.e., the equivalent of 1 standard drink in liquor, beer, and wine) consumed on each day during the past 30 days. Variables of interest in the present study that were derived from the TLFB included the total number of standard drinks consumed on each drinking day and the date.

Days—Type of day was operationalized two different ways: (1) day of the week, and (2) holiday. Consistent with prior studies (e.g., Del Boca et al., 2004; Maggs et al., 2011), weekdays (Sunday to Wednesday) were coded 0 and contrasted with weekends (Thursday to Saturday) coded as 1. In addition, because holidays have been shown to predict increased drinking patterns (Del Boca et al., 2004), day of the year was identified for each day reported and holiday was included as a control in the analyses. Specifically, each holiday was explored based on mean drinks consumed and associated confidence intervals. Every holiday whose mean drinks was not included in the confidence interval for “no holiday” group was considered significantly different (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Halloween, Christmas, Spring Break for local colleges, and the NFL Super Bowl). Significantly higher means were then included in a dummy coded “holiday” variable (0 = not a drinking holiday; 1 = drinking holiday) included in the final analysis.

Harmful drinking—The Alcohol Use Disorder Identification Test (AUDIT; Babor, de la Fuente, Saunders, & Grant, 1992), a 10-item self-report instrument, was used to assess harmful drinking. It is suggested that a two-factor structure, alcohol use and alcohol-related problems, best represents scores from the AUDIT (e.g., Doyle, Donovan, & Kivlahan, 2007). The present study utilized only items associated with the alcohol-related problems factor (i.e., items 4 to 10). Participants responded to items 4 through 8 on a 5-point Likert scale from 0 to 4, and response options varied. On items 9 and 10, participants responded on a scale of 0 (*no*), 2 (*yes, but not in the last year*), or 4 (*yes, during the last year*). Summing all 7-item responses created a composite score, with higher scores indicating greater harmful drinking. Internal consistency was .78.

Alcohol expectancies—Fromme, Stroot, & Kaplan, 1993), a 38-item questionnaire that assesses both positive and negative expectancies across seven domains. The present study used the social (e.g., “I would be outgoing”) and tension reduction (e.g., “I would feel calm)

subscales specifically. Participants responded on a 4-point Likert scale ranging from 1 (*disagree*) to 4 (*agree*). Items were summed separately for each subscale to create two composite scores, with higher scores indicating greater endorsement. Internal consistencies were .71 for the social subscale and .66 for the tension reduction subscale.

Demographic information—Demographic information was collected for each participant, and transformed into dummy-coded variables used as predictors in the final analysis: sex (0 = male, 1 = female), if they have any children (0 = none, 1 = any), employment status (0 = unemployed, 1 = employed [part-time or full-time]), ethnicity (0 = Black/African-American, 1 = other). In each case, the most frequently occurring group in the sample was used as the reference group coded zero.

Statistical Analysis

Due to the multilevel nature of the data (30 days of data nested within individuals), data were analyzed using a multilevel modeling (i.e., "mixed effects" or "hierarchical linear" modeling) approach in HLM version 7.01 (Raudenbush, Bryk, & Congdon, 2013). Because drinks consumed per day were count data with a large number of zeroes, an over-dispersed Poisson distribution was specified. Model building procedures and examination of error variances were used to identify fixed versus random intercepts and slopes. Daily (level-1) variables included drinks consumed (the outcome), dummy-coded day type (weekday = 0; weekend = 1), and dummy-coded holiday[1]. Person-level (level-2) variables included social expectancies, tension reductions expectancies, age, and AUDIT scores (all grand-mean centered) as well as parent status, sex, employment, and ethnicity (all dummy coded). All demographic variables were included in the final model to test their associations with weekday drinking (the intercept) and weekend increases (a random slope). By examining the associations of person-level predictors with the slope for weekend drinking, this incorporated cross-level interactions. AUDIT score was included as a covariate to remove the statistical impact one's harmful drinking had on the hypothesized relationships. Holiday was controlled for as a random slope.

Results

Preliminary Analyses

Out of 7140 days of drinking data, 11 outliers were identified via boxplots, and were Winsorised (i.e., reduced to less extreme scores just above non-outliers while maintaining rank). Normality was verified for age, social expectancies, tension reduction expectancies, and AUDIT scores. Categorical variables were dummy coded. After confirming no case had more than 15% missing data, missing values for all variables were replaced using Expectation Maximization imputation (Dempster, Laird, & Rubin, 1997). Participants drank an average of 14 days ($M = 14.75$, $SD = 9.02$) out of the 30 possible days. On a typical drinking day, participants consumed about 5 drinks ($M = 5.55$, $SD = 5.15$). Exploration of day type revealed that significantly more drinks were consumed on the average weekend day

[1]Time was explored as a potential contributor to the model. However, its relationship with the outcome was negligible and its variance component was non-significant. Therefore, time was excluded from the final model.

(M = 4.11, SD = 5.45) than on the average weekday (M = 1.79, SD = 3.52), t(4521.18) = -20.26, p < .001, including non-drinking days (i.e., values of zero). See Figure 1 for average drinks consumed per day. After eliminating non-drinking days, this same pattern held true. Significantly more drinks were consumed on the average weekend day (M = 6.57, SD = 5.60) than on the average weekday (M = 4.46, SD = 4.36), t(3394.77) = -12.48, p < .001, indicating that perhaps different social-cognitive factors are at play on weekends versus weekdays. Moreover, alcohol use occurred primarily on weekends, with 63.2% of drinks consumed on these days.

Multilevel Modeling

The unconditional model (with no predictors) established an intraclass correlation (ICC) of .190 (see Table 2), indicating that 19.0% of the variance in daily drinking is between-individuals, leaving 81.0% of variance within individuals, indicating that within-person predictors of drinking (such as daily context) should be explored. It also revealed significant between-person variability around the grand mean, $\chi^2(237) = 8328.30$, p < .001, signifying that predictors of between-person variability should be explored. These preliminary results supported examination of the cross-level interactions described below, investigating how between-person predictors (i.e., age, sex, ethnicity, employment status, parent status, expectancies) relate to drinking for different daily contexts (within-person). After model building procedures, we arrived at the following final model:

Level-1 Model

$$\mathrm{Log}[\mathrm{Drinks}_{ti}] = \pi_{0i} + \pi_{1i}{}^{*}(\mathrm{WEEEKEND}_{ti}) + \pi_{2i}{}^{*}(\mathrm{HOLIDAY}_{ti})$$

Level-2 Model

$$\begin{aligned}\pi_{0i} = {} & \beta_{00} + \beta_{01}{}^{*}(\mathrm{PARENT}_{i}) \\ & + \beta_{02}{}^{*}(\mathrm{SEX}_{i}) \\ & + \beta_{03}{}^{*}(\mathrm{EMPLOYED}_{i}) \\ & + \beta_{04}{}^{*}(\mathrm{ETHNICITY}_{i}) \\ & + \beta_{05}{}^{*}(\mathrm{AGE}_{i}) \\ & + \beta_{06}{}^{*}(\mathrm{EXPECT\_SOC}_{i}) \\ & + \beta_{07}{}^{*}(\mathrm{EXPECT\_TR}_{i}) \\ & + \beta_{08}{}^{*}(\mathrm{AUDIT}_{i}) + r_{0i}\end{aligned}$$

$$\pi_{1i}=\beta_{10}+\beta_{11}{}^{*}(\mathrm{PARENT}_i)+\beta_{12}{}^{*}(\mathrm{SEX}_i)+\beta_{13}{}^{*}(\mathrm{EMPLOYED}_i)+\beta_{14}{}^{*}(\mathrm{ETHNICITY}_i)+\beta_{15}{}^{*}(\mathrm{AGE}_i)+\beta_{16}{}^{*}(\mathrm{EXPECT\_SOC}_i)+\beta_{17}{}^{*}(\mathrm{EXPECT\_TR}_i)+\beta_{18}{}^{*}(\mathrm{AUDIT}_i)+r_{1i}$$

$$\pi_{2i}=\beta_{20}+r_{2i}$$

In the above model, the log transformation reflects the use of an overdispersed Poisson distribution. All subscripts *i* refer to *individual,* and *t* refer to *time* (or day). The π values refer to level-1 parameters (i.e., π_{0i} refers to an individual's random intercept, π_{1i} refers to the influence of day, and π_{2i} refers to the influence of holiday). The β values refer to level-2 parameters (i.e., β_{02} refers to the parameter representing the association for sex, β_{03} refers to the association with employment, etc.). Random slopes are indicated with *r*s, such that r_{0i} refers to the random influence on the intercept, r_{1i} refers to the random influence on the day slope, and r_{2i} refers to the random influence on the holiday slope. In the above model, *PARENT*, *SEX*, *EMPLOYED*, and *ETHNICITY* refer to dummy-coded demographic information described above. *AUDIT* reflects that we are controlling for harmful drinking. *EXPECT_SOC* refers to social expectancies, and *EXPECT_TR* refers to tension reduction expectancies. Thus, the level-1 model indicates that the log of drinks on day *t* for participant *i* is a combination of the random intercept of person *i*, and the association of day type and holiday status on day *t* for person *i*. The level-2 model indicates that individual *i*'s random intercept is a function of the overall intercept for the entire sample, as well as the influence of individual *i*'s parent status, sex, employment, ethnicity, age, social expectancies, tension reduction expectancies, level of harmful drinking, and finally, random error. Similarly, individual *i*'s weekend slope is influenced by these same factors. Individual *i*'s holiday slope is influenced by only the sample's average slope, and random error.

Results (presented in Table 3) indicated, after controlling for harmful drinking, weekday drinking was significantly associated with sex, where female participants drank less than male participants; age, where older participants consumed more drinks; social expectancies, where stronger expectations of social benefits were associated with more drinks; and tension reduction expectancies, where stronger expectations of tension reduction were associated with more drinks consumed. The weekend slope intercept indicated that participants consumed significantly more drinks on the weekend. Weekend increases in drinking were only significantly associated with social expectancies, where stronger social beliefs were associated with stronger increases in weekend consumption. Tension reduction expectancies did not relate to increases for weekend drinking, nor did sex, age, ethnicity, employment, parent status, or harmful drinking. These relationships between expectancies and drinking

can be observed in Figure 2. As demonstrated in Figure 2a, higher social expectancies are associated with stronger increases (i.e., a steeper slope) for weekend drinking. However, the parallel slopes in Figure 2b indicate a relatively stable increase in weekend drinking, regardless of level of tension reduction expectancies. Finally, the holiday slope intercept indicated that participants consumed significantly more drinks on holidays than non-holidays. Using a formula proposed by Snijder and Bosker (2012), we compared our final model to a partial null model that accounted only for the influence of holidays; we found that 17.6% of the variance is explained by weekday/weekend differences in drinking and associated interactions.

Discussion

The current investigation adds to the limited body of literature on the drinking patterns of nonstudent emerging adults. Our goal was to identify differences in weekday versus weekend drinking and to examine whether specific positive expectancies predicted differential drinking patterns. Consistent with prior research, we expected greater weekend over weekday drinking. We anticipated that increased drinking on weekends would be positively associated with social expectancies while weekday drinking would be associated with tension reduction expectancies.

In general, study findings supported our expectations showing differential interactions of expectancies with day of the week drinking. Specifically, with regard to *weekday* consumption, stronger tension reduction beliefs were associated with more drinks consumed. Social expectancies also predicted weekday drinking but at slightly lower odds. For *weekend* consumption, drinking was higher than weekday drinking. Interestingly, in contrast to weekday drinking, social expectancies alone predicted stronger weekend increases while tension reduction expectancies did not. Demographic factors including age, ethnicity, employment, and parent status were not associated with weekend drinking increases. Further, although female participants consumed less on weekdays, against our hypothesis, sex did not emerge as a significant predictor of weekend increases. Thus, being male or female did not relate to the degree to which drinking increased from weekday going into the weekend. This is in contrast to prior work with college students showing that males exhibited more prominent escalations in drinking throughout the week than females (Maggs et al., 2011; Tremblay et al., 2010). In light of the mixed results, combined with other findings demonstrating no sex differences in risk of heavy drinking throughout the week (Maggs et al., 2011), additional research is essential to further explicate the contextual factors associated with differential drinking patterns between males and females. And finally, select holidays were associated with increases in alcohol consumption. This is consistent with prior research (e.g., Del Boca et al., 2004). However, the observed relationships with drinking that were statistically significant (e.g., social and tension reduction expectancies with weekday drinking, and social expectancies with increases in weekend drinking) were above and beyond the effect of holiday.

Our model without predictors indicated that a larger portion of the variance in daily drinking were due to fluctuations day to day, rather than differences among nonstudents, though differences among nonstudents were significant. Our final multilevel model indicated that,

after controlling for the effect of holiday, the within-person weekday/weekend distinction explained 18% of the total variance. This large effect suggests that drinking patterns vary greatly from weekday to weekend, such that nonstudents consumed more from Thursday through Saturday than Sunday through Wednesday.

Our finding that drinking is elevated on weekends as compared to weekdays suggests that there is a cyclical pattern of weekly drinking. These results echo prior findings demonstrating that drinking exhibits a steady increase throughout the week and peaks into the weekend. This pattern has been shown across samples, with the overwhelming majority focusing on college students (Del Boca et al., 2004; Hoeppner et al., 2012; Labhart & Kuntsche, 2014; Maggs et al., 2011; Tremblay et al., 2010; Wood et al., 2007), but also has been demonstrated in the general population (Kushnir & Cunningham, 2014). The current findings are consistent with Goldman et al. (2011), which showed weekly patterns of drinking escalation from weekday to weekend, and congruous with the results of Reich et al. (2015), which revealed that those choosing to binge drink varied by day of the week, with rates peaking on Saturdays.

Prior research provides limited information regarding the link between alcohol expectancies and “day of the week” drinking. While past studies have examined social expectancies in relation to drinking growth patterns and trajectory class membership (Del Boca et al., 2004; Greenbaum, Del Boca, Darkes, Wang, & Goldman, 2005; Reich et al., 2015), none have explored weekend/weekday drinking as related to differential positive alcohol expectancies. Our findings showed that weekend drinking is tied to expecting alcohol to produce social rewards. The role of social expectancies in the context of weekend drinking is in line with the larger body of research supporting the salience of the expected social benefits of drinking with college student samples (e.g., Baer, 2002; Ham & Hope, 2003; Jones, Corbin, & Fromme, 2001). Prior research on expectancy and context has found that social expectancies are associated with drinking with others and at parties (Engels et al., 2005). Given that social and leisure activities are more likely to occur on weekends, the emphasis on social expectancies for weekend drinking is not entirely surprising. Thus, for this sample of nonstudent drinkers, their alcohol use fell into a weekly cycle whereby greater drinking took place on the weekends and the social aspect of a drinking context was associated with consumption on these occasions. In light of research linking sociability expectancies to problematic drinking (Ham et al., in press; Pabst et al., 2014), efforts to challenge beliefs about anticipated social rewards of drinking could be prime intervention targets (Lau-Barraco & Dunn, 2008).

The finding that tension reduction expectancies were associated with weekday drinking but not with weekend drinking escalations should be highlighted given the potential implication. Drinking as a way to manage negative emotions or for negative reinforcement is conceptualized to be a central contributor to the cause and maintenance of problematic drinking behaviors (Cooper, Frone, Russell, & Mudar, 1995; Greely & Oei, 1999; Sher, 1987). Drinking with the goal of reducing negative affect or to cope with stress has been associated with an increased risk for problem-prone drinking (Brown, 1985; Christiansen, Vik, & Jarchow, 2002; Pabst et al., 2014). Thus, the emphasis on tension reduction expectancies for weekday drinking could signify a potential progression to increasing

drinking severity. Theory (Goldman, Del Boca, & Darkes, 1999; Maisto et al., 1999) and research (Aas et al., 1998) suggest that while expectancies impact drinking behavior, behavior could also strengthen learned expectancies (i.e., reciprocal determinism). As such, drinking experiences could lead to stronger endorsement of anticipated coping reinforcing effects of alcohol over time which could prompt more alcohol use to regulate emotions. This positive feedback loop could then lead to heightened risk for problematic drinking. Consequently, to minimize hazardous drinking and reduce associated harms, a primary aim in intervening with nonstudent heavy drinkers should be to challenge tension reduction or coping outcomes of alcohol use. In general, our findings highlight the importance of alcohol expectancies and drinking situations in understanding the alcohol use behaviors of nonstudents. The differential role of tension reduction and social facilitation expectancies on the amount of alcohol consumed during a typical day throughout the week imply different cognitive pathways may be involved in weekday versus weekend drinking and both types of expected alcohol effects should be targets of risk-reduction efforts with nonstudent drinkers.

Several limitations should be noted for the current study. First, approximately 60% of our sample identified as an ethnic minority which may limit the generalizability of these findings. Another limitation is that alcohol expectancies were assessed as a between-person factor; thus, the proximal within-person associations between types of expectancies and daily drinking are unclear. Future research should employ a daily process design to examine these within-person processes as well as to investigate further, in relation to specific expectancies, the context associated with weekday and weekend drinking including setting (e.g., home, bars, parties), interpersonal context (e.g., alone, with peers), and alcohol-related consequences experienced as a function of “day of the week” drinking. Another study limitation involves the use of a retrospective rather than prospective measure of daily drinking. While the TLFB is widely used and has shown to produce valid assessments of drinking (Sobell & Sobell, 1992), this method has been found to provide deflated estimations of drinking compared to daily diary or real-time methods (Carney, Tennen, Affleck, Del Boca, & Kranzler, 1998; Patrick & Lee, 2010). Given advances in technology, fine-grained characteristics of drinking patterns may be more easily and accurately assessed with prospective daily recall or ecological momentary assessment methods (Shiffman, Stone, & Hufford, 2008). Finally, the current investigation was specifically focused on at-risk nonstudent emerging adult drinkers; thus, generalization beyond this target group should be made with caution.

The goal of the current investigation was to identify differences in weekday versus weekend drinking among nonstudent emerging adults. Consistent with prior research, we found greater weekend over weekday drinking after controlling for holiday and harmful drinking. Weekday drinking was related to tension reduction and sociability alcohol expectancies while weekend increases in drinking were associated only with social expectancies. Weekday drinking was also stronger for men and older participants, though sex and age were unassociated with the strength of weekend increases. These findings support that specific positive alcohol expectancies differentially predict drinking by context, and that both types of expected alcohol effects should be targets of risk-reduction efforts with nonstudent drinkers.

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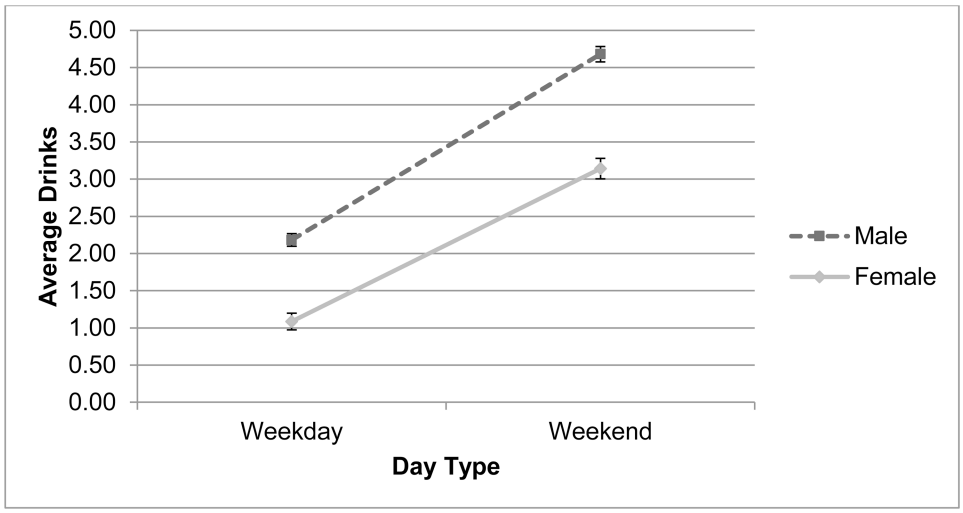
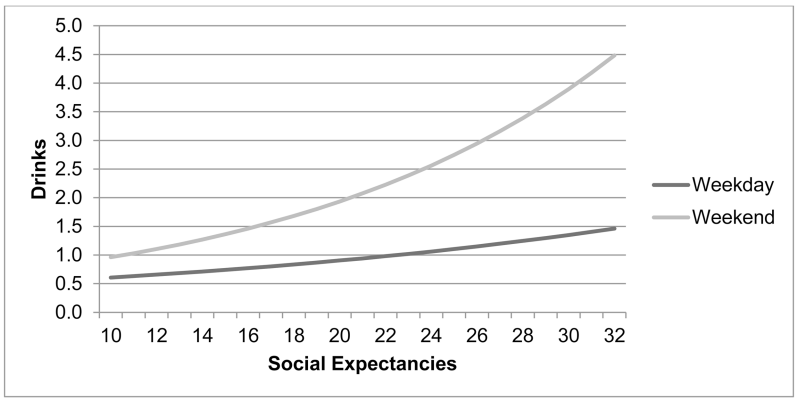


Figure 1.
Average alcohol consumption across days by sex.

a)



b)

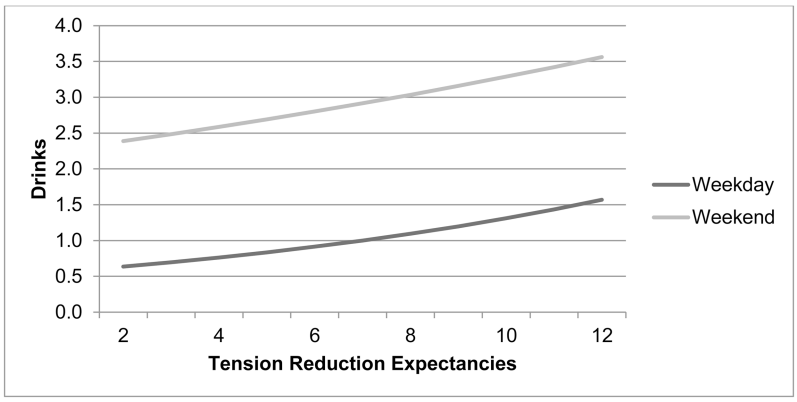


Figure 2.

Relationship between expectancies and alcohol consumption by type of day. Note that the range across the X-axis reflects the range of values observed in the current sample for each expectancy type.

Table 1
Sample Demographic and Baseline Characteristics

Variable	Men (*n* = 151) *n* (%)	Women (*n* = 85) *n* (%)	Total (*n* = 238)[1] *n* (%)
Demographic Variables			
Marital status			
Single	121 (80.1)	47 (55.3)	168 (70.6)
Living with partner	17 (11.3)	23 (27.1)	40 (16.9)
Married	8 (5.3)	9 (10.6)	17 (7.2)
Separated/Divorced	5 (3.3)	6 (7.1)	11 (4.6)
Ethnicity			
Caucasian	54 (35.8)	32 (37.6)	86 (36.1)
Native American	3 (2.0)	0	3 (1.3)
African American	79 (52.3)	45 (52.9)	124 (52.1)
Hispanic	10 (6.6)	5 (5.9)	15 (6.3)
Other	5 (3.3)	5 (5.9)	10 (4.2)
Annual income			
Under $10,000	62 (41.1)	49 (57.6)	111 (46.6)
$10,001-$20,000	47 (31.1)	23 (27.1)	70 (29.4)
$20,001-$40,000	30 (19.9)	10 (11.8)	41 (17.2)
$40,001-$60,000	8 (5.3)	1 (1.2)	9 (3.8)
$60,001-$80,000	1 (0.7)	0	1 (0.4)
Missing	3 (2.0)	2 (2.4)	5 (2.1)
Living Arrangement			
A parent's or relative's home	69 (45.7)	38 (44.7)	107 (46.7)
A house, apartment, or room (not affiliated with college)	73 (48.3)	45 (52.9)	119 (52.0)
Other	9 (6.0)	2 (2.4)	12 (5.0)
Children			
No	113 (74.8)	51 (60.0)	166 (69.7)
Yes	38 (25.2)	34 (40.0)	72 (30.3)
Employment			
Full-time	47 (31.1)	26 (30.6)	74 (31.4)
Part-time	38 (25.2)	22 (25.9)	60 (25.2)
Unemployed	65 (43.0)	37 (43.5)	102 (42.9)
Cigarette Ever-User Status			
Yes	89 (59.6)	42 (49.4)	132 (55.5)
No	26 (17.2)	16 (18.8)	42 (17.6)
Missing	36 (23.8)	27 (31.8)	64 (26.9)
Marijuana Ever-User Status			
Yes	85 (55.3)	40 (47.1)	125 (52.3)
No	18 (11.8)	12 (14.1)	30 (12.6)
Missing	49 (32.9)	33 (38.8)	82 (35.1)
Raw Baseline Characteristics[2]			

Variable	Men (*n* = 151) *n* (%)	Women (*n* = 85) *n* (%)	Total (*n* = 238)[1] *n* (%)
AUDIT	6.71 (5.75)	5.15 (5.07)	6.12 (5.54)
Social Expectancies	26.97 (4.06)	27.49 (3.99)	27.16 (4.04)
Tension Reduction Expectancies	9.64 (2.10)	9.49 (2.32)	9.56 (2.22)
Age	21.96 (2.07)	21.83 (2.11)	21.92 (2.09)

Note. AUDIT = Alcohol Use Disorder Identification Test (items 4-10 only).

[1]Two individuals did not report their sex.

[2]Values represent means (standard deviation).

Table 2

Coefficients for Models Predicting Number of Standard Drinks using Multilevel Modeling

	b	*SE*	e^B	*t*	*df*	*p*	σ^2	τ_{00}	ICC
Unconditional (Null) Model							3.633	0.852	.190
Intercept (β_{00})	0.61	0.062	1.836	9.69	237	<.001			
Final Model							2.726	0.940	.256
Weekday Intercept (π_0)									
Intercept (β_{00})	0.18	0.158	1.196	1.13	229	.258			
Children (β_{01})	-0.17	0.160	0.846	-1.05	229	.294			
Sex (i.e., male) (β_{02})	-0.29*	0.138	0.748	-2.10	229	.037			
Employed (β_{03})	-0.02	0.138	0.984	-0.12	229	.907			
Ethnicity (β_{04})	-0.14	0.151	0.873	-0.90	229	.370			
Age (β_{05})	0.08*	0.039	1.088	2.17	229	.031			
Social Expectancies (β_{06})	0.04*	0.016	1.044	2.67	229	.008			
TR Expectancies (β_{07})	0.09*	0.038	1.089	2.22	229	.027			
AUDIT (β_{08})	0.09**	0.012	1.092	7.62	229	<.001			
Weekend Slope (π_1)									
Intercept (β_{10})	0.97**	0.107	2.636	9.08	229	<.001			
Children (β_{11})	0.01	0.128	1.020	0.08	229	.938			
Sex (i.e., male) (β_{12})	0.11	0.125	1.117	0.89	229	.375			
Employed (β_{13})	0.06	0.115	1.063	0.53	229	.598			
Ethnicity (β_1)	0.03	0.130	1.031	0.24	229	.815			
Age (β_1)	-0.05	0.034	0.955	-1.34	229	.181			
Social Expectancies (β_{16})	0.03*	0.013	1.034	2.55	229	.011			
TR Expectancies (β_{17})	-0.05	0.030	0.951	-1.65	229	.100			
AUDIT (β_{18})	-0.01	0.010	0.987	-1.24	229	.213			
Holiday Slope (π_2)									
Intercept (β_{20})	0.79**	0.100	2.200	7.96	237	<.001			
Variance Components									

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	b	***SE***	***e*^{B}**	***t***	***df***	***p***	**σ^2**	**τ_{00}**	**ICC**
Random Effect	*SD*	Var.	*df*	χ^2	*p*				
Intercept (r_0)	0.97**	0.940	130	1277.1	<.001				
Weekend Slope (r_1)	0.73**	0.537	130	455.1	<.001				
Holiday Slope (r_2)	0.71**	0.503	138	245.7	<.001				
Level-1 (e)	1.65	2.726							

Note. TR = Tension Reduction, AUDIT = Alcohol Use Disorder Identification Test (items 4-10 only), ICC = Intraclass correlation. e^B represents the exponentiation of the coefficient, also called the odds ratio. σ^2 and τ_{00} represent the within-group and between-group variance components, respectively, used to calculate the ICC. Var. = variance.

*$p < .05$,

**$p < .001$

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