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Pathways from Positive, Negative, and Specific Alcohol Expectancies to Weekday and Weekend Drinking to Alcohol Problems

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Abstract

The current study tested and identified risk and protective pathways from alcohol expectancies to weekday and weekend consumption to problematic consequences. Adult alcohol users ($N = 395$) completed measures of alcohol expectancies, daily consumption habits during a typical week, and alcohol-related problems. Confirmatory factor analysis supported the five-factor structure of positive expectancy, negative expectancy, weekday drinking, weekend drinking, and alcohol problems. The structural equation model specifying general positive and negative expectancy to weekday and weekend use to alcohol problems exhibited satisfactory fit indices. Specifically, positive expectancy contributed to greater weekend drinking, but negative expectancy prompted greater weekday drinking. Furthermore, lower positive expectancy, higher negative expectancy, higher weekday drinking, and higher weekend drinking each uniquely explained greater alcohol problems. The structural equation model involving the seven specific expectancies to weekday and weekend use to alcohol problems produced high fit indices. Specifically, higher risk and aggression, higher self-perception, and lower cognitive and behavioral impairment expectancies uniquely predicted weekday drinking. In contrast, higher sociability, higher liquid courage, higher risk and aggression, and lower cognitive impairment expectancies explained weekend drinking. The predictive model premised on specific alcohol expectancies as distinct constructs exhibited higher fit indices and more nuanced insights regarding risk and protective pathways for prevention than the model involving general positive versus negative expectancy constructs. Findings underscore that different types of self-fulfilling alcohol expectancy beliefs distinctively explain weekday versus weekend intake and problems.

Keywords Alcohol expectancies · Weekend drinking · Alcohol problems · Structural equation model

Weekend relaxation is essential to help recover from work and stress during the weekdays and contributes to positive emotions and well-being (Binnewies et al. 2010; Fritz et al. 2010). During the weekend, people are more likely to socialize and engage in pleasurable activities and events in which alcohol is served, with this respite period coinciding with substantially higher consumption rates compared to the weekdays (Kuntsche and Cooper 2010; Orcutt and Harvey 1991; Studer et al. 2014). The elevated consumption rate during the weekends relative to weekdays leads to more deleterious alcohol-induced problems such as vehicular accidents (Hingson and Winter 2003), aggression and violence (Pridemore 2004), and mortality (Plunk et al. 2014). Alcohol expectancy beliefs regarding the anticipated effects of drinking could help to explain weekend use and problematic outcomes. The current study tested pathways from alcohol expectancies to weekday and weekend use to alcohol problems.

Weekend Versus Weekday Drinking

Previous studies have investigated the risk characteristics of alcohol ingestion during the weekend (Kuntsche and Labhart 2012; Kuntsche et al. 2015), identified consumption intentions and environmental factors responsible for weekend drinking

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(Trim et al. 2011), and documented enhancement motives as a reason for weekend intake (Kuntsche and Cooper 2010). Suffoletto and Chung (2016) examined patterns of change in weekend drinking perceptions in association with drinking risks in the context of an alcohol intervention. The study discovered that those uncommitted to restricting weekend alcohol use were less responsive to the intervention. Thus, research that seeks to identify risks and consequences of weekend drinking habits should help inform prevention programs targeting diurnal alcohol consumption habits.

A fundamental challenge in understanding the daily drinking patterns across the week concerns the exact days that conceptually embody and demarcate the boundaries of "weekends" and "weekdays" in the context of alcohol use. Despite inconsistencies in measurement, the research consensus is that people ingest alcohol more heavily on the "weekends" compared to "weekdays" (Del Boca et al. 2004; Maggs et al. 2011). Approaches to this operational definition have varied, ranging from adopting a two-day drinking weekend of Friday to Saturday or Saturday to Sunday (e.g., Ekholm et al. 2011; Matzopoulos et al. 2006) to a three-day weekend of Thursday to Saturday or Friday to Sunday (e.g., Luk et al. 2017; Mohr et al. 2013). Competing definitional variations have been pursued including applying five days of the week to measure weekend (Friday and Saturday) and weekday (Monday to Wednesday) consumption but not categorizing the other days (Cleveland and Almeida 2013; Turrisi et al. 2013).

Recently, Lac et al. (2016) applied confirmatory factor analysis (CFA) to resolve the classification of the days that optimally embody weekend versus weekday intake patterns by testing common measurement manifestations put forth in the previous literature. This psychometric investigation based on adults across a wide age spectrum discovered that the best fitting model was a correlated two-factor structure permitting Friday and Saturday to load on weekend drinking and Monday, Tuesday, and Wednesday to represent weekday drinking. Moreover, Sunday and Thursday, constituting transitional consumption days, each double loaded on both weekend and weekday drinking.

Alcohol Expectancies

Alcohol expectancies represent personal beliefs about the anticipated effects of drinking. Research has established that positive and negative alcohol expectancies are consistently correlated with overall alcohol use and its consequences (Brown et al. 1987; Jones et al. 2001). The Comprehensive Effects of Alcohol questionnaire (Fromme et al. 1993) is the most widely administered alcohol expectancy scale and represented by four positive (sociability, tension reduction, liquid courage, and sexuality) and three negative (cognitive and

behavioral impairment, risk and aggression, and self-perception) expectancies. Drinking in younger adults is usually prompted by higher sociability and higher sexuality expectancies, whereas drinking in older adults is driven by higher tension reduction and lower cognitive and behavioral impairment expectancies (Nicolai et al. 2012; Pabst et al. 2010).

Current Study

Drinking expectancies and motives have been evaluated as risk factors for weekday and weekend drinking. Lau-Barraco et al. (2016) determined that tension reduction expectancies were associated with weekday drinking (defined as Sunday to Wednesday) and social expectancies were associated with weekend drinking (defined as Thursday to Saturday). Studer et al. (2014) documented that coping motives were related to weekday drinking (defined as Monday to Thursday), whereas enhancement motives explained weekend drinking (defined as Friday to Sunday). These studies indicate that tension reduction and coping beliefs prompt weekday use, whereas sociability and enhancement beliefs facilitate weekend use.

The purpose of the current study is to test pathways from alcohol expectancies to weekday and weekend use to alcohol-related consequences. The examination of these connections would help to identify risk and protective factors to offer insights for prevention efforts tailored to the consumption habits of weekdays versus weekends. The proposed research overcomes several limitations of prior research. First, the current study applied a paradigm to conceptualize weekday and weekend consumption based on a validated two-factor measurement structure (Lac et al. 2016). Past investigations have applied inconsistent or arbitrary definitions or classified weekday and weekend drinking based on descriptive data (Del Boca et al. 2004; Maggs et al. 2011). Second, the present study comprehensively tested all seven specific alcohol expectancies as predictors of weekday and weekend use. The practical utility of disaggregating specific types of alcohol expectancies has been noted (Blume and Guttu 2015; Lac and Brack 2018), but the extent that these specific expectations explain weekend versus weekday use has been largely neglected. For instance, previous research has evaluated social and tension-reduction expectancies but did not control for the other types of specific expectancies in the same predictive model to understand weekend versus weekday drinking (Lau-Barraco et al. 2016). Finally, this is the first study to test relations involving expectancies and problems with the two-factor structure of weekday and weekend drinking (Lac et al. 2016). Thus, a mediational model from alcohol expectancies to weekday and weekend use to problems was tested.

Method

Participants

The sample of alcohol users (N = 395) averaged 32.42 (SD = 11.27) years of age (range 18 to 71). Gender distribution included 54% male and 46% female. Racial identity included 81% White, 4% Latino, 6% Black, 6% Asian, and 3% multiracial. The original data collection involved 512 participants (117 nondrinkers during the typical seven-day week were excluded from analyses).

Procedure

Participants were recruited from Mechanical Turk (MTurk), a crowdsourcing site permitting the completion of tasks including research studies for nominal compensation. Data from this source are considered convenience sampling (Antoun et al. 2016), with methodological studies showing that participants answered candidly, paid attention to questions, and completed measures that exhibited measurement reliabilities and validities similar to that in community samples (Kim and Hodgins 2017). Participants are more demographically diverse than undergraduate and standard Internet sources (Buhrmester et al. 2011; Goodman et al. 2013), with results comparable to in-person recruitment methods (Rand 2012). Although MTurk participants are drawn from geographically diverse regions across the U.S. (Azzam and Jacobson 2013), they tend to be younger and higher in education attainment than the overall U.S. population (Paolacci et al. 2010). Among MTurk respondents who reported being alcohol users, 27% of the days they used alcohol satisfied the National Institute on Alcohol Abuse and Alcoholism (NIAAA) criteria for binge drinking in one study (Boynton and Richman 2014), and 66% were classified by a clinical screening tool to possess alcohol problems in another study (Kim and Hodgins 2017).

Participation was restricted to a 90% or higher approval rating on previously completed MTurk tasks to ensure adequate response quality (Peer et al. 2014) and US residency because of alcohol use disparities across countries (Balogun et al. 2014). An institutional IRB approved the research protocols.

Measures

Alcohol Expectancies The Comprehensive Effects of Alcohol questionnaire (Fromme et al. 1993) assessed beliefs regarding the anticipated effects of alcohol intake. Instructions indicated to "Check a response from disagree to agree, depending on whether you would expect the effect to happen to you if you were under the influence of alcohol." The 38-item inventory consists of seven specific subscales including sociability (α = .91; e.g., "I would be friendly"), tension reduction (α = .81; e.g., "I would feel calm"), liquid courage (α = .88;

e.g.," I would feel powerful"), sexuality (α = .87; e.g., "I would be a better lover"), cognitive and behavioral impairment (α = .86; e.g., "I would be clumsy"), risk and aggression (α = .88; e.g., "I would take risks"), and self-perception (α = .88; e.g., "I would feel self-critical"). The first four subscales are classified as positive expectancy (α = .76) and the last three subscales as negative expectancy (α = .70). Response options ranged from 1 (*disagree*) to 4 (*agree*).

Weekday and Weekend Drinking The Daily Drinking Questionnaire-Revised (Lac et al. 2016), previously validated using CFA and item response theory analysis, measured daily drinking patterns. Instructions indicated to "Consider a typical week during the past month. How much alcohol, on average (measured in number of drinks), do you drink on each day of a typical week?" Participants responded to seven parallel items corresponding to each day of the week (e.g., "On a typical Monday, I have ___ drinks") using open-ended quantitative responses. Consistent with measurement specifications for the factor structure of intake frequency across the seven days of the week (Lac et al. 2016), Monday, Tuesday, and Wednesday represented weekday drinking and Friday and Saturday represented weekend drinking. Thursday and Sunday were permitted to double load on weekday and weekend use. Weekday (α = .82) and weekend (α = .75) drinking were estimated as latent factors. Based on the NIAAA (2004) definition of binge drinking as consuming 5 or more alcoholic beverages for males and 4 or more alcoholic beverages for females on a single occasion, 28% of the sample binge drank at least one day per week.

Alcohol Problems The Rutgers Alcohol Problem Index (RAPI) is a 23-item instrument designed to assess alcohol consequences in clinical and nonclinical samples (White et al. 1988; White and Labouvie 1989). This screening tool covers almost all the DSM-III-R diagnostic criteria for an alcohol disorder (White and Labouvie 1989) and exhibits strong convergent validity with other clinical assessments of alcohol abuse and problems (White et al. 1988). Instructions indicated "How many times did the following things happen to you while you were drinking or because of your alcohol use in the past 30 days?" Response options ranged from 0 (*never*) to 5 (*5 or more times*). Consistent with scoring recommendations (Martens et al. 2007), each item was dichotomously coded as to whether the problem was experienced (1 = *1 or more times*) or not (0 = *never*). Items could be arranged into three intercorrelated facets (Martens et al. 2007): abuse/dependence consequences (α = .93, 12 items, e.g., "Felt psychologically dependent on alcohol"), personal consequences (α = .90, 7 items, e.g., "Neglected your responsibilities"), and social consequences (α = .83, 4 items, e.g. "Caused shame or embarrassment to someone"). These three summed indices served as parcels (Coffman and MacCallum 2005; Matsunaga 2008) for the alcohol problems factor.

Statistical Analysis

In Model 1, the CFA tested the five-factor structure involving positive expectancy, negative expectancy, weekday drinking, weekend drinking, and alcohol problems to examine bivariate correlations across these latent factors. In Model 2, a structural equation model (SEM) estimated predictive pathways from the positive and negative expectancy to weekday and weekend use to alcohol problems. In Model 3, another SEM tested pathways from the seven specific alcohol expectancies to weekday and weekend use to alcohol problems.

The models were specified with the Mplus program (Muthen and Muthen 2017). Based on the recommended approach to adjust for nonnormally distributed variables (Hoyle 2012; Kline 2016; Maydeu-Olivares 2017), robust maximum likelihood (MLM) served as the estimation method to automatically correct fit indices and p values of direct effect estimates based on normality departures. Accordingly, four robust fit indices (Hoyle 2012; Muthen and Muthen 2017) judged the adequacy of each model. The model chi-square (χ^2) test is oversensitive in rejecting a model when the sample size is not small (Bollen 1989). Thus, the CFI and TLI, preferably between .90 and 1.00 indicating a good model (Ullman and Bentler 2003), were also interpreted. The RMSEA is appropriately sensitive in detecting misspecifications, with a value below .05 denoting close fit, between .05 and .08 fair fit, and between .08 and .10 mediocre fit, and above .10 poor fit (Browne and Cudeck 1992; MacCallum et al. 1996).

Results

Confirmatory Factor Analysis

The five-factor CFA involving the latent factors of positive expectancy, negative expectancy, weekday drinking, weekend drinking, and alcohol problems was estimated. The CFA exhibited satisfactory fit indices, $\chi^2 = 259.99$, $df = 107$, $p < .05$, $\chi^2/df = 2.43$, CFI = .93, TLI = .91, and RMSEA = .06 [90% CI .05 to .07]. Factor loadings and interfactor correlations are presented in Fig. 1. All items loaded significantly and highly on their respective factors. Interfactor correlations ranged from .14 to .63, with these magnitudes falling below the recommended .80 correlation to signify discriminant validity of factors (Brown 2006). Furthermore, the imposition of constraints forcing each correlation pair between factors to be equivalent ($r = 1.00$) statistically degraded the CFA model, all $ps < .001$. These results corroborated that the five factors embodied distinct constructs.

Structural Equation Model: General Positive and Negative Expectancy

Pathways from general positive and negative expectancy to weekday and weekend drinking to alcohol problems were estimated in an SEM. Positive expectancy and negative expectancy were specified to be correlated and to predict weekday and weekend use and alcohol problems. Both weekday and weekend drinking were stipulated to explain alcohol problems. The disturbance terms (predictive errors of latent factors) of weekday and weekend use were permitted to be correlated.

The predictive model demonstrated satisfactory fit indices, $\chi^2 = 339.40$, $df = 143$, $p < .05$, $\chi^2/df = 2.37$, CFI = .92, TLI = .90, and RMSEA = .06 [90% CI .05 to .07]. Trimming the two nonsignificant predictive paths yielded the final model, $\chi^2 = 340.89$, $df = 145$, $p < .05$, $\chi^2 = 2.35$, CFI = .92, TLI = .90, and RMSEA = .06 [90% CI .05 to .07]. Estimates are found in Fig. 2. All item loadings for the factors attained significance. Positive expectancy uniquely predicted greater weekend drinking, whereas negative expectancy uniquely explained greater weekday drinking. Lower positive expectancy, higher negative expectancy, higher weekday drinking, and higher weekend drinking uniquely contributed to greater alcohol problems. The mediational processes depicted in Fig. 2 were corroborated by tests of indirect effects presented in the top part of Table 1.

Structural Equation Model: Specific Expectancies

Pathways from the seven specific expectancies to use to problems were estimated with SEM. The specific expectancies were stipulated to be intercorrelated and to explain weekday and weekend drinking and alcohol problems. Weekday and weekend drinking were proposed to explain problems. Disturbance terms for weekday and weekend drinking were permitted to correlate.

The proposed model rendered strong fit indices: $\chi^2 = 150.68$, $df = 100$, $p < .05$ $\chi^2/df = 1.51$, CFI = .97, TLI = .96, RMSEA = .04 [90% CI: .02 to .05]. Deletion of nonsignificant predictive paths supported the final model, $\chi^2 = 162.83$, $df = 109$, $p < .05$, $\chi^2/df = 1.49$, CFI = .97, TLI = .96, RMSEA = .04 [90% CI: .02 to .05]. Model estimates are presented in Fig. 3. All item loadings for the latent factors attained significance. Lower cognitive and behavioral impairment, higher risk and aggression, and higher self-perception expectancies uniquely contributed to weekday drinking. Higher sociability, higher liquid courage, lower cognitive and behavioral impairment, and higher risk and aggression expectancies explained weekend drinking. Greater alcohol problems were explicated by lower sociability, higher sexuality, higher cognitive and behavioral impairment,

Fig. 1 Confirmatory factor analysis involving positive expectancy, negative expectancy, weekday drinking, weekend drinking, and alcohol problems. Standardized coefficients are presented. Coefficients with bold lines are significant at *p* < .05. E = measurement error
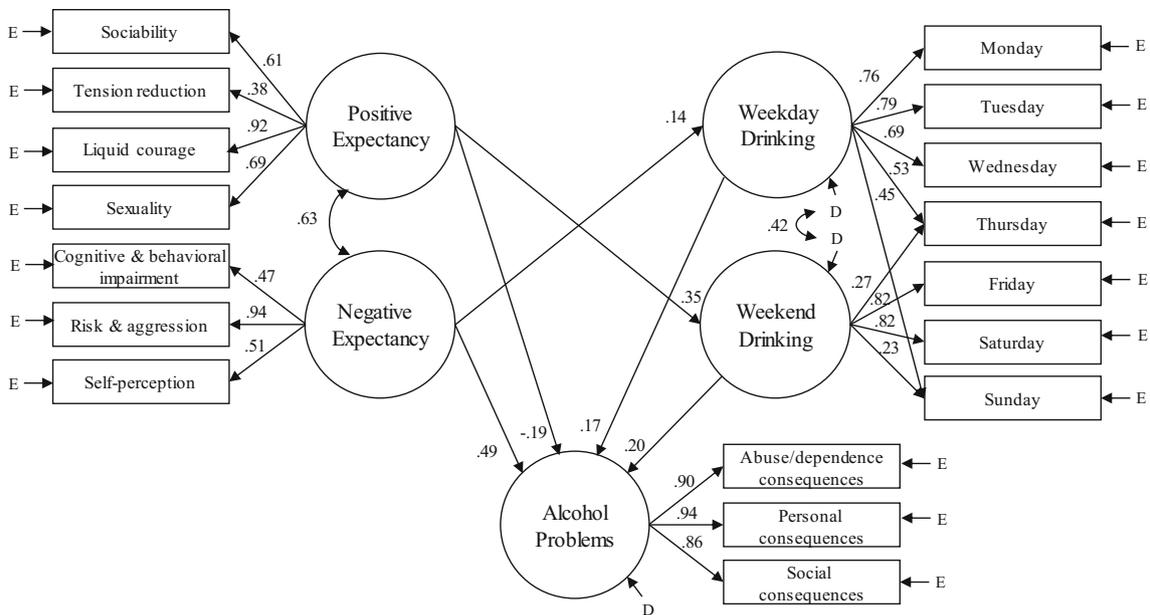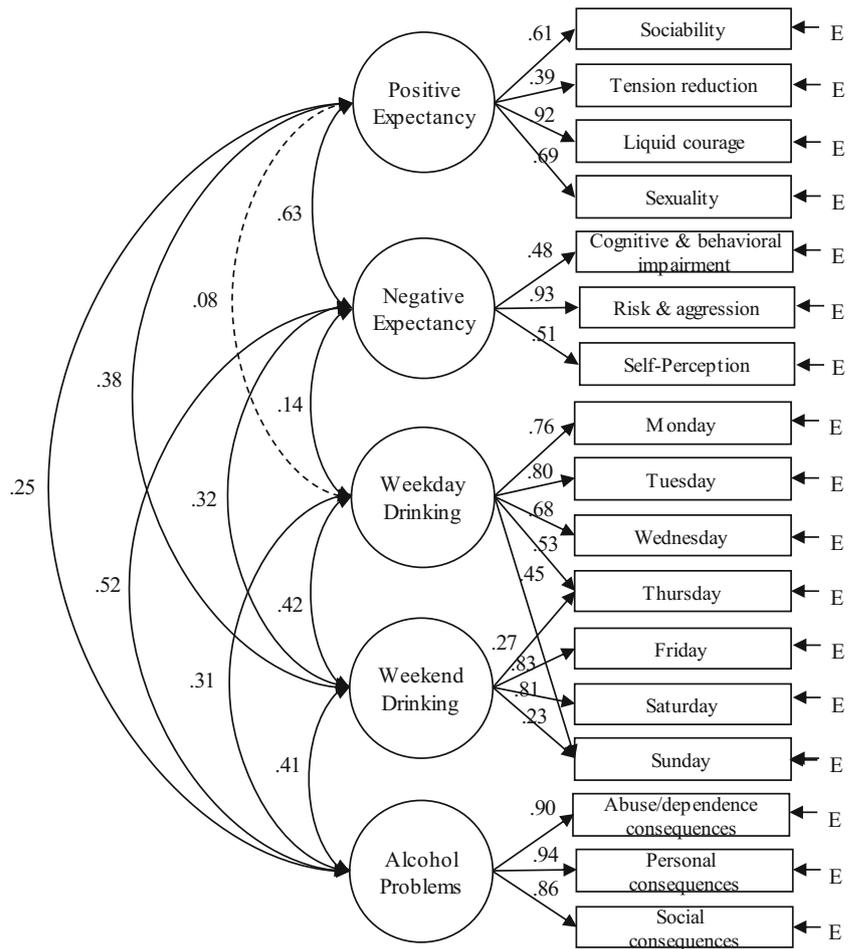
Fig. 2 Structural equation model of positive and negative expectancy to weekday and weekend drinking to alcohol problems. Standardized coefficients are presented. All paths shown are significant, *p* < .05. To rule out demographic characteristics, estimated but not displayed (for diagrammatic clarity) are age, gender (0 = female, 1 = male), and race (0 = racial minority, 1 = White) in covarying with the positive and negative expectancy and predicting weekday drinking, weekend drinking, and alcohol problems. E = measurement error. D = disturbance

Table 1 Tests of specific indirect effects

| Model	Predictor	Mediator	Outcome	Specific indirect effect β	95% CI	
					LL	UL
Figure 2	Positive expectancy	Weekend drinking	Alcohol problems	.071*	.011	.147
Figure 2	Negative expectancy	Weekday drinking	Alcohol problems	.023*	.003	.065
Figure 3	Sociability expectancy	Weekend drinking	Alcohol problems	.039*	.011	.083
Figure 3	Liquid courage expectancy	Weekend drinking	Alcohol problems	.040*	.006	.094
Figure 3	Cognitive & behavioral impairment expectancy	Weekday drinking	Alcohol problems	−.021*	−.063	−.004
Figure 3	Cognitive & behavioral impairment expectancy	Weekend drinking	Alcohol problems	−.028*	−.073	−.004
Figure 3	Risk & aggression expectancy	Weekday drinking	Alcohol problems	.020*	.002	.056
Figure 3	Risk & aggression expectancy	Weekend drinking	Alcohol problems	.043*	.006	.104
Figure 3	Self-perception expectancy	Weekday drinking	Alcohol problems	.020*	.001	.062

Bootstrapping of indirect effects based on 2000 samples using bias-corrected confidence intervals (MacKinnon et al. 2004). Specific indirect effects presented here have statistically accounted for all other effects, including demographic covariates, in Figs. 2 and 3. The indirect effect from positive expectancy to weekend drinking to alcohol problems was not significantly different than the indirect effect from negative expectancy to weekday drinking to alcohol problems. Standardized coeffiicents are presented. LL = lower limit; UL = upper limit.

*$p < .05$

higher risk and aggression, higher self-perception expectancies, higher weekday drinking, and higher weekend drinking. Test of indirect effects, as shown in the bottom part of Table 1, corroborated the statistical significance of all mediational processes in Fig. 3.

Discussion

The study examined general and specific alcohol expectancies (in separate models) as uniquely contributors to weekday versus weekend drinking habits. Most alcohol studies typically
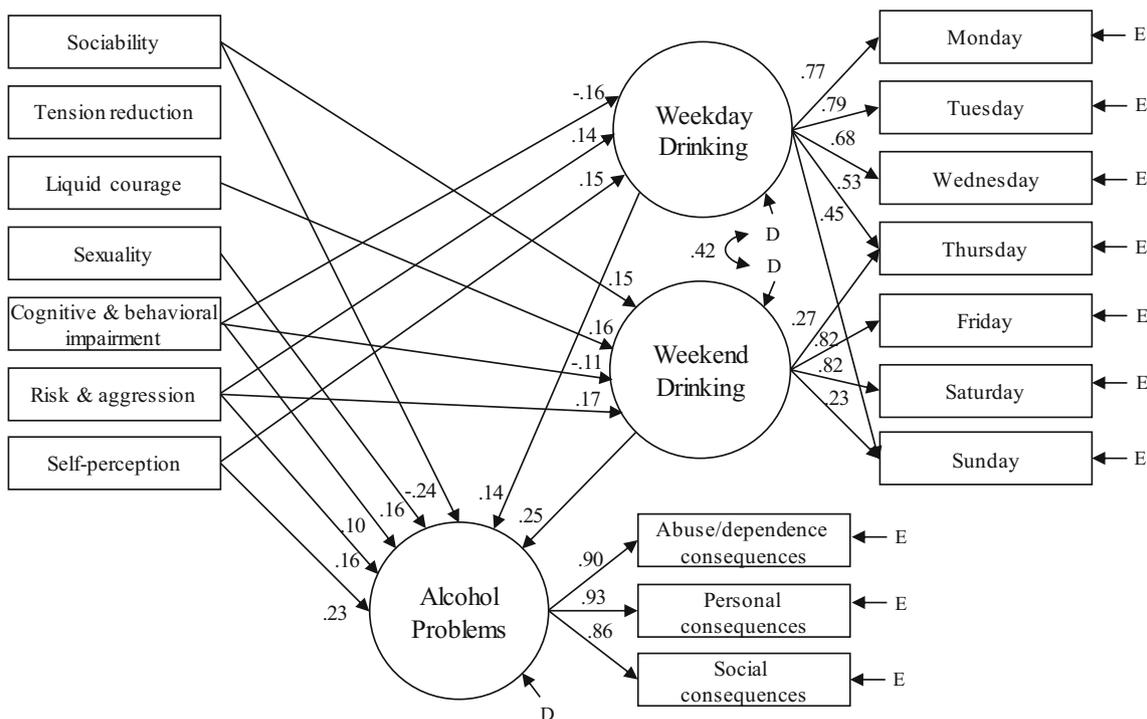
Fig. 3 Structural equation model of specific expectancies to weekday and weekend drinking to alcohol problems. Correlations across the seven specific expectancies were estimated as part of this model and are presented in the online supplementary materials. Standardized coefficients are presented. All paths shown are significant, $p < .05$. To rule out demographic characteristics, estimated but not displayed (for diagrammatic clarity) are age, gender (0 = female, 1 = male), and race (0 = racial minority, 1 = White) in covarying with the specific expectancies and predicting weekday drinking, weekend drinking, and alcohol problems. E = measurement error. D = disturbance

assess an overall composite of alcohol usage without distinguishing between weekday versus weekend intake (Bloomfield et al. 2013; Lahaut et al. 2003). Findings support that belief expectations regarding alcohol serve as mental schemas (Moss and Albery 2009) that differentially guide weekday and weekend use and alcohol problems.

The CFA supported that the five factors were positively intercorrelated, except for the nonsignificant correlation between positive expectancy and weekday drinking. The SEM premised on general positive versus negative expectancy determined that positive expectancy was a risk for weekend drinking, but negative expectancy was a risk for weekday drinking. Previous research has documented that positive, but not negative, expectancy explicated overall alcohol use, but the drinking factor was not separated into weekend versus weekday intake (Lac and Brack 2018). Also in the present study, positive expectancy served as a protective factor, but higher negative expectancy, higher weekday drinking, and higher weekend drinking served as risk factors for alcohol problems. Findings also disclosed that expectancy could operate differently in its indirect and direct effects. Notably, a risky indirect effect was evidenced from positive expectancy to weekend use to alcohol problems, but positive expectancy emerged as a protective direct effect against alcohol problems after controlling for negative expectancy, weekday use, and weekend use.

The SEM using seven specific expectancies as predictors yielded information about the risk and protective connections with weekday and weekend use. Self-perception expectancy uniquely related to weekday, but not weekend, drinking. A rationale for this connection is that people might seek solace in the bottle to regulate self-image as an ego-defensive strategy (Steele and Josephs 1990) to manage weekday stressors. Experimental evidence has shown that self-perception became elevated after alcohol use (Wall et al. 2003). Sociability and liquid courage expectancies uniquely predicted weekend but not weekday usage. These findings are consistent with the common utilitarian perception that alcohol serves as a lubricant to muster the courage to engage in social activities and events (Engels et al. 2005; Kuntsche and Cooper 2010; LaBrie et al. 2011; Lau-Barraco et al. 2016). The liquid courage expectation reflects the perception that ingesting alcohol will make one feel brave, powerful, and creative. Consistent with Studer et al. (2014), the sociability and liquid courage expectancies are based on the functional perspective that recreational use could enhance social gatherings and celebratory activities that tend to be more prevalent during weekends than weekdays.

Cognitive and behavioral impairment expectancy as protective against weekday and weekend alcohol intake is consistent with research indicating that espousing the belief that alcohol compromises psychomotor abilities serves as a deterrent against consumption (Magrys and Olmstead 2014). The risk and aggression expectancy association with greater daily drinking has been documented (Zhang et al. 2002), and supports the role of alcohol in establishing an excuse for risky and aggressive acts as postulated by the deviance disavowal hypothesis (Spunt et al. 1994). This framework posits that people believe that they will be less likely to incur punishment and retaliation after engaging in nonnormative actions when intoxicated by blaming the bottle for their irresponsible behaviors (Quigley and Leonard 2006).

Alcohol expectancies have applications in the prevention and treatment of alcohol use and problems (Goldman 1994). Most of the seven specific expectancies uniquely explained alcohol problems, over and beyond the significant pathways from both weekday and weekend drinking. The risk and protective pathways from expectancies offer opportunities to correct these malleable beliefs in efforts to curtail the susceptibility to usage and problems (Labbe and Maisto 2011; Scott-Sheldon et al. 2012). Clinicians working with those who consume alcohol more heavily during the weekdays might address their clients' self-perception expectancy belief, as this association was evidenced in the present study. In contrast, drinkers who consume at higher rates during the weekend were more likely to possess higher sociability and liquid courage expectancies and therefore might benefit from informational messages that address and reduce these risk perceptions. Risk and aggression expectancy was predictive of weekday drinking, weekend drinking, and alcohol problems, so prevention programs targeting people's expectation that alcohol could be consumed to facilitate aggressive acts might consider strategies designed to help channel these beliefs into more constructive behaviors (Kachadourian et al. 2014). Weekday and weekend use both contributed uniquely to alcohol problems, so training drinkers on how to be mindful in applying protective behavioral strategies during events where alcohol is served could curtail risks for deleterious consequences (Brett et al. 2017).

Additional prevention and treatment opportunities could be pursued based on the present findings. The modification of maladaptive expectancy beliefs in the context of alcohol treatment approaches is a possibility (Neighbors et al. 2009). Cognitive-behavioral treatment, for example, has been conducted to modify preexisting beliefs regarding alcohol expectancies (Coates et al. 2018). Furthermore, the "alcohol expectancy challenge," an intervention designed to correct expectations about the anticipated effects of alcohol, applies experiential learning and informational feedback to modify alcohol expectations (NIAAA 2002). A meta-analysis of "alcohol expectancy challenge" interventions that compared treatment versus control groups discovered that such programs were efficacious in reducing positive but not negative expectancies (Scott-Sheldon et al. 2012). However, the role of negative expectancies should not be neglected as it is a risk factor that increases the vulnerability to subsequently relapsing in alcohol-dependent individuals who completed treatment (Jones and McMahon 1994). The literature on whether it is preferable for preventions to

target weekday or weekend use is limited, but research tends to show that weekend intake is the window to more serious alcohol-induced consequences that inflict harm to the self and others (Kuntsche and Cooper 2010; Orcutt and Harvey 1991; Studer et al. 2014). The rationale is that drinkers tend to make an active effort to restrict alcohol intake during the weekdays owing to school or work obligations and to avoid compromising task completion (Pabst et al. 2010; Luk et al. 2017), so prevention designs targeting the elevated consumption patterns of the "wet" weekends might be a critical endeavor.

Additional considerations are warranted in designing expectancy belief modification interventions. The assessment of alcohol expectancies in treatment designs should apply validated measures (Fromme and D'Amico 2000). The identification of at-risk profiles through more effective screening, needs assessments, brief pilot interventions, and referral to treatment are warranted. It would be important to establish normative information about alcohol expectancies and usage habits for any demographic sample, so that tailored programs could be effectively implemented in clinical and community settings (Li and Dingle 2012). Moreover, prevention scientists ought to consider the roles of social and contextual environments of drinkers that shape and activate their alcohol expectancy beliefs (LaBrie et al. 2011).

Findings should be interpreted in the context of limitations. Although the recruitment of participants using MTurk offers a demographically diverse sample (Buhrmester et al. 2011; Goodman et al. 2013), the extent that findings could be extrapolated to high-risk samples, including clinically diagnosed alcohol abusers, warrants scrutiny in future research. The current study ruled out the demographic covariates of age, gender, and race, but additional potential confounds such as socioeconomic status should be measured and controlled in future studies. Future investigations extending upon this study should evaluate the possibility of a bifactor structure (Chen et al. 2012) of drinking days. In such a three-factor measurement model, separate weekday and weekend factors could be specified (as in the present study) in addition to permitting items from all seven days to load on a third "omnibus drinking" factor. Additionally, the findings are not generalizable to nondrinkers as the current research included only drinkers. Although nondrinkers could also possess alcohol expectancy beliefs (Fromme and D'amico 2000; Fromme et al. 1993), the decision in the present study to include only consumers is consistent with the protocol of administering the Rutgers Alcohol Problems Index to users only (White and Labouvie 1989). Another reason that nondrinkers were excluded is that they would be reporting zero incidences of weekday drinking, weekend drinking, and alcohol problems.

The current cross-sectional study could by extended by pursuing longitudinal designs. Although the current research tested pathways from alcohol expectancies (beliefs) to weekday and weekend drinking (behavior) to drinking problems (outcomes) that are theoretically and directionally consistent with the literature, the results isolated in this investigation ought to be cross-validated in longitudinal designs to scrutinize the temporal precedence of these constructs. A cross-lagged panel study determined that alcohol expectancies longitudinally preceded alcohol use in assessments separated by three years (Sher et al. 1996), but that investigation did not separate drinking into weekday and weekend use and did not incorporate alcohol problems.

The understanding of how alcohol expectancies and consequences are connected with weekend and weekday drinking would be critical in helping to address alcohol misuse as a public health problem, as people usually ingest more than anticipated on weekends (Labhart et al. 2017). The insights in the clarification of risk pathways from expectancies to weekend and weekday use to problems offer implications to modify expectancy beliefs in informational interventions tailored to drinking patterns across the week.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflicts of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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