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Natural Observation of Alcohol Price and Promotions at Bars: Implications for Alcohol Misuse Prevention

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Abstract

Alcohol misuse among young adults remains a primary public health concern given the wide range of short- and long-term physical, social, and societal consequences of the behavior. On-premise drinking establishments, which allow alcohol consumption on site (i.e., bars), are frequent locations for young adult alcohol use. Risks for alcohol misuse within the bar setting are key factors to identify for prevention. Notably, alcohol price and promotions are associated with alcohol consumption among young adults. This study sought to develop and pilot test an observational protocol to assess the alcohol environment at on-premise drinking establishments. Following qualitative exploration of salient risk factors in these settings through focus groups with young adults, an observational tool was adapted and tested in a feasibility study. The refined tool was then pilot tested with two independent data collectors conducting natural observation at 13 establishments in the downtown nightlife district of a small, southeastern city. High interrater reliability was noted. Descriptive summary statistics of bar characteristics demonstrate low alcohol prices with variability across types of alcohol (e.g., beer, wine, and liquor), greater numbers of alcohol promotions inside rather than outside the building, and higher rates of manual versus electronic age verification procedures. Observational assessment of alcohol price and marketing at on-premise drinking establishments as described in this study is needed to inform prevention policy and programs to reduce harms associated with young adult alcohol misuse.

Keywords

alcohol marketing; alcohol misuse; on-premise drinking establishments; young adults

Young adults, aged 18 to 24 years, have historically been heavy consumers of alcohol, demonstrating high rates of problematic alcohol consumption (Hingson et al., 2017; H. R. White & Jackson, 2004). Alcohol misuse among young adults is associated with a host of negative social and physical consequences with acute and persistent effects on the individual and their community (Cox et al., 2019; Hingson et al., 2017; Mundt et al., 2009; A. White

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& Hingson, 2014). Thus, research to enhance prevention of alcohol misuse among this population is needed.

Alcohol is commonly consumed in a social context among young adults and the environment in which a drinking event takes place can influence an individual's alcohol use behaviors (Mair et al., 2015). Freisthler et al. (2014) proposed a social–ecological framework of drinking contexts comprised of: (1) situational characteristics that vary from one event to the next including legal and social constraints and alcohol availability, (2) social characteristics reflective of the number and characteristics of people present at the event, and (3) the location of the event itself. Such factors within the drinking context can either facilitate heavy drinking, for example, through readily available alcohol, or serve as a protective factor against drinking as in the case of implementing responsible beverage service practices. Research has shown that drinking contexts considered to be a “wet environment” in which alcohol is prominent and easily accessible is associated with increased rates of excessive alcohol consumption among young adults (Edwards et al., 1995; Weitzman et al., 2003). On-premise drinking establishments, which allow consumption at the place of purchase, are of particular concern, as bars are typical places that young adults drink alcohol (Harford et al., 2002; Stanesby et al., 2019). Importantly, environmental factors in the drinking context can be leveraged as points for prevention to decrease risk for excessive alcohol consumption (e.g., Clapp et al., 2005).

Given that bars are common settings for drinking among young adults, examination of the alcohol environment at bars is necessary to identify risky characteristics that may be amenable to change through prevention programming and policy efforts. Previous research has noted alcohol price and promotions as central factors of the retail environment in bars. Generally, as the price of alcohol increases, individual consumption of alcohol decreases (Chaloupka et al., 2002; Sharma et al., 2017; Xu & Chaloupka, 2011). Young people are particularly influenced by price, likely due to their lower levels of disposable income. Among college students, research has shown that multiple alcohol behaviors, including binge drinking, are negatively associated with price of alcohol (Chaloupka & Weschler, 1996; Sutton & Godfrey, 1995). Beyond price itself, alcohol promotions that incentivize heavy drinking are also a risk-inducing environmental factor. Alcohol promotions, such as drink specials, have been associated with elevated blood alcohol concentrations (Thombs et al., 2008). Specifically, market competition among retailers to implement drink specials, such as “happy hours” to increase patrons’ purchasing of alcohol during nonpeak hours, has been the focus of research studies, particularly with the college student population. Collectively, research suggests an increase in not only alcohol consumption but also in drinking intentions of college students, when drink specials are available (Baldwin et al., 2014). Kuo et al. (2003) found that alcohol promotions provided by on- and off-campus drinking establishments were associated with increased levels of self-reported binge drinking by students. Moreover, Thombs et al. (2008) found in their naturalistic field study that bar patrons who purchased alcohol as a drink special were over four times more likely to have a blood alcohol content at or above the legal drinking limit for driving (80 mg/dl) than those who did not. Increased alcohol consumption due to alcohol promotions has also been found to be associated with specific negative consequences, such as driving while intoxicated and being involved in a physical altercation (Baldwin et al., 2014).

While previous research has laid the groundwork for assessment of the alcohol environment at bars (Clapp et al., 2007; Kuo et al., 2003), the current evidence base on the effects of alcohol price and promotions on young adult drinking reflects data collected 15 to 20 years ago. Given that trends in alcohol consumption among young adults have changed during this time, particularly a rise in high-intensity drinking (consumption at 2–3 times the binge drinking threshold; Hingson & White, 2013; Patrick, 2016; Patrick & Azar, 2017), we sought to provide a current assessment of alcohol marketing in the retail environment to inform health promotion prevention strategies. The current study utilized a mixed method approach to develop and test a protocol using observational methodologies to assess alcohol environments at on-premise drinking establishments. First, we conducted a formative assessment of environmental factors associated with alcohol misuse through focus groups with young adults (aged 18–24 years). Based on the results of that exploratory work, we adapted an observational protocol used to identify alcohol marketing strategies at on-premise drinking establishments (Kuo et al., 2003). We then pilot-tested the adapted protocol to collect detailed observational data on the alcohol retail environment at a census of bars in the downtown district of a small city with a large research university. Following discussion of pilot test results, we provide implications for further assessment of the retail environment of on-premise drinking establishments as it relates to high-intensity drinking and implications for alcohol prevention programming and policy.

Study 1: Qualitative Methods and Results

Participants and Procedure

Participants ($N = 34$; 53% male; 68% White, 24% Black, 8% Other race; and 12% Hispanic) were recruited from a large 4-year college in the southeastern United States. Eligibility criteria included that participants were 18 to 24 years of age, able to read and speak English, and were not currently seeking or have previously been in treatment for alcohol use disorder in the past 12 months.

We conducted five focus groups limited to 5 to 8 participants in each group to facilitate active participation (Krueger & Casey, 2014). Students provided written informed consent and completed a brief baseline questionnaire regarding demographics and current alcohol use at the start of the focus group session. All focus groups were led by a trained focus group facilitator who sought multiple perspectives on the topics of interests, and also included a notetaker. The facilitator began each focus group by reminding participants about privacy and confidentiality of information shared during the session. We utilized a semistructured interview guide to conduct each focus group which lasted between 43 to 76 minutes. After discussing the general definition and meaning of high-intensity alcohol use, the primary question relevant to this study was “What are the environmental determinants of high-intensity alcohol use?” Using factors identified in Freisthler et al. (2014), we probed participants on specific factors including location, group composition and size, availability, media influences, and others’ drinking behavior. Saturation on the topics of interest was reached after five focus groups. All focus groups were audio recorded and transcribed verbatim. Upon completion of the focus group, participants received a \$25

Amazon gift card. Study procedures were approved by the University's institutional review board. (UMCIRB#17_002949).

Data Analysis

We utilized a multistep process to analyze data that adhered to Yardley's (2000) quality control standards for qualitative research, including: rigor, coherency, and transparency. Transcripts and field notes from each of the focus groups were compiled and thematic analysis was applied as an inductive approach to generate overall themes from qualitative data. Data analysis occurred in several steps. First, we generated a preliminary coding structure based on the theory-based questions within the focus group guide. Second, coauthors independently coded each transcript based on those preliminary themes. Third, we reviewed prior transcripts as new codes and themes emerged. Finally, we grouped similar data and interpreted larger meanings associated with the themes. All discrepancies between coders were discussed until 100% agreement was reached. We utilized NVivo 10 (QSR International, 2020) to conduct all qualitative data analysis.

Results

Inductive analyses of the data revealed six dominant themes inherent in the raw qualitative data that participants identified as risk factors that contribute to high-intensity drinking among young adults. We present in detail the three themes that were pertinent to assessment of the bar setting, which informed the observational tool described in Study 2 below. The three additional themes centered on social factors that are applicable to a range of drinking event settings: group composition, drinking at specific events (e.g., 21st birthday), and others' drinking behavior.

Availability of Alcohol.—Participants across all five focus groups indicated that young adults are more likely to consume excessive amounts of alcohol when it is readily available and particularly when it was free or at a low price. Across focus groups, participants noted that alcohol price was a determining factor in the locations they chose to patronize. Additionally, participants stated that availability of free and reduced-price alcohol was especially risky for those under the legal drinking age. Participants noted that when alcohol was readily available, they would often drink a lot before moving to another location that evening where alcohol may not be as accessible.

Location.—Participants stated that young adults engaged in high-intensity drinking at multiple locations and were most frequently at fraternity parties, bars and clubs in the downtown business district, and at football tailgates. Bars and clubs were locations frequented most often. Each of these locations allowed for a mix of both legal and underage drinkers, as many on-premise drinking establishments in the bar district of the study area allow entry at 18 years of age. Thus, restrictions and regulations on age for entry was an important factor in the choice of location for a drinking event.

Alcohol Promotions.—A common theme expressed by participants was the role of alcohol promotions in consuming alcohol at a high-intensity level. The promotions noted were primarily price-related, such as penny draft night, all you can drink for a certain price,

and discounts for certain alcohols at specific times. In each focus group, participants were able to name the specific alcohol promotion available at different bars on each day of the week. This theme was connected to the availability of alcohol as participants noted that the lower price point of alcohol made it more readily available to drink at a high-intensity level.

Study 2: Quantitative Methods and Results

Procedures

The quantitative observation tool was adapted from the alcohol environment assessment conducted as part of the College Alcohol Study (Kuo et al., 2003), based on findings from the qualitative study. Specifically, we drafted an observation tool that assessed three major categories of on-premise drinking establishment characteristics reflective of key themes from the focus group participants: (1) the price of alcohol, (2) number and type of interior and exterior alcohol promotions, and (3) age verification procedures. The survey was designed as a web-based instrument using Qualtrics®, an online survey software, since data collectors would be using their mobile phones to collect data at the bars (Qualtrics, Provo, UT; www.qualtrics.com). We conducted a feasibility test with two data collectors to ensure the protocol tool was easy to navigate on a mobile platform, the questions were clear, and the tool was structured in a manner that allowed the data collectors to complete the questions as they approached different sections of the establishment. The protocol was refined based on feedback from the feasibility test. The final observation tool consisted of 31 items, 7 of which pertained to age verification procedures, 15 items related to the minimum and maximum price of beer, wine, and liquor drinks, 6 items on the presence of alcohol promotions, and 3 items on availability of food, water, and other activities. It took approximately 12 to 15 minutes for data collectors to complete the observation tool.

Selection of Bars.—We utilized a census of all on-premise establishments located within the known bar district of the city. A walk-through of each establishment, during study hours, was conducted to confirm whether the establishment met three study criteria: (1) that alcohol is served at the establishment, (2) business hours include identified study data collection time periods (Thursday, Friday, and Saturday evenings), and (3) the establishment caters to the targeted population for the study (assessed via observation of the crowd). There were 13 on-premise drinking establishments that met these criteria and were included in the study.

Data Collector Training.—We recruited undergraduate students to serve as data collectors, given that they represent the priority demographic for the selected establishments and thus could remain unidentified during data collection. Field data collectors received more than 10 hours of interactive training consisting of background study information, best practices for observational techniques, and role-playing to simulate conduct of the observations in the field. Study investigators certified each observer's competence in the study protocol before data collection began.

Bar Observations.—Unobtrusive observations were conducted at all bars on two separate weekend nights during the Spring 2019 academic semester. Two data collectors entered each premise and made no identification about their role on the research study. Data collectors

acted as intended patrons such as waiting in entrance lines and paying any necessary cover charges. Once inside the premise, each data collector independently completed the assessment tool. The data collectors were allowed to complete questions in the assessment tool in any order to allow them to freely move about the establishment. To minimize threat of observer identification during the assessment, data collectors utilized a web-based survey tool on their smartphones. Once both data collectors had completed their individual assessments, the pair exited the premise and confirmed with research faculty that the assessment had uploaded to a secure server. Procedures for bar observations were deemed not human subjects research by the University's institutional review board given that no data on individuals were collected.

Measures

Alcohol Price.—Data collectors recorded the minimum and maximum price of the following alcoholic drinks: (1) single beer, (2) pitcher of beer, (3) glass of wine, (4) liquor shot, (5) single liquor drink, and (6) largest volume liquor drink. A narrative description of the largest volume liquor drink was also recorded. We chose to assess the price of different types of alcohol given the variation in beverage-specific patterns of young adult drinking in the United States (Stern et al., 2017). To gather price information, data collectors first identified written prices on signs and menus. If information was not available, they inquired with the person serving the alcohol.

Alcohol Promotions.—Data collectors counted the number of signs promoting alcohol on both the interior and exterior of the bar. Promotions reflected both drink specials (e.g., “alcohol specials regarding multiple drinks for a single price such as buy one, get one,” “alcohol specials regarding all you can drink for a single price”), and advertisements for alcohol brands.

Age Verification and Entry.—We recorded whether individuals younger than age 21 were allowed to enter the premise as yes (1) or no (2). Age verification procedures were recorded outside the building as well as inside at the point of sale. Given that all bars had some form of age verification procedure in place, we recoded the data to assess interior and exterior age verification through a manual check (1) and/or using an electronic scanning device (2).

Availability of Food.—Data collectors noted whether food was readily available which reflected multiple food options for free or low prices (1), somewhat available indicating some food options for purchase (2) or not available (3).

Data Analysis

The data set includes reports by both data collectors on two nights of data collection, resulting in four observations for each of the 13 bars included in the study. We assessed interrater reliability as a measure of quality control. The proportion of agreement among observers was assessed using repeated measurements, as multiple observers independently collected data in the 13 venues. Interobserver agreement was high (89%), and observation protocols provided largely complete data, indicating that this assessment is feasible to

conduct in real-time. We conducted descriptive analyses to provide summary statistics on study measures including mean, standard deviation, and range for continuous variables and frequency for categorical variables.

Results

Table 1 provides descriptive results summarizing data on minimum, maximum and range of alcohol prices for beer, wine, and liquor, interior and exterior marketing materials, and age verification procedures.

Price of Alcohol.—Beer was the cheapest type of alcohol with a single beer ranging from \$1 to \$9 with an average minimum price of \$2.15 ($SD = 0.85$) and an average maximum price of \$4.08 ($SD = 1.64$). Pitchers of beer ranged from \$6.00 to \$19.00, with average minimum prices of \$6.94 ($SD = 0.91$) and average maximum prices of \$11.98 ($SD = 4.28$). Wine was the most expensive type of alcohol with a single glass of wine costing an average minimum of \$5.32 ($SD = 1.19$) and maximum of \$7.29 ($SD = 2.07$) with a range from \$3.25 to \$9.00. A single shot of liquor had the largest range in price based on quality of liquor from \$2.00 to \$25.00. The average minimum price for a liquor shot was \$3.28 ($SD = 0.62$) and the average maximum price was \$8.89 ($SD = 5.62$). Finally, the average price for the largest volume of liquor was \$8.80 and ranged from \$5.00 to \$15.49. The names of these largest volume liquor drinks were appealing and included “Trashcan” and “Fishbowl.”

Alcohol Promotions.—On-premise drinking establishments had more alcohol promotions inside the building as compared with the exterior of the building. On average, there were 5.83 interior promotions ($SD = 3.53$, range 0 to 10) and 0.96 exterior promotions ($SD = 1.95$, range 0–8). All observed alcohol promotions were marketing of specific alcohol brands such as lighted signs and posters for specific beer and spirit brands. There were no observed alcohol promotions related to other price related incentives (e.g., buy one get one free). While observed locations did have featured drinks for the evening, they were not promoted as price-related specials.

Age Verification Procedures.—Entry into bars and clubs in the surveyed district is allowed at 18 years of age based on local policy. 79.25% of establishments allowed underage entry. Manual verification by visual inspection of an identification was more common than verification through use of an electronic scanning device. 66.04% of establishments used manual checks and 22% used electronic checks outside the building. 41.51% used manual verification procedures inside and only 3.92% used electronic devices once the patron was inside the building.

Availability of Food.—Food was readily available at 22.6% of establishments, somewhat available at 13.2% of establishments, and not available at 64.2% of establishments.

Discussion

On-premise drinking establishments, such as bars, are important contexts to consider in understanding young adult alcohol misuse. The alcohol environment at bars is a key indicator of risk for excessive alcohol consumption and associated harms. The current study

developed an observational protocol to assess salient factors within the alcohol environment at bars, namely alcohol price, promotions, and age verification procedures. Understanding these factors and their association with drinking behaviors is needed to strategically inform prevention programs and policies to reduce young adult alcohol misuse.

Overall, results of the exploratory qualitative study indicated that low alcohol prices were the central reason young adults patronized the observed bars. In the quantitative assessment, drink prices were as low as \$1 and the minimum prices for all types of alcohol except wine were less than \$5. Large volumes of alcohol such as pitchers of beer, which are typically 60 ounces or five standard size beers, were cheap with average prices ranging from \$6.94 to \$11.98. The average price for the largest volume liquor drink, in which the number of standard 1.5 ounces of liquor is largely unknown, had a mean price under 10 dollars. Assessment of multiple types of alcohol is important as consumption patterns vary across types of alcohol. For example, underage youth are most likely to consume beer, spirits and flavored alcoholic beverages (Siegel et al., 2013). Therefore, lower prices on alcohol brands that are particularly appealing to underage youth may further raise risk for excessive alcohol consumption and consequences. Previous studies of bar patrons found that a 10% increase in cost per gram of ethanol at bars was associated with a 30% reduction in the risk of exiting the establishment with blood alcohol content above or equal to the legal drinking and driving limit (O'Mara et al., 2009). The price of alcohol is regulated by federal, state and local authority (National Institute on Alcohol Abuse and Alcoholism, no date), and serves as a critical part of alcohol control policy context. Federal level alcohol regulation dictated by the 21st Amendment of the Constitution includes the ability to regulate commerce with foreign entities and to wield authority on taxation of goods, including alcohol. However, a vast amount of alcohol control policy is regulated at the state and local level. The 21st Amendment provides states with regulatory authority for alcohol permits and prohibitions as well as alcohol sales and possession (NIAAA, no date; Mosher & Treffers, 2013). Thus, there is variation in alcohol control policy across states and municipalities. The price of alcohol is a central component of policies regarding alcohol sales. Given the strong connection between alcohol price and consumption patterns (e.g., Sharma et al., 2017), assessment of alcohol price is warranted to enforce and advocate for stronger alcohol prevention policy.

One way to reduce alcohol price is to offer promotions or specials that incentivize the purchase of alcohol. In this study, we found that the majority of alcohol promotions were brand related, which is expected given that state law in the study area bans alcohol specials that indicates an individual must buy more than one drink to get a discount (e.g., buy one, get one), happy hours, or promotion of specials where prizes are given away based on the purchase of alcoholic beverages. Notably, this observation tool is flexible in that it can be expanded to accommodate any type of alcohol promotion allowed by local or state policy. Not only are alcohol promotions relevant to potential reductions in price, but they are also important elements of the retail environment that elicit social-cognitive processes that underly alcohol use behavior. There is increasing evidence that suggests alcohol marketing is a key influence in underage drinking (Jackson & Bartholomew, 2020) and that exposure to alcohol marketing is associated with subsequent alcohol use (Jackson et al., 2018). This is particularly salient in an environment such as bars where alcohol is widely available as

alcohol cues are processed within the brain's reward system, which may in turn enhance alcohol consumption (Courtney et al., 2018). Similar to the results of the College Alcohol Study (Kuo et al., 2003), we found that alcohol promotions were more common inside, rather than outside, the bar. This is important as alcohol advertisements displayed at the point of sale are known to increase purchasing and consumption behaviors of youth (Jones & Smith, 2011).

Local ordinances for the study location allow persons younger than age 21 to enter bars and clubs, and over three quarters of the sampled bars allowed entry at 18 years of age. Many of these bars have expansive square footage and are dark, allowing underage drinkers to consume alcohol without being seen. Large crowds of people and readily available alcohol are known risk factors for heavy alcohol consumption (Lipperman-Kreda et al., 2017; Thrul et al., 2018). These risks are exacerbated when a significant portion of patrons are intoxicated, as young adults who reported that many people were intoxicated at their last drinking event were over 12 times more likely to report heavy drinking themselves relative to events with few intoxicated people (Clapp & Shillington, 2001). Thus, strong age verification procedures that limit entry at on-premise drinking establishments to qualified persons are needed. Use of electronic age verification devices is a suggested practice to improve compliance with sales of substances to minors (Chen et al., 2021; Krevor et al., 2003). Once inside an establishment, there are protective behavioral strategies that individuals can employ to mitigate environmental risks and reduce their alcohol consumption and associated problems (Braitman et al., 2015). One category of strategies relates to reducing the impact of alcohol on the body, such as eating before and during a drinking event, drinking slowly, and alternating between alcoholic drinks and water. The ability to utilize such strategies depends on the availability of food and water at an establishment; thus, assessment of and advocacy for accessible food and water at locations in which alcohol use is high such as bars is warranted.

Implications for Practice and Policy

In this pilot test, the observation protocol and tool were successful for collecting pertinent data to better understand the local condition related to high-intensity drinking among bar patrons with only a 12 to 15 minute observation. The tool allows for the evaluation of factors associated with the alcohol environment, and the protocol, easily replicated, provides practical methods for conducting a natural observation of the drinking environment at on-premise drinking establishments. Rich data on alcohol retail environments and their associations with drinking behaviors are critically important to move alcohol prevention policy forward. Specifically, it is essential to gain a better understanding of how alcohol promotions and pricing impact alcohol consumption, and subsequently, alcohol-related risks in order to promote policy to reduce negative consequences associated with alcohol misuse. Research evaluating the impact of drink special advertisements and promotions is warranted, given most current state regulations focus on such advertisements (Baldwin et al., 2014). Moreover, as alcohol misuse is deemed a complex systems issue, solutions need to involve a systems approach, in addition to individual interventions, to develop strategies to inform prevention, treatment, and policy work. Innovative, multisectoral collaborations have been suggested to “promote theory, measures, design, analytic approaches, technologies,

and implementation strategies that transcend traditional disciplinary boundaries” (Begun & Clapp, 2016, p. 77). Taking this a step further, more recently, researchers have provided new directions for alcohol prevention research that incorporate a complex systems paradigm including a transdisciplinary framework that integrates health, social, natural and computational sciences (Apostolopoulos et al., 2018a, 2018b). While this work shapes how to use computational modeling and simulation effectively in prevention research, it also provides important features of the complex systems affecting alcohol misuse for consideration in policy decisions.

Study Limitations and Future Directions

There are important next steps in this line of research regarding the drinking context at on-premise drinking establishments. To maximize the impact of comprehensive data on bar environments, researchers must be able to link setting characteristics, such as price, to actual alcohol consumption levels of bar patrons. Field methodologies are an effective strategy to collect objective measurement of alcohol use and have been used before in studies of young adult alcohol misuse in bars. Specifically, field methodologies allow for realtime data collection that occurs in a naturalistic setting, which limits biases related to retrospective recall (Shiffman, 2009). Moreover, field methods provide event-level data regarding alcohol consumption and the environmental factors associated with that specific drinking occasion. Therefore, conducting field studies in the place where alcohol consumption is occurring, not only allows researchers to capture the specific level of drinking, but also the environmental factors affecting that level of drinking. In order to intervene and provide effective health promotion to positively affect the influence the immediate environment has on individual drinking behavior, accurate assessments of these factors, in real-time, are needed. Use of field methodologies provide the opportunity for researchers to collect pre/posttest data on quantity-based measures of alcohol consumed in a particular setting and within specified environments (Clapp et al., 2007). Therefore, data collected before and after specific drinking events allows for causality of drinking behavior and environmental factors to be studied. This event-level analysis, conducted in naturalistic drinking settings, is important for understanding factors associated with nighttime risk-taking behavior related to alcohol use.

The results of this study are informative to future research and practice regarding the alcohol environment at on-premise drinking establishments, however, the study is not without limitations. This study does not assess an exhaustive list of characteristics of on-premise drinking establishments. Additional detail on factors such as crowd density, lighting, and music, which are known correlates of alcohol use in certain settings (Carlini et al., 2014; Clapp et al., 2007), is worthy of exploration. Enforcement of responsible beverage practices is also a noted intervention strategy to prevent young adult alcohol harms (Bolier et al., 2011) that was not assessed in this study. Our study is confined to a single location and descriptive results may not apply to other locations that differ based on demographic characteristics or local and state alcohol policy. However, the utility of the observational protocol is flexible to accommodate various settings. Indeed, further studies that compare findings across varying policy settings is a worthwhile pursuit. Notably, the location of this study includes a large 4-year university and several 2-year colleges. Results from other areas

without such a large student presence may yield different results. Nevertheless, this study provides updated information regarding alcohol price and promotions that are informative to research and practice efforts to reduce alcohol misuse among young adults.

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Table 1.

Summary of Bar Characteristics (*N* = 13 Bars).

Alcohol price			
Alcoholic drinks	Minimum price: <i>M</i> (<i>SD</i>)	Minimum price range	Maximum price range
Single beer	\$2.15 (0.85)	\$1.00–\$4.00	\$4.08 (1.64)
Pitcher of beer	\$6.94 (0.91)	\$6.00–\$8.00	\$11.98 (4.28)
Glass of wine	\$5.32 (1.19)	\$3.25–\$7.00	\$7.29 (2.07)
Liquor shot	\$3.28 (0.62)	\$2.00–\$4.50	\$8.89 (5.62)
Single liquor drink	\$3.93 (1.20)	\$1.00–\$8.00	\$7.81 (4.12)
Mean Price (SD)			
Largest volume liquor drink	\$8.80 (3.20)	\$5.00–\$15.49	
Alcohol promotions			
Number of promotions	<i>M</i> (<i>SD</i>)	Minimum	Maximum
Interior	5.83 (3.53)	0	10
Exterior	0.96 (1.95)	0	8
Age verification			
Younger than 21 years allowed to enter			79.25
Exterior age verification—manual			66.04
Exterior age verification - electronic			22.00
Interior age verification—manual			41.51
Interior age verification—electronic			3.92
Availability of food			
Readily available			22.64
Somewhat available			13.21
Not available			64.15