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A Qualitative Examination of Intentions and Willingness for Heavy Drinking Among Young Adult High-Intensity Drinkers

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Objective: Heavy episodic drinking (HED) and high-intensity drinking (HID) are common in young adulthood but pose unique risks. Quantitative studies have used the Theory of Planned Behavior (TPB) and the Prototype-Willingness Model (PWM) to understand decision-making processes underlying alcohol misuse. However, our understanding of intentions (plans) and willingness (openness) for HED/HID is in its nascent stages. This study represents the first qualitative examination of relationships between intentions and willingness to engage in HED/HID. **Method:** We conducted individual interviews among 28 young adult high-intensity drinkers (12 male, 15 female, 1 trans male; $M_{age} = 23$ years). Interviews focused on HED/HID events with open-ended questions examining: (a) variability in intentions/willingness by occasion and within a drinking event; (b) formation of intentions for consumption and/or intoxication; and (c) interplay of willingness and intentions on heavy drinking nights. Verbatim transcripts were coded within NVivo software and content was analyzed using applied thematic analysis. **Results:** Participants described intentions and willingness as varying by occasion and perceived their shifting across a drinking event. Intentions for heavy drinking reflected a desired level of intoxication, rather than a specific number of drinks. Willingness, rather than intentions, to engage in heavy drinking/HID was more evident. **Conclusions:** Findings have significant implications for future measurement work in this area. There may be value in assessing intentions and willingness multiple times per day and during the drinking event itself. We also recommend that intentions for both consumption and intoxication levels be assessed, particularly in studies aiming to examine impaired control.

Public Health Significance


This study demonstrated the importance of both intentions and willingness as decision-making factors that influence heavy drinking in young adults. Our findings showed that young adults more so plan for a level of intoxication, rather than a specific number of drinks to consume. We also highlight that young adults perceive that their intentions and willingness to drink and become intoxicated change during the drinking event itself, which has implications for targeting these factors in the moment.

Keywords: young adults, intentions, willingness, heavy drinking, high intensity drinking

Heavy episodic drinking (HED), defined as consuming 4+/5+ drinks in a single occasion for women/men, is common in young adulthood, with 29% of college-attending and 25% of non-college-attending young adults endorsing HED in the past 2 weeks (Schulenberg et al., 2019). Even more concerning, approximately 10% of both college-attending and non-college-attending young adults have engaged in high-intensity drinking (HID; i.e., consuming 8+/10+

drinks for women/men in a single occasion) in the past 2 weeks (Schulenberg et al., 2019). These high levels of drinking are linked to substantial negative consequences, including physical and sexual assault, unintentional injury, and death (Hingson et al., 2017; White & Hingson, 2013). Understanding the decision-making processes that contribute to these forms of heavy drinking among young adults is needed to inform prevention and intervention efforts.

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According to the Theory of Planned Behavior (TPB; Ajzen, 1991), intentions are the strongest and *only* proximal predictor of behavior, and they are informed by one's attitudes, subjective norms, and perceived behavioral control related to the behavior. However, this theory presumes that individuals follow through with their intentions. Notably, research examining associations between intentions and drinking behavior also provides evidence for an intention-behavior gap—or “unplanned” drinking (e.g., Fairlie et al., 2019; Labhart et al., 2017; Lauher et al., 2020; Sheeran & Webb, 2016; Stevens et al., 2017).

In line with evidence that not all behavior is planned or intentional, the Prototype Willingness Model (PWM; Gerrard et al., 2008; Gibbons & Gerrard, 1995; Gibbons et al., 2009) includes the rational, planned pathway marked by intentions (“reasoned pathway”) and an additional pathway whereby less deliberate decision-making processes occur (“social reaction pathway”). This latter more spontaneous pathway accounts for high-risk behaviors that tend to occur in social contexts but would be considered unplanned in the TPB (Pomery et al., 2009). Rather than the explicit intentions that precede “planned” drinking, this social reaction (“unplanned”) pathway relies on willingness, which reflects an openness to engage in a given behavior in situations that are conducive to that behavior (Gerrard et al., 2008; Gibbons et al., 2003; Gibbons & Gerrard, 1995). Though conceptually similar, intentions and willingness are distinct constructs with differential influences on behavior (Gerrard et al., 2008; Gibbons et al., 1998, 2003; Hukkelberg & Dykstra, 2009).

The PWM has strong support when examined for alcohol use in adolescent and young adult samples, both cross-sectionally and longitudinally, with evidence of the importance of both reasoned and reaction paths (e.g., Lewis et al., 2020; Litt et al., 2014; see Todd et al., 2016, for a meta-analysis). Further, recent research has begun to examine both intentions (e.g., Lauher et al., 2020; Stevens et al., 2017) and willingness for *any* drinking (e.g., Lewis et al., 2016, 2020) in daily life using experience sampling methods, which affords a more ecologically valid assessment of PWM constructs. Only one study has examined intentions for HED/HID (Fairlie et al., 2019), but no work—qualitative or quantitative—has considered both intentions *and* willingness for HED/HID.

Furthering our understanding of these decision-making processes for high-level drinking, specifically among young adults, will advance measurement practices, particularly when examining these constructs at the event level. For example, it is unknown which processes are most important for HED/HID—intentions, willingness, or both? It also remains unclear whether young adults reliably plan for a set number of drinks prior to HED/HID events, or whether other factors are considered (e.g., planned level of intoxication). Perhaps most important to measurement practices, no published study has evaluated whether and how intentions, willingness, or both shift during a drinking event, which has implications for prior work examining these constructs only once daily. Answering these important questions will support future work centered on identifying momentary intervention targets for problematic alcohol involvement in at-risk groups.

Qualitative research is well-suited for better understanding the relevance of intentions and willingness to HED/HID, as this method aims to understand how people account for, take action, and manage day-to-day situations (Miles & Huberman, 1994). Indeed, qualitative methods allow exploration of the details of lived experiences,

which in the present case, can provide insight into why and how HED/HID occurs among young adults (Neale et al., 2005), including the unique and complementary roles of intentions and willingness in these events. To our knowledge, only two qualitative studies have considered intentions and/or willingness for alcohol use. Davies et al. (2013) used focus groups to explore PWM constructs in adolescents (ages 11–13 vs. 16–17), with themes emerging for prototypes, drinking context (i.e., planned, unplanned, pressured drinking), and attitudes and norms. Northcote (2011) assessed young adults' decision-making regarding heavy drinking, with themes emerging related to the TPB (i.e., norms, attitudes, and intentions). However, lacking are qualitative studies that focus on both intentions and willingness for young adult HED/HID.

The Present Study

The present study sought to examine intentions (i.e., plans for any drinking or for HED/HID) and willingness (i.e., openness to various levels of drinking) for heavy drinking in a sample of young adult high-intensity drinkers using qualitative methods. To our knowledge, no qualitative study has examined both intentions and willingness for young adult HED/HID. Understanding how young adults perceive their intentions and willingness for high-risk drinking will inform our understanding of the decision-making processes of heavy drinking, particularly when using ecological momentary assessment (EMA) methods aiming to understand behavior in daily life. Interview topics centered on understanding (a) if heavy drinking events are characterized by willingness, intentions, or both; (b) if and how intentions and willingness vary from occasion to occasion and across a drinking event; and (c) whether intentions for heavy drinking are related to a desired level of intoxication, number of drinks, or both. Based on limited prior work (Lewis et al., 2016; Northcote, 2011), we expected that intentions and willingness would be variable between occasions; however, no other hypotheses were proffered, consistent with an exploratory qualitative approach to understanding behavior.

Method

Participants

Participants were 28 young adults (12 men, 15 women, 1 trans man) recruited from the community using flyers and social media advertisements. Inclusion criteria included (a) age 18–25 years, (b) at least 2 HID days (8+ drinks for women, 10+ drinks for men) in the last 30 days, (c) at least 2 additional drinking days where HID thresholds were not passed, and (d) ability to read English. Exclusion criteria were (a) participation in treatment for a substance use disorder or serious mental illness in the past 6 months, (b) symptoms of mental illness in the last 6 months that interfered with one's ability to engage in important life activities (assessed via a single self-report item). Average age was 23 years ($SD = 1.41$), 21% ($n = 6$) reported Hispanic ethnicity, 71% ($n = 20$) were White, 7% ($n = 2$) were Black, 7% ($n = 2$) were Asian, and 18% ($n = 5$) endorsed “Other” race (with four of those five participants endorsing Hispanic ethnicity). Most of the sample was either currently enrolled in college (32%, $n = 9$) or had completed 4-year college (64%, $n = 18$), and 61% ($n = 17$) were employed full-time. In the past 30 days, participants consumed an average of 5.82 drinks

($SD = 2.26$) on a typical drinking day and 12.52 ($SD = 5.56$) on a peak drinking day. Most participants endorsed engaging in HID between 1 and 4 days per month (86%, $n = 24$), with 14% ($n = 4$) endorsing more frequent HID. In the past month, participants reported an average of 4.64 drinking days per week on a typical week ($SD = 1.39$) and 4.79 drinking days on a peak week ($SD = 1.60$).

Procedure

Interviews were conducted following a semistructured agenda and began with a request that the participants identify the most recent time they engaged in HID. Specifically, women were asked about the most recent time they had eight or more drinks, and men were asked about the most recent time they had 10 or more drinks in a single sitting (e.g., social and physical context in which it occurred, reasons for drinking, manner of drinking—i.e., pace). Participants also were asked similar questions about a recent HED event as a comparator. Though these HID and HED events were referenced throughout the interview, most questions relevant to the present study focused on intentions and willingness as they applied to participants' general heavy drinking tendencies. See Table 1 for specific interview questions. Interviews lasted approximately one hour, and participants received \$30 compensation. Digital recordings were transcribed verbatim, and transcripts were de-identified.

Data Analysis

First, a preliminary coding structure was derived from the individual interview script and was further refined during early stages of analysis (based on emerging consistencies across transcripts). To enhance the rigor and credibility of our analysis, two coders (second and last author) independently coded each transcript. For each transcript, the two coders met to discuss and resolve any discrepancies, bringing all transcripts into 100% agreement. Master codes were then entered into NVivo12 data analysis software (QSR International, 2018) for analysis. We used an applied thematic analysis approach, which is a rigorous, inductive approach to identifying and examining themes from textual data (Braun & Clarke, 2006; Guest et al., 2011). Data coded on each node were summarized, memos were written, and summaries of themes, both a priori and emergent, were generated from coded data and ultimately agreed upon by the research team.¹ We identified four themes, displayed in Table 2 and elaborated upon below.

Results

Theme 1: Intentions and/or Willingness Vary From Occasion to Occasion

Preceding the onset of the drinking event, intentions and willingness to drink more (vs. less) heavily varied, depending in part on the social and/or physical context of the event. For example, highly anticipated parties with large groups of peers were described as planned drinking events with high willingness to drink heavily, whereas more formal celebrations with family (e.g., a wedding) were planned drinking events with less willingness to engage in heavy drinking. Participants' mood prior to the drinking event, comfort level of the environment (as characterized by the physical and/or social context), and next-day responsibilities (specific to HID) were described as important factors in determining intentions

and willingness for any drinking and/or drinking heavily. As one female participant (ID 119, college graduate) noted:

If it's, like, again, my best friend's birthday, then I plan on drinking, like, a lot more, because it's, like, her birthday or, like, my boyfriend's birthday. But if it's, like, my grandmother's birthday, then I'm not gonna drink eight plus more.

Theme 2: Intentions and/or Willingness Were Perceived to Shift During a Drinking Event

Heavy drinking events were typically described as planned drinking events, but one's willingness to drink heavily, become intoxicated, and/or engage in HID was perceived to change over the course of the event and was described as dependent on how the night progressed (e.g., increased willingness during the event associated with having a good time). Participants indicated that their willingness to drink at all versus heavily also was shaped at the onset of the event by the context (e.g., with friends vs. with strangers). During the drinking event itself, the taste of the drink and ease of drinking in the moment further was perceived to influence participants' willingness to continue drinking, regardless of their original intentions. Overall, participants reported planning to drink at all (vs. not drink) on a given night, but a variety of factors (e.g., physical and social contexts) influenced their willingness to drink to high levels, including HID. As one male participant (ID 117, college graduate) indicated for an HID event:

Say I went into a night thinking, 'I'm gonna have, like, ten drinks tonight over the course of, maybe, like, four or five hours. And play a lot of games.' And then, if we get through those five hours, it's about 1:00 a.m., and everyone's still very much awake and playing games, and we're at a decent level, where none of us are, um, too intoxicated to continue on—um, then we'll probably keep—keep going on.

Theme 3: Young Adult High-Intensity Drinkers Typically Plan for a Desired Level of Intoxication, Rather Than a Set Number of Drinks

In response to questions about their decision-making processes with respect to number of drinks versus desired level of intoxication, participants more often described planning for a level of intoxication. Some participants described a combination of planning for a specific level of intoxication and number of drinks, but this number tended to be an approximate range based on prior experience to achieve their desired level of intoxication. Particularly for HID events, participants did not describe planning to reach a set number of drinks but rather that this happened along the way to reaching their planned level of intoxication. Young adults also reported using various strategies (e.g., drinking at an accelerated rate) to reach this level of desired intoxication. The precise level of intoxication that participants described intending to reach varied. For example, participant quotes describing their intentions included phrases indicating that they sought

¹ When possible, text within transcripts was coded for the type of drinking event referenced by the participant (HID, HED, or unclear event type). During analysis, meaningful thematic differences across the tagged event types were not observed, likely because most questions on intentions and willingness probed for general heavy drinking tendencies. Thus, data analyzed within each relevant node (e.g., intentions) were considered independent of HID versus HED, and a priori and emergent themes reflect heavy drinking, more broadly, among a sample of high-intensity drinkers.

Table 1
Specific Interview Questions for the Present Study

Interview question	Construct
1. Thinking back to [identified HID day], did you <i>plan</i> to drink X drinks that night?	HID event-specific intention
2. [On identified HID day] Rather than (or in addition to) a set number of drinks, did you have any plans regarding the level of intoxication you wanted to reach that night?	HID event-specific intention
3. Typically, as you go into a drinking occasion, to what extent do you have an idea of how many drinks you will have?	General intention
4. Do you tend to start the night thinking of number of drinks? A certain feeling/experience? Or with no plans at all?	General intention
5. Would you say that the number of drinks you <i>plan</i> to consume differs from one occasion to the next? How so?	General intention
6. Rather than (or in addition to) a set number of drinks, do your intentions for how intoxicated you want to get differ from one occasion to the next?	General intention
7. Do your intentions for drinking a lot or getting drunk change throughout a night? How so?	General intention
8. Are there times when you don't necessarily have a plan to drink a set amount or to get intoxicated, but you're open to it? Tell me about that.	General willingness
9. Does your openness to drinking a lot or getting drunk change throughout a night? How so?	General willingness
10. Are there any upcoming plans that you have that you think will involve drinking 8+/10+ drinks? Tell me about that.	General willingness/intention
11. Are there times when you do not plan to drink 8+/10+ drinks or get drunk, but it happens anyway?	HID event-specific willingness

Note. During the introduction to the interview, participants were cued to respond with heavy drinking events in mind and were told specifically: "I'll be interviewing you about your alcohol use experiences, and particularly those times where you've consumed 8 or more (women)/10 or more (men) drinks in a single sitting. For example, I'll be asking you about what your alcohol use and the context in which you're drinking looks like on those times, about any intentions or motivations you have for that level of alcohol use, and the good and bad things that you've experienced on those occasions." Closed-ended questions were followed by probes for more details (e.g., "Tell me about that").

to get "pretty drunk" (ID 106, male; ID 123, female), "more than buzzed" (ID 101, trans male), "drunk-drunk versus tipsy" (ID 104, female), "very intoxicated" (ID 110, male), "happy buzz" (ID 113, female), and "the tipsy feeling" (ID 116, female). A subset of other participants described going into an evening without any specific plans regarding either a number of drinks or a desired level of intoxication. As one male participant (ID 111, college graduate) put it:

It's probably more so the feeling or experience and then just I know, like, what—how many drinks it would, like, take for me to be at that level.

Theme 4: Heavy Drinking Events Are Often Characterized by Willingness, Rather Than a Clear Intention, to Drink Heavily

Participants did not describe intending (planning) to consume a specific number of drinks during HID but did express an openness (willingness) to drink heavily based on their desired level of intoxication and/or peer offerings. In particular, participants reported engaging in higher levels of alcohol consumption when they had high willingness to drink heavily, especially when peers continued offering them drinks. Overall, willingness to engage in heavy drinking/HID was more evident than an intention for heavy drinking/HID. As indicated by one female participant when discussing her recent HID event (ID 118, college graduate):

Yeah, um, I definitely say the Boston night was one of those nights. It was kinda like, all right, just me and my best friend having a good time in the city. Don't really care what—how much I drink, but I just wanna have, like, a really, really good time. I knew I didn't wanna get to the point that she ended up getting to. Um, I didn't wanna, you know, get sick. I didn't want to black out. I knew that's—that's not what I wanted, but anything before that would be okay.

Discussion

The present study represents the first qualitative examination of intention and willingness for heavy drinking in a sample of young adult high-intensity drinkers. Prior quantitative research has

demonstrated the importance of both intentions and willingness on alcohol consumption; however, a more nuanced understanding of these decision-making processes is necessary. Findings demonstrated that intentions and willingness shift not only from occasion to occasion, but also were perceived to shift within a drinking event, which has significant measurement implications, particularly for studying alcohol misuse with fine-grained methods (e.g., EMA). Findings also revealed an important distinction between intentions for a desired level of intoxication versus number of drinks.

The original conceptualizations of the TPB and the PWM did not explicitly account for situational variability in intentions and willingness; however, recent work has shown significant within-person variability in both constructs (Fairlie et al., 2019; Lauher et al., 2020; Lewis et al., 2016; Stevens et al., 2017). Supporting this notion, and as hypothesized, participants in the present study described their intentions and willingness as varying from occasion to occasion and dependent upon various contextual factors related to the event, which supports the social reaction pathway of the PWM (Gerrard et al., 2008; Gibbons et al., 2009).

One particularly novel finding from the current work was that intentions and willingness were perceived to shift within a drinking event. Prior work has presumed some daily-level stability in intentions and willingness by assessing these constructs proximal to the drinking event but not during the event itself (Fairlie et al., 2019; Lewis et al., 2016). However, participants in the present study described that they perceived significant shifts in both intentions and willingness during the drinking event, which has important implications for the validity of work examining these constructs only once per day, particularly if the assessment is less proximal to the drinking event (e.g., assessed in the morning report). The present study demonstrates the potential value of repeated daily assessments of intentions and willingness, including during the drinking event, if possible. This is especially relevant for studying "unplanned" drinking events, which would depend upon a reliable and valid assessment of intentions (or willingness). Indeed, future work is needed to determine whether and how intentions and willingness actually change during a drinking event.

Table 2
Qualitative Themes and Representative Quotes

Gender (ID) College status	Representative quotes
Theme 1: Intentions and willingness vary from occasion to occasion	
Male (105) College graduate	I guess that'll be based on my mood that night. Some—some days, I'll have a shit day, and I'll just come home or whatever, go to the house and be like—walk in and say let's get shit faced, you know. I had a bad day. And there are days where I walk in, you know, sometimes I'm just really not in the mood to drink, or at least get drunk like everybody else.
Female (104) College graduate	I would say, like, the—my willingness to have, um, eight or more drinks is definitely, like, depending on what I'm doing the next day . . . But, like, I'm definitely not drinking eight or more drinks and then going to work at 6:00 a.m. . . . But if I'm—tomorrow, they're—I have literally nothing on my schedule and I'm just gonna hang out all day, I'm more likely to be, like, my willingness to do—have eight or more drinks, even though I'm only planning on hanging out and doing nothing, is probably much higher.
Female (130) College graduate	It's pretty much I'm just always open to it. It's very rare that I'm—like I said before, the main reason why I'm not open to it is because I know I have to be somewhat responsible later, such as going over to my friend's apartment. We're all together, but I'm one of the people driving people home, so I'm not open to drinking more. I will stop after one or two drinks.
Male (108) Noncollege	[An] occasion, celebration . . . that's usually the biggest factor if I'm gonna plan. Like, one of my buddies texted me today. He's like, "Oh, you want to come over for a fire on Saturday?" I'm probably gonna get messed up, you know, 'cause I'll be at his house and I don't have to worry about much. And usually that type of event, that's when it's like, "Why not?"
Theme 2: Intentions and willingness were perceived to shift during a drinking event	
Female (127) College graduate	I might go into a bar saying, "Oh, I feel like shit. I don't wanna get wasted tonight." Then I'll go in and I'll have a shot and I'm like, "Okay. That's not happening. Gross." It really can change in the middle of the night. It can, but—I typically don't go in saying, "All right, I'm gonna limit myself to this," or, "I'm gonna try to surpass this limit." That's not—I'll drink as I go. If it feels good to drink or if it tastes good to drink, then I will continue. If not, then I won't.
Male (107) In college	U-unfortunately, drugs have like an influence on it and like, sometimes, I'm like, "Oh, I'm only gonna have a couple beers tonight," and then it turns into an episode.
Female (123) In college	Yeah. I never set a goal. Oh, I want to hit 10 drinks, but for the Thursday that I—this semester that I like, threw up. I didn't limit myself. I was saying, oh, you can keep going. You can keep going. You don't have anything tomorrow. It was, yeah, I let a little too loose.
Male (115) College graduate	So depending on how the night goes, I mean if it's—if it's a pretty quiet night, like there is nobody, um, I just have like small quantities. And if it's—if it's a big event or something special is going on, the quantity gradually increases.
Theme 3: Intentions for desired level of intoxication versus number of drinks	
Male (106) In college	I'm not likely to be like okay, I'm gonna have like 10 drinks today. Like, it's more like—like it was my friend's 21st birthday, so . . . I'm gonna get, like, pretty drunk.
Female (121) College graduate	Definitely it's one of those things that I've always said it gets—not that it gets me mad but I wish I would get drunk faster so I wouldn't have to drink so much. I do try to keep pace with myself but there are sometimes that I'm like, "I wanna feel drunk tonight," so I would drink a little more accelerated than I would at different nights.
Female (123) In college	I wanted to feel drunk, pretty drunk. That was, yeah. I was looking to get pretty drunk and have fun and dance and sing and stuff. (discussing her recent HID event)
Theme 4: Heavy drinking events characterized by a willingness rather than intention	
Male (122) In college	I'd say if I definitely know I'm trying to stay under the six, then I'll stay under the six. But once I go over the six, I think I'm more flexible if people, say, keep buying me drinks.
Female (116) College graduate	<i>Interviewer:</i> Okay. Did you <i>plan</i> to get tipsy? <i>Interviewee:</i> Not really. I think I was just open to it. 'Cause I haven't been that way, or haven't gotten tipsy in a while. And I was like, "Okay." And they, my friends, really wanted us—us to stay up till, like, 4:00 a.m. and do the deep conversations, or whatever. And I was like, "I don't know if I'll make it. But if I do, I do." (discussing her recent HID event)
Male (129) In college	There are some times where I didn't plan on it, but everyone else is drinking, and it's offered, and it's, like, "All right, yeah, sure." Once you start, just kinda keep goin' from there.
Female (127) College graduate	It's probably one of those typical 'let's stay home and do a puzzle' type—a night, or that night where I was wrapping gifts with my mom. We planned on having a drink or two. We didn't have a set amount of how much we were going to drink. We certainly weren't limited, but we didn't go in saying, "All right, we'll each have a drink and that's it," or, "Let's get completely wasted." Definitely neither of the two. That was definitely one of those nights where I did plan on drinking, but how much was definitely not discussed or not planned at all, not even thought about.

We also assessed whether young adult high-intensity drinkers intend to reach a desired level of intoxication, a specific number of drinks, or both/neither. Participants most often reported that they planned reaching a desired level of intoxication rather than planning to drink a specific or set number of drinks; however, some young adults acknowledged planning for an approximate range of drinks needed for their desired level of intoxication and that this drink range was informed by prior experience. This finding corroborates a recent qualitative study assessing drinking in nightlife settings, in which participants noted goals of reaching a "right level of intoxication," particularly when the night was a planned celebration (Aresi & Pedersen, 2016). Young adults in the present study also described

how the number of drinks needed to achieve their desired level of intoxication depended on a variety of factors (e.g., eating prior to drinking, rate of drinking), which has important implications for daily diary/EMA research assessing impaired control via a discrepancy between actual versus planned number of drinks (e.g., Fairlie et al., 2019; Labhart et al., 2017; Stevens et al., 2017).

Notably, our findings emphasize the importance of assessing intentions and willingness for *intoxication* (e.g., "How intoxicated do you plan to get tonight?," "How open are you to getting drunk tonight?"), which may be a more reliable predictor of behavior than intentions/willingness for a specific level of consumption (e.g., "To what extent do you plan to drink 10 drinks tonight?," "How open are

you to drinking 5+ drinks tonight?”). As also described by participants in the present study, prior work has shown that intentions for drinking are, in part, a function of past behavior (Conner et al., 1999). Since young adults tend to underestimate their prior alcohol consumption (Monk et al., 2015; Stevens et al., 2020), they may not accurately estimate the number of drinks they should (i.e., “intend”) to drink in order to achieve a certain feeling; but it may be easier to describe the feeling (or level of intoxication) one wants to achieve. Furthermore, as the number of drinks consumed increases, it is also possible that the number of drinks (e.g., eight vs. nine drinks) becomes less distinguishable. Again, this limited accuracy of reporting may limit the utility of assessing planned versus actual consumption. Taken together with our qualitative findings, assessing intentions for specific consumption levels may result in an erroneous estimate that does not accurately reflect young adults’ actual intentions—for a desired level of intoxication. Going forward, we recommend that researchers assess intentions for both intoxication and consumption, which could be used in combination to define impaired control in a reliable and valid manner (see Heather, 1995).

Regarding heavy drinking/HID nights, we asked participants whether their willingness versus intentions for alcohol consumption were most evident, and they tended to describe a high willingness (rather than intention) for heavy drinking, particularly on HID nights that almost exclusively occur in social settings. This corroborates the social reaction pathway of the PWM that emphasizes the importance of willingness for high-risk behaviors that tend to occur in social contexts (Gerrard et al., 2008; Gibbons et al., 2009). Indeed, this finding underscores the importance of assessing willingness when examining high-risk drinking among young adults. Interestingly, when describing high willingness for heavy drinking, participants in the present study noted the influence of peers offering drinks on heavy consumption, as well as the importance of characteristics of the drinking event (e.g., comfortable/safe setting, few next-day responsibilities), which supports the interplay of social influence, event circumstances, and willingness (Gerrard et al., 2008; Gibbons et al., 2009).

Limitations and Future Directions

First, it is important to note that our sample was small (though typical for qualitative work) and relatively homogenous with respect to drinking behavior and demographics, with most participants being in college or college graduates. Thus, findings may not generalize to less risky drinkers and to non-college attending young adults. This work should be replicated in other demographic groups. For example, future research should investigate whether there are age-related differences and/or drinking experience-related differences in intentions and willingness for alcohol consumption, particularly for level of intoxication. Second, though participants were asked to consider very recent HED/HID events when responding to interview questions, retrospective recall bias may still be of concern. Third, qualitative data presented here were unable to discern whether and how individuals distinguish between intentions and willingness for consumption versus intoxication or determine whether these are independent predictors. Future work is needed to determine the specificity of intentions and willingness for consumption versus intoxication to advance this area of research. Fourth, the present study shows that young adults *perceive* that their intentions shift during a drinking episode. EMA studies explicitly testing this notion are needed to determine whether

intentions actually change in this manner. Relatedly, future EMA research is needed to discern whether drinking beyond intentions reflects momentary shifts in intentions or impaired control over original intentions. Understanding intentions and behavior with this degree of nuance would greatly advance our conceptualization of impaired control in daily life.

Future work that draws on themes that emerged in this qualitative study is encouraged to use fine-grained, prospective measurement of intentions, willingness, and subsequent drinking outcomes. Nevertheless, future work that assesses intentions and willingness during a drinking episode should also consider whether the number of drinks consumed affects the reliability and validity of responses. To determine the accuracy of assessing these constructs once participants are intoxicated, EMA studies could compare these momentary reports to a morning report the next day that asks whether their intentions and willingness shifted during the course of the prior evening and assess their concordance. Finally, though prior EMA research suggests that reactivity to frequent assessments should be minimal (e.g., Barta et al., 2012; Hufford et al., 2002; Wycoff et al., 2018), this has not been tested when asking about current and future (i.e., intended) levels of intoxication and should be considered in future research incorporating such assessments.

Conclusions

Our findings highlight the need for assessing intentions/willingness for intoxication in addition to intentions/willingness for consumption. To our knowledge, work in this area has not included such assessments, which has implications for assessing impaired control in daily life (see Martin et al., 2008). In addition to corroborating evidence that intentions and willingness vary by occasion, we also demonstrate that intentions and willingness are perceived to shift within the drinking event, which calls into question the current practice of assessing these constructs once daily. We recommend that future work include assessments of intentions and willingness more proximal to the drinking event (e.g., afternoon vs. morning assessment; Lewis et al., 2020) and, if possible, include repeated assessments of these constructs during the drinking event itself.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Aresi, G., & Pedersen, E. R. (2016). ‘That right level of intoxication’: A grounded theory study on young adults’ drinking in nightlife settings. *Journal of Youth Studies*, 19(2), 204–220. <https://doi.org/10.1080/13676261.2015.1059931>
- Barta, W. D., Tennen, H., & Litt, M. D. (2012). Measurement reactivity in diary research. In M. R. Mehl & T. S. Conner (Eds.), *Handbook of Research Methods for Studying Daily Life* (pp. 108–123). The Guilford Press.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Conner, M., Warren, R., Close, S., & Sparks, P. (1999). Alcohol consumption and the theory of planned behavior: An examination of the cognitive mediation of past behavior. *Journal of Applied Social Psychology*, 29(8), 1676–1704. <https://doi.org/10.1111/j.1559-1816.1999.tb02046.x>
- Davies, E. L., Martin, J., & Foxcroft, D. R. (2013). Young people talking about alcohol: Focus groups exploring constructs in the prototype

- willingness model. *Drugs Education, Prevention & Policy*, 20(4), 269–277. <https://doi.org/10.3109/09687637.2012.726662>
- Fairlie, A. M., Cadigan, J. M., Patrick, M. E., Larimer, M. E., & Lee, C. M. (2019). Unplanned heavy episodic and high-intensity drinking: Daily-level associations with mood, context, and negative consequences. *Journal of Studies on Alcohol and Drugs*, 80(3), 331–339. <https://doi.org/10.15288/jsad.2019.80.331>
- Gerrard, M., Gibbons, F. X., Houlihan, A. E., Stock, M. L., & Pomery, E. A. (2008). A dual-process approach to health risk decision making: The prototype willingness model. *Developmental Review*, 28(1), 29–61. <https://doi.org/10.1016/j.dr.2007.10.001>
- Gibbons, F. X., & Gerrard, M. (1995). Predicting young adults' health risk behavior. *Journal of Personality and Social Psychology*, 69(3), 505–517. <https://doi.org/10.1037/0022-3514.69.3.505>
- Gibbons, F. X., Gerrard, M., Blanton, H., & Russell, D. W. (1998). Reasoned action and social reaction: Willingness and intention as independent predictors of health risk. *Journal of Personality and Social Psychology*, 74(5), 1164–1180. <https://doi.org/10.1037/0022-3514.74.5.1164>
- Gibbons, F. X., Gerrard, M., & Lane, D. J. (2003). A social reaction model of adolescent health risk. *Social psychological foundations of health and illness* (pp. 107–136). <https://doi.org/10.1002/9780470753552.ch5>
- Gibbons, F. X., Houlihan, A. E., & Gerrard, M. (2009). Reason and reaction: The utility of a dual-focus, dual-processing perspective on promotion and prevention of adolescent health risk behaviour. *British Journal of Health Psychology*, 14(2), 231–248. <https://doi.org/10.1348/135910708X376640>
- Guest, G., MacQueen, K. K., & Namey, E. E. (2011). Applied thematic analysis. *Applied thematic analysis*. SAGE Publications; <https://doi.org/10.4135/9781483384436>
- Heather, N. (1995). Impaired control: a concept of fundamental significance. *Addiction*, 90(8), 1046–1047. <https://doi.org/10.1111/j.1360-0443.1995.tb01061.x>
- Hingson, R., Zha, W., & Smyth, D. (2017). Magnitude and trends in heavy episodic drinking, alcohol-impaired driving, and alcohol-related mortality and overdose hospitalizations among emerging adults of college ages 18–24 in the United States, 1998–2014. *Journal of Studies on Alcohol and Drugs*, 78(4), 540–548. <https://doi.org/10.15288/jsad.2017.78.540>
- Hufford, M. R., Shields, A. L., Shiffman, S., Paty, J., & Balabanis, M. (2002). Reactivity to ecological momentary assessment: An example using undergraduate problem drinkers. *Psychology of Addictive Behaviors*, 16(3), 205–211. <https://doi.org/10.1037/0893-164X.16.3.205>
- Hukkelberg, S. S., & Dykstra, J. L. (2009). Using the prototype/willingness model to predict smoking behaviour among Norwegian adolescents. *Addictive Behaviors*, 34(3), 270–276. <https://doi.org/10.1016/j.addbeh.2008.10.024>
- Labhart, F., Anderson, K. G., & Kuntsche, E. (2017). The spirit is willing, but the flesh is weak: Why young people drink more than intended on weekend nights—An event-level study. *Alcoholism: Clinical and Experimental Research*, 41(11), 1961–1969. <https://doi.org/10.1111/acer.13490>
- Lauher, M. L., Merrill, J. E., Boyle, H. K., & Carey, K. B. (2020). The relationship between unplanned drinking and event-level alcohol-related outcomes. *Psychology of Addictive Behaviors*, 34, 497–505. <https://doi.org/10.1037/adb0000553>
- Lewis, M. A., Litt, D. M., King, K. M., Fairlie, A. M., Waldron, K. A., Garcia, T. A., Loparco, C., & Lee, C. M. (2020). Examining the ecological validity of the Prototype Willingness Model for adolescent and young adult alcohol use. *Psychology of Addictive Behaviors*, 34(2), 293–302. <https://doi.org/10.1037/adb0000533>
- Lewis, M., King, K., Litt, D., Swanson, A., & Lee, C. (2016). Examining daily variability in willingness to drink in relation to underage young adult alcohol use. *Addictive Behaviors*, 61, 62–67. <https://doi.org/10.1016/j.addbeh.2016.05.019>
- Litt, D. M., Lewis, M. A., Patrick, M. E., Rodriguez, L., Neighbors, C., & Kaysen, D. L. (2014). Spring break versus spring broken: Predictive utility of spring break alcohol intentions and willingness at varying levels of extremity. *Prevention Science*, 15(1), 85–93. <https://doi.org/10.1007/s11211-012-0355-5>
- Martin, C. S., Chung, T., & Langenbucher, J. W. (2008). How should we revise diagnostic criteria for substance use disorders in the DSM-V? *Journal of Abnormal Psychology*, 117(3), 561–575. <https://doi.org/10.1037/0021-843X.117.3.561>
- Miles, M., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook*. SAGE Publications; [https://doi.org/10.1016/0149-7189\(96\)88232-2](https://doi.org/10.1016/0149-7189(96)88232-2)
- Monk, R. L., Heim, D., Qureshi, A., & Price, A. (2015). “I have no clue what I drunk last night” using smartphone technology to compare in-vivo and retrospective self-reports of alcohol consumption. *PLOS ONE*, 10(5), e0126209. <https://doi.org/10.1371/journal.pone.0126209>
- Neale, J., Allen, D., & Coombes, L. (2005). Qualitative research methods within the addictions. *Addiction*, 100(11), 1584–1593. <https://doi.org/10.1111/j.1360-0443.2005.01230.x>
- Northcote, J. (2011). Young adults' decision making surrounding heavy drinking: A multi-staged model of planned behaviour. *Social Science & Medicine*, 72(12), 2020–2025. <https://doi.org/10.1016/j.socscimed.2011.04.020>
- Pomery, E. A., Gibbons, F. X., Reis-Bergan, M., & Gerrard, M. (2009). From willingness to intention: Experience moderates the shift from reactive to reasoned behavior. *Personality and Social Psychology Bulletin*, 35(7), 894–908. <https://doi.org/10.1177/0146167209335166>
- QSR International. (2018). *NVivo 12*. <https://www.qsrinternational.com/nvivo/nvivo-products>
- Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2019). *Monitoring the future national survey results on drug use, 1975–2018: Volume II, College students ages 19–60*. <http://monitoringthefuture.org/pubs.html#monographs>
- Sheeran, P., & Webb, T. L. (2016). The intention–behavior gap. *Social and Personality Psychology Compass*, 10(9), 503–518. <https://doi.org/10.1111/spc3.12265>
- Stevens, A. K., Littlefield, A. K., Talley, A. E., & Brown, J. L. (2017). Do individuals higher in impulsivity drink more impulsively? A pilot study within a high risk sample of young adults. *Addictive Behaviors*, 65, 147–153. <https://doi.org/10.1016/j.addbeh.2016.10.026>
- Stevens, A. K., Sokolovsky, A. W., Treloar Padovano, H., White, H. R., & Jackson, K. M. (2020). Heaviness of alcohol use, alcohol problems, and subjective intoxication predict discrepant drinking reports in daily life. *Alcoholism: Clinical & Experimental Research*. <https://doi.org/10.1111/acer.14362>
- Todd, J., Kothe, E., Mullan, B., & Monds, L. (2016). Reasoned versus reactive prediction of behaviour: A meta-analysis of the prototype willingness model. *Health Psychology Review*, 10(1), 1–24. <https://doi.org/10.1080/17437199.2014.922895>
- White, A., & Hingson, R. (2013). The burden of alcohol use: Excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Reviews*, 35(2), 201–218.
- Wycoff, A. M., Metrik, J., & Trull, T. J. (2018). Affect and cannabis use in daily life: A review and recommendations for future research. *Drug and Alcohol Dependence*, 191, 223–233. <https://doi.org/10.1016/j.drugalcdep.2018.07.001>

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