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My own personal hell: Approaching and exceeding thresholds of too much alcohol

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Abstract

Objectives: Government guidelines aim to promote sensible alcohol consumption but such advice is disconnected from people's lived experiences. This research investigated how people construct personal thresholds of 'too much' alcohol.

Design and measures: 150 drinkers completed an online survey (*M*age=23.29(5.51); 64.7%female). Participants were asked whether they had an intuitive sense of what constitutes too much alcohol. They wrote open-ended descriptions of how that threshold had been established and how it felt to approach/exceed it. These qualitative accounts were coded using thematic analysis and interpreted with an experiential theoretical framework.

Results: Personal thresholds were based on previously experienced embodied states rather than guidelines, or health concerns. Describing the approach to their threshold, 75% of participants fell into two distinct groups. Group 1's approach was an entirely negative (nausea/anxiety) and Group 2's approach was an entirely positive, embodied experience (relaxed/pleasurable). These groups differed significantly in awareness of alcohol's effects, agency and self-perceptions, but not on alcohol consumption. Exceeding their threshold was an entirely negative embodied experience for all.

Conclusion: These findings illustrate that people are guided by experientially grounded conceptions of consumption. Interventions could target different groups of drinker according to their embodied experience during the approach to 'too much' alcohol.

Keywords: Alcohol limits; Experiential; Consumption; AUDIT; Embodiment; Health guidelines; Heavy drinking

***My own personal hell*: Approaching and exceeding thresholds of too much alcohol**

1. Introduction

Determining a safe level of alcohol consumption has challenged medical authorities, governments and individual citizens alike. It has largely been a challenge of achieving balance between perceived objective (Ronksley, Brien, Turner, Mukamal, & Ghali, 2011) and subjective (Peele & Brodsky, 2000) benefits of alcohol, and the litany of short and long term health risks to which alcohol contributes worldwide (WHO, 2018). In the short term, excessive alcohol consumption contributes to violence and abuse (Bellis et al., 2015; Laslett et al., 2010), while long term risks include cancer (Roswall & Weiderpass, 2015) and liver disease (Mehta & Sheron, 2019). To counter these harms, many countries publish guidelines setting a low-risk level of alcohol consumption, but there is considerable variation between different countries' recommendations of what represents low-risk drinking (Furtwaengler & de Visser, 2013). This implies an objective understanding of what constitutes too much alcohol has yet to be achieved.

The United Kingdom (UK) Government advises that low-risk drinking constitutes 14 units (one unit = 10ml of alcohol) consumed over the course of a week (Department of Health, 2016). However, Wood et al.'s (2018) analysis of almost 600,000 drinkers suggests consuming only 12.5 units per week increases mortality risk. They also showed that exceeding the UK guideline of 14 units resulted in a lowered life expectancy of 1.6 years for men and 1.3 years for women. A systematic review that analysed data from 195 countries and 28 million participants (GBD 2016 Alcohol Collaborators, 2018) concluded that, 'the safest level of drinking is none' while acknowledging that this 'level is in conflict with most health guidelines'.

Relying on awareness of guidelines to reduce alcohol consumption is problematic. In the UK, drinkers of all ages exceed them regularly (Health and Social Care Information Centre, 2014; Knott, Scholes, & Shelton, 2013). This is partly due to lack of knowledge: in one study, only a quarter of participants could accurately describe the guidelines (Buykx et al., 2018) and the amount of alcohol that constitutes a unit is frequently misjudged (De Visser & Birch, 2012).

Even when people possess accurate knowledge they do not necessarily drink within guidelines. Cooke et al. (2010)reported a non-significant correlation between knowledge of 'sensible drinking' and consumption in a sample of university students. People also ignore or disparage accurate information, and actively challenge the notion that such information is relevant for them. For example, UK drinkers viewed daily consumption guidelines as irrelevant because the recommendations ignored heavy weekend drinking, a widespread cultural practice (Lovatt et al., 2015). Those who exceed recommended limits often present themselves disingenuously to doctors, assuming they would be told to drink less if they were honest about their intake (Davies, Conroy, Winstock, & Ferris, 2017).

A combination of low consensus on risk levels, and the seemingly unrealistic advice regarding unhealthy consumption can lead people to disregard or ignore existing guidelines. Instead, they often rely on their health beliefs when judging how much to drink. For this reason, researchers have investigated alcohol consumption using health belief models such as Ajzen's (1991) Theory of Planned Behaviour (TPB). The TPB assesses the degree to which attitudes, subjective norms and perceived behavioural control (PBC) contribute to intentions and behaviour. It has predicted young people's drinking successfully (Norman, Bennett, & Lewis, 1998; Norman & Conner, 2006) with PBC being a key predictor in some studies (e.g., French & Cooke, 2012; Haydon, Obst, & Lewis, 2016). However, Cooke et al.'s (2016) meta-analysis found an inconsistent relationship between PBC and alcohol consumption. Perceived behavioural control had a large, positive, relationship with light consumption (i.e., drinking within government guidelines), but a small, negative, relationship with heavy consumption (i.e., getting drunk). This research highlights the importance of people's beliefs regarding their perceived control, but also suggests that more needs to be known about people's experiences of control at different levels of consumption.

Recent qualitative research highlights the importance of addressing personal experiences of drinking alcohol, with an emphasis on what it is like to stay within perceived

optimal levels of consumption. For example, Lovatt et al. (2015) used a *lay epidemiology* framework to assess adult drinkers' interpretations of UK guidelines. Such a framework focuses on the way that subjective experiences and media representations guide people's knowledge and beliefs about health and illness (Davison, Davey Smith & Frankel, 1991). In Lovatt et al's (2015) study, participants said the guidelines were disconnected from their health beliefs and their subjective experiences of drinking, with one focus group reporting that 'their too much [i.e., the Government's] is not our too much'. Instead of counting units, they said that they counted drinks and relied on personal experiences of knowing how their bodies responded to alcohol.

Qualitative studies from a variety of nations have helped paint a nuanced picture of drinkers' experiences. Scottish mid-life adults were asked to describe the states they experienced when they drank (Lyons, Emslie, & Hunt, 2014). Unlike Lovatt et al.'s (2015) participants, they did not count drinks but would notice the physical states associated with 'being in the zone' and associated with 'the point of no return' when they had consumed too much. Young Australians described how they hoped to feel when they drank alcohol and what they did to reach and to stay at those levels (Zajdow & MacLean, 2014). They did not count units to monitor their drinking either, but they did attend to how they felt, aiming to maximize pleasure and to stay between 'the ideal state and the danger zone'. Young UK non-drinkers and moderate drinkers described their experiences of maintaining low-risk drinking patterns in social situations where higher levels of consumption were the cultural norm (Graber et al., 2016). They attempted to stay in the 'sweet spot', a positive experience that could transform into a negative one of being 'too drunk'. Similarly, young Italian drinkers spoke about the importance of alcohol to having fun in different social settings (Aresi & Pedersen, 2016). They described desirable states that required purposeful action in order to maintain an 'acceptable level of intoxication' and not go 'beyond the limit'. Other young Italians attempted to strike a balance between getting the 'right kind of buzz' without reaching their tipping point (Beccaria, Petrilli, & Rolando, 2015).

Participants in the preceding studies allude to a potential limit of consumption that marks a point of no return and is associated with an *experiential threshold* of too much alcohol Despite the recent focus on peoples' experiences of drinking to optimal subjective levels, no research has directly addressed peoples' experiences of what it is like to approach and exceed *their* threshold of consuming too much alcohol. An elaboration of those states is the focus of the current research. The rationale for the design and analysis is founded on theoretical work on first-person experiential states that indicates experience is characterized by embodiment, pre-reflective self-consciousness, and by being socially embedded (Gallagher & Zahavi, 2013; Zahavi, 2005, 2014)

Gallagher and Zahavi (2013) describe embodiment as a *principle of experience* (p.135) that exists along a continuum of positive-negative physical and affective states. Alcohol literature often refers to such states. Pleasure is an important motivation for students' drinking (Hutton, 2012; Webb, Ashton, Kelly, & Kamali, 1996) and drinking for enhancement is common across countries and age groups (Cooper, 1994). Adults drink for enjoyment (Graber et al., 2016; Lovatt et al., 2015) to be calm and to feel 'just the right buzz' (Aresi & Pedersen, 2016). These sensations are described as 'the pleasure zone' (Fry, 2011) but this zone is inherently unstable, open to change, and difficult to reach and maintain (Lyons et al., 2014; Zajdow & MacLean, 2014). Drinkers are motivated to stay in an optimal zone to avoid the adverse physical states (e.g., feeling sick) and poor mood they fear will result from excessive consumption (Aresi & Pedersen, 2016; de Visser, Wheeler, Abraham, & Smith, 2013; Graber et al., 2016; Lyons et al., 2014).

The immediate, pre-reflective self-consciousness that is an intrinsic part of experience corresponds to a sense of 'self-as-subject' (Legrand, 2011; Zahavi, 2005). This ongoing awareness enables a person to know 'what it is like for me' to have this particular experience (Zahavi, 2014). While they are drinking, a person will know that it is they who is experiencing 'the buzz' and is happy, or who is stumbling and embarrassed. Drinkers have an intrinsic

awareness of the ongoing effect of alcohol at lower levels of consumption and this can be used to monitor and alter the trajectory of one's drunkenness (Katainen & Rolando, 2015). People monitor drinking through the effect the drink is having on their bodies and they engage in strategies to keep in their sweet spot, such as switching drinks or slowing down their consumption (Aresi & Pedersen, 2016; Lovatt et al., 2015). This implies agency and control, something that is fundamental to first-person experiences, whereby people feel themselves to be the intentional author of their actions (Gallagher & Zahavi, 2013; Taylor, 1985).

Drinkers attempt to exert control over their experiential state. These attempts are described as a 'manageable loss of control' (Graber et al., 2016) 'controlled disinhibition' (Aresi & Pedersen, 2016) 'intoxicated self-control' (Zajdow & MacLean, 2014)and a 'controlled loss of control' (Measham, 2006). Restraint is exercised over the dis-inhibitory effects of alcohol but the level of control that people consider optimal varies across drinkers. On the one hand, Graber et. al.'s (2016) non-drinkers and moderate drinkers were aware of potential negative future states and wanted to be confident in making choices that would prevent the loss of control that could lead to bad experiences. On the other hand, other young and mid-life drinkers enjoyed testing the boundaries of their everyday state and experienced relief or excitement from diminished control (Engineer, Philips, Thompson, & Nicholls, 2003; Lyons et al., 2014; Zajdow & MacLean, 2014). At the extreme, loss of control can lead to blackouts and drinkers can become afraid of consuming excessive amounts in future (White, Signer, Kraus, & Swartzwelder, 2004).

A person's drinking is not solely governed by their conscious intentions to exert or relinquish control. Social contexts also form potent guides for appropriate behavior (Gallagher & Zahavi, 2013; Guignon, 2012) and are important in understanding people's embodied experiences of drinking (MacAndrew & Edgerton, 1969; MacLean, Pennay, & Room, 2018; Zajdow & MacLean, 2014). The first-person experiential perspective views an individual, the context they inhabit, and the people with whom they interact as intertwined rather than completely discrete entities. A person enters a pub already infused with a socially-constructed

understanding of how to behave in that setting and their drinking is also infused with the behaviors of the people around them (Cooper, 2016; Dreyfus, 1991). To that extent, the individual embodies the context and the social groups therein and these combine with the drinker's conscious intentions to 'call forth' different drinking experiences (cf. Aresi & Pedersen, 2016). Contextual and social norms can be internalized and associated with different experiences in regulating consumption to achieve optimal drinking states and to avoid transgressing norms of drunken presentation (Graber et al., 2016; Szmigin et al., 2008). However, this can be a balancing act. Many young adults believe that alcohol facilitates social interactions and is instrumental in forging group belonging (de Visser et al., 2013; Livingstone, Young, & Manstead, 2011). They also believe that exceeding alcohol norms can interfere with meaningful communication and damage social reputation (MacLean et al., 2018).

1.1 Aims:

We investigated personal thresholds of too much alcohol. To do this, we used a theoretical framework for understanding first-person experiential states (Gallagher & Zahavi, 2008; Zahavi, 2005, 2014). First, we determined whether participants had an intuitive sense of a threshold of too much alcohol. Those who did were expected to base that threshold on experiential embodied states rather than on a number, or units, of drinks. Participants' open-ended descriptions of (1) approaching and (2) exceeding a personal threshold of too much alcohol were analysed to determine the nature of the experience in relation to: positive or negative embodiment, by ongoing awareness of the effect of alcohol, by the ability to exert control, and by positive or negative views of self and social interactions.

2. Method

2.1 Participants and procedure

150 participants (97 women, 47 men, 6 non-binary) responded to an online survey about drinking attitudes and behaviours. Most respondents (84%) were students and the average age was 23.3 (SD = 5.5). The survey was promoted on university electronic notice boards and researchers' social media pages and delivered using Qualtrics software. The study was approved by XXX University Research Ethics Committee.

2.2 Measures

Alcohol consumption was assessed using the Alcohol Use Disorders Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). The 10-item questionnaire measured alcohol consumption and harms as a score from 0-40 (0-7= low risk; 8-15= increasing risk; 16-19= higher risk; 20+= possible dependence). This enabled an assessment of the categories of drinker in the sample.

Experiential thresholds were assessed through participants' written responses to questions in separate essay boxes on the online survey. There was no word limit or restriction placed on the answers. Initially, participants were asked whether they: *had an intuitive sense of what would constitute too much alcohol (either in terms of the way in which the drink makes you feel or in terms of an absolute amount of alcohol)*? If they responded affirmatively, they were asked to: *describe how you established your own personal intuitive sense of too much and whether this has changed over time*. Following this, they were asked whether it was: *something that remains consistent across different situations or does it fluctuate according to the situation*?

Nagel (1974) described the phenomenal structure of experience as a description of 'what it is like' to experience something. Our participants were asked to: *Imagine the following experience: Imagine that you are actually drinking and that you approach, but do not exceed, your own personal intuitive sense of 'too much'. Can you describe the feelings, thoughts, and just generally what it is like to approach, but not exceed, your own personal sense of too much*. Finally, they did the same thing for the experience of exceeding their sense of too much alcohol.

2.3 Analysis

This paper used a mixed methods approach. Thematic analysis (Braun & Clarke, 2006) was guided by a deductive, theory driven process (Gallagher & Zahavi, 2008; Zahavi, 2005, 2014). Participants' accounts were examined for statements corresponding to experiences revealing: (1) embodiment in the form of physical and affective states (2) an ongoing awareness of the effect of alcohol (3) control (4) reflections on self and (5) reflections on social interactions. All descriptions of the threshold of too much alcohol were read and reread to ensure that codes were also grounded in participants' statements and reflected their experiences. The first and third authors independently coded 15 participants' responses to all questions. Any differences in coding were discussed with reference to theory, previous alcohol research and the participants' experience, and the coding revised to reflect agreement. The first author then coded the remaining 135 participants' accounts. The third author assessed a further sample of 15 participants' accounts of all questions to ensure that coding remained consistent across the corpus. Original accounts were reread in light of the analytic interpretations to ensure that participant descriptions were represented accurately. Descriptive statistics and chi-square were used to compare participants' drinking behaviours and the frequency of codes applied to their accounts.

3. Results

3.1 Do participants have an intuitive sense of too much alcohol?

An intuitive sense of too much alcohol was established by 149 of the 150 participants. This was founded on previous drinking experiences, with 119 (80%) participants referring to physical and affective states as important in determining their threshold (see Table 1). For physical states, 101 (68%) descriptions referred only to negative physical states (e.g., stumbling), two referred only to positive physical states (e.g., a tipsy buzz), and 14 (9%) referred to both negative and positive states. For affective states, 62 (42%) referred only to

negative affective states (e.g., embarrassed), eight (5%) referred only to positive affective states (e.g., happy), and nine (6%) referred to both negative and positive states.

[Insert Table 1]

Distinct amounts (e.g., 5-6 pints), and distinct types (e.g., spirits) of alcohol appeared in 32 (21%) and 16 (11%) descriptions respectively. These drinks illustrated what would lead participants to exceed their threshold and to lose control. Only two people referred to government guidelines as informing their sense of too much alcohol (e.g., 'through gaining knowledge of government guidelines and personal experience' P107, female, 26 yrs), and only six people referred to long-term health as contributing to their intuitive level of too much (e.g., 'I understand the health risks of too much alcohol' P72, female, 19 yrs).

In terms of stability, 36 (24%) participants said that their sense of too much alcohol stayed the same (e.g., 'it's based on my past experiences and it hasn't changed', P137, male, 24yrs) and 46 (31%) indicated that it had changed over time (e.g., 'largely because the amount I drink has decreased, leading me to get drunk with less alcohol', P1, male, 23yrs). Nineteen (13%) participants mentioned a pre-existing internal state (e.g., having eaten) influencing their sense of too much alcohol. Seventy-eight (52%) participants mentioned an external factor (e.g., where a person was) as being an influence. A lower threshold was considered more appropriate at family functions or work events where participants were concerned about how they would be judged (e.g., 'too much for a family dinner would be less than too much when I'm clubbing with friends. I'd feel more comfortable being more drunk in a setting where it's more acceptable' P149, male, 19yrs). The mean AUDIT score for the sample was 10.48 (SD=6.25); 38.1% of participants were categorised as 'low risk', 42.9% as 'increasing risk', 9.5% as 'higher risk', and 9.5% as 'possible dependence'.

3.2 Approaching the threshold of too much alcohol

3.2.1. Physical and affective states

Approaching the threshold was described as a physical and/or affective state by 139/150, (93%), participants. Seventy-five per cent of the overall sample described their experience of approaching their threshold at the extremes of the positive-negative continuum of physical and affective states. At one extreme, 61 participants (41%) described the approach as an *entirely negative embodied* state (e.g., 'nausea and anxiety' P102, female, 22yrs). At the other extreme, 51 participants (34%) described the approach as an *entirely positive embodied* state (e.g., 'relaxed and enjoying myself' P17, female, 21yrs). A further 9 (6%) participants experienced the approach as predominantly (but not exclusively) negative, 11 (7%) participants experienced an equal balance between negative and positive physical and affective states, and 7 (5%) participants experienced the approach as predominantly (but not exclusively) positive. The remaining 11 (7%) participants provided accounts that had no mention of physical or affective states at all. There was no significant association between participant gender and descriptions of physical and affective states, χ^2 = 1.64, p = 0.44, ns.

The remaining analyses focus on contrasting the descriptions of those who experienced an *entirely negative embodied* approach (henceforth, Group 1) with those who experienced an *entirely positive embodied* approach (henceforth, Group 2). These groups constituted the majority of participants and were completely distinct phenomenological states. Analysis of AUDIT scores revealed no significant differences between Group 1 (*M* = 10.9; *SD*=6.77) and Group 2 (*M*=10.16; *SD*= 5.31), with each group's average falling within the category of 'increasing risk.'

[Insert Table 2]

3.2.2. Ongoing awareness

Those experiencing an entirely negative embodied approach (Group 1: 55/61) were more likely than those experiencing an entirely positive embodied approach (Group 2: 27/51) to report being aware of the ongoing effect of alcohol (e.g., Group 1: 'I am aware myself that I am drinking too much and it does not feel very nice to be approaching that point' P7, female, 20 yrs; Group 2: 'I'm always aware of how drunk I am and know when I'm feeling good' P77, female, 21yrs), $\chi^2 = 19.63$, $p < .01$. Group 1 (42/61) were also more likely than Group 2 (12/51) to report being aware of potential future adverse states (e.g., Group 1: 'I usually start thinking about how I feel when I'm too drunk or hungover and realise that I might be heading that way and want to avoid it' P42, female, 28yrs; Group 2: 'I know if I have that next drink I'm gonna be spinning and on the bathroom floor and that's not nice!' P128, male, 27yrs) $\chi^2 = 22.85$, $p < .01$.

3.2.3. Experiencing control and strategies for preventing loss of control

A significantly greater proportion of Group 1 participants (33/61) than Group 2 participants (11/51) were concerned about losing control (e.g., Group 1: 'I start to feel out of control and say things I shouldn't' P65, female, 20yrs; Group 2: 'I would feel quite in control as I would know that I haven't had too much to drink' P51, female, 28yrs), $\chi^2 = 12.32$, $p < .05$. Group 1 (26/61) were also more likely than Group 2 (11/51) to report having a strategy for dealing with drinking too much (e.g., Group 1: 'I remove myself from that drinking environment so as to avoid the social pressures of stopping drinking before any others you are with want to' P3, male, 21yrs; Group 2: 'I tend to drink more water if I'm approaching too much' P124, female, 29yrs), $\chi^2 = 14.66$, $p < .05$.

3.2.4. Perceptions of self and social interactions

Group 1 were less likely (00/61) than Group 2 (19/51) to describe the self positively (e.g., Group 2: 'I feel entirely aware of myself, but with a more positive outlook' P18, male, 20yrs) $\chi^2 = 22.33$, $p < .05$. Group 1 were also less likely (02/61) than Group 2 (19/51) to report positive social interactions (e.g., Group 1: 'I would not be enjoying people's company any more'

P99, female, 24yrs; Group 2: 'I would be feeling more conversational and less inhibited' P111, female, 23yrs) $\chi^2 = 21.05$, $p < .05$.

3.3 Exceeding the threshold of too much alcohol

Participants' accounts revealed that 147 (98%) of them had exceeded their threshold of too much alcohol, and that three had not.

3.3.1. Physical and affective states

Exceeding the threshold of too much alcohol was described by 144 (96%) of the participants as a physical and/or affective state. The other six made no mention of physical or affective states. The majority of participants (130/150, 87% of the entire sample) described the experience of exceeding their threshold as an entirely negative physical and affective state. Recall that Group 1 experienced the approach to their threshold as an entirely negative embodied state and Group 2 had experienced the approach to their threshold as an entirely positive embodied state. Exceeding the threshold was described as an *entirely negative embodied* state for participants of each group (Group 1: 52/61, 85%; Group 2: 45/51, 88%), $\chi^2 = 0.04$, $p = 0.84$, ns. See Table 2 for descriptions of the transition from approaching to exceeding the threshold.

3.3.2. Ongoing awareness

When exceeding their threshold, there were no longer differences between Group 1 (30/61) and Group 2 (24/51) in being aware of the ongoing effect of alcohol ($\chi^2 = 0.05$, $p = 0.83$, ns). Among Group 1 participants, fewer reported an ongoing awareness in their accounts of exceeding the threshold compared to their accounts of approaching the threshold $\chi^2 = 24.24$, $p < .01$. There were also no differences between Group 1 (31/61) and Group 2 (27/51) in awareness of potential future adverse states, $\chi^2 = 0.05$, $p = 0.82$. Relative to approaching their thresholds, fewer participants of Group 1 reported an awareness of potential negative states (χ^2

= 4.13, $p < .05$) and more participants of Group 2 reported an awareness of potential negative states ($\chi^2 = 9.34$, $p < .05$).

3.3.3. Experiencing control and strategies for preventing loss of control

Similar proportions of Group 1 (50/61) and Group 2 (45/51) felt they were not in control when exceeding their threshold (e.g., Group 1: 'I would feel out of control and vulnerable' P43, female, 22yrs: Group 2: 'I feel completely out of control … I do not enjoy this feeling at all' P122, female, 23yrs), $\chi^2 = 0.84$, $p = 0.35$, ns. There were no longer differences between Group 1 (11/61) and Group 2 (7/51) in reporting a strategy for dealing with drinking too much, $\chi^2 = 0.38$, $p = .54$. Significantly fewer Group 1 participants reported a strategy when exceeding their threshold than when approaching their threshold, $\chi^2 = 8.60$, $p = .01$, (there were no differences for Group 2 relative to their approach).

3.3.4. Perceptions of self and social interactions

There were no differences between Group 1 (0/61) and Group 2 (2/51) in describing the self positively, $\chi^2 = 0.06$, $p = 0.80$, ns, or differences between Group 1 (3/61) and Group 2 (3/51) in describing positive social interactions, $\chi^2 = 0.05$, $p = 0.82$, ns. Relative to their experience of approaching their threshold, there were no differences on either of these measures for participants of Group 1, but there were significantly fewer Group 2 participants describing self and interactions positively, χ^2 s > 14.80, ps < .01.

4. Discussion

4.1 Summary of findings

Previous research alluded to drinkers constructing a threshold that marked an experiential danger zone (e.g., Aresi & Pedersen, 2016; Graber et al., 2016, Lyons et al., 2014). The current research focused specifically on the existence, and nature, of that threshold. It used

an *a priori* first-person experiential framework (Gallagher & Zahavi, 2008; Zahavi, 2005, 2014) to elucidate the key factors intrinsic to approaching and exceeding a threshold of too much alcohol. Participants had an intuitive sense of what too much alcohol meant to them. It was a threshold that had been learned over time and was based on physical and affective states rather than external guidelines. One group described the approach to the threshold as an entirely positive embodied state, and another group described it as an entirely negative embodied state. These two groups' experiences of approaching their thresholds also differed in terms of awareness, control, perceptions of self, and the quality of their social interactions. In contrast, exceeding the threshold was uniformly experienced as a negative embodied state, characterised by loss of awareness, loss of control, negative self-perception, and low quality social interactions.

4.2 Establishing personal thresholds

Government guidelines, long-term health (de Visser et al., 2013), and number of drinks (Lovatt et al. 2015) did not figure strongly in participants' descriptions of what informed their thresholds of too much alcohol. Instead, their thresholds were established through recognizing previous negative states. These were predominantly embodied experiences that involved losing physical control, suggesting their threshold was forged at levels where alcohol had previously incapacitated the drinker. This demonstrates a disconnect between medical conceptions of risk and the experiences that people call on to gauge when to stop drinking. Medically, Woods et al. (2018) suggested 12.5 units per week as a suitable threshold, beyond which drinkers can expect long-term damage. The Global Burden of Disease Alcohol Collaborators (2018) suggested that *any* level of alcohol consumption should be considered unsafe. Experientially however, participants constructed a threshold that corresponded to an emphatic loss of control, suggesting levels of consumption far in excess of those recommendations, and a focus on short term risks of drinking too much alcohol.

Medical guidelines also imply consumption should remain stable over time and situation. In contrast, participants' experiential thresholds were not anchored permanently. They were dynamic, moving according to internal states and external contexts. Internally, participants' knowledge of their embodied states improved with drinking experience. Hunger would produce a lower threshold. Regular drinking would induce a physical tolerance where the threshold would move to higher levels, and irregular drinking would move the threshold to lower levels. Contextually, participants' thresholds were influenced by norms for acceptable levels of drunkenness, their comfort for self-presentation, and their concerns for being vulnerable. These findings correspond with other research that highlighted the power of personal experience and situational norms in determining appropriate levels of consumption (Aresi & Pedersen, 2016; MacLean et al., 2018; Szmigin et al., 2008) Together, these data suggest that an intuitive and experiential personal threshold for too much alcohol is a widespread phenomenon that differs markedly from authoritative recommendations.

4.3Approaching the threshold

Having determined how people constructed their thresholds and whether these were consistent over time and situations, we investigated the subjective experience of drinking when approaching and exceeding those thresholds. Nearly all participants (93%) described approaching their threshold as an embodied, physical and affective state. These experiences were characterised by rich accounts, with 75% of participants describing states at either extreme of the positive-negative continuum outlined by Gallagher and Zahavi (2008). Drinkers in previous research have implied that thresholds exist that represent a state of being 'too drunk' (Graber et al. 2016) and at which point they would lose control (Aresi & Pedersen, 2016). Our Group 1 participants were already experiencing entirely negative physical and affective states *prior* to reaching their threshold (e.g., impaired vision and fear). For them, being just below the experiential danger zone was a distinctly unappealing state that was fraught with warnings. In contrast, our Group 2 participants experienced entirely positive physical and

affective states (e.g., relaxed and happy), and being just below their threshold was associated with the appealing experiential states characteristic of optimal levels of consumption (cf. Graber et al., 2016; Lyons et al., 2014).

More participants of Group 1 than of Group 2 were aware of the ongoing effect of alcohol and of the likely debilitating short-term consequences of continuing to drink (e.g., being sick and hungover). Previously, a range of different drinkers have described their attempts to retain manageable levels of control in order to keep them in the desired zone of pleasurable experiences (e.g., Measham, 2006; Zajdow & MacLean, 2014). In the current research, Group 1 drinkers were already tipping into an uncontrollable state. They did not feel they had lost control completely but were concerned that they would if they did not act to counter the effects of alcohol. As with previous research on optimal levels of alcohol consumption (e.g., Zajdow & MacLean, 2014), these findings suggest that drinkers are acutely aware that the embodied state they seek is inherently unstable. The differing experiences reported by the two groups correspond with Cooke et al.'s (2016) findings that PBC related positively to light consumption but not to heavy consumption. Group 1 reported anxiety about drinking too much, monitored their feelings, and worried about getting out of control. They would probably be happiest to drink within government guidelines, and stay in control and distant from their threshold. In contrast, Group 2 *wanted* to lose control and saw that state as an inherent part of their pleasure.

Although people may drink to maximise pleasure, the exhilaration of that pleasure is perilous in that it can transform into a damaging state relatively quickly. Participants attempted to balance the extra-ordinary state of pleasure that alcohol can facilitate with the extra-ordinary pain that can result from exceeding their threshold. More of Group 1 than Group 2 expressed a concern about losing control, but more participants of Group 1 also expressed agency in having a deliberate strategy to take them off a drunken path that would prove detrimental to their well-being (cf Vihvelin, 2013). These participants would stop drinking, switch to water, or remove themselves from the situation entirely. This is comparable to Haydon et al.'s(2016) results

where participants of higher perceived control would be able to withstand the desire to drink and/or counter a situational pressure to consume more alcohol. In keeping with those findings, our participants did not simply demonstrate impressive conscious intentions to exert control and drink less. Their accounts also illustrate the degree to which participants were aware that the contextual and peer norms infused their own drinking behavior (cf. Aresi & Pedersen, 2016; Haydon et al., 2016). In order to change behavior, they left their social group and the context. Other Group 1 participants were similarly aware that they could attempt to halt the progressive loss of control and forestall further nausea and severe hangovers, yet they experienced internal conflict whereby their desire to continue drinking overrode their decision to stop drinking. These accounts revealed an acknowledgement of being intentional authors of their actions (cf. Gallagher & Zahavi, 2008), yet they ploughed on, ignoring the sensible routes that were still in their control to take. This conflict is notable in light of the degree to which people are said to be motivated to avoid exceeding their threshold (e.g., Zajdow & MacLean, 2014) but is consistent with binge drinkers' impaired decision-making, poor impulse control (Townshend, Kambouropoulos, Griffin, Hunt, & Milani, 2014) and impaired executive functioning (e.g., Tomassini et al., 2011). People's motivation to act in a manner that avoids imminent harm dissipates when the drinker is close to their threshold.

Fewer of Group 1 than Group 2 related positively to themselves in the approach to their threshold. Group 2 drinkers were similar to participants in previous studies on optimal levels of consumption in describing a powerful psychological state of confidence, dis-inhibition and feeling free from others' judgements (e.g., Engineer et al., 2003; Graber et al., 2016; Lyons et al., 2014; Zajdow & MacLean, 2014). Group 1 participants described potential shame and embarrassment at the hands of others and were not enjoying people's company. To view oneself as shameful is to take the position of 'self-as-object' (Legrand, 2011; Zahavi, 2005) where a self-referential narrative reveals what a person thinks their actions 'say about me' (Gallagher & Zahavi, 2008). Becoming too drunk involves that person being out of kilter with the social norms they have internalised for that setting (cf. Dreyfus, 1997). This can be an alienating and

sometimes embarrassing experience that reduces self-esteem (Graber et al., 2016). However, some drinkers relish the experience of temporarily acting beyond the boundaries of their normal self when intoxicated (Lyons et al., 2014; Zajdow & MacLean, 2014). Group 2's participants experienced fun, enjoyable conversations and positive social interactions. The distinctly different nature of Group 1 and Group 2 participants' approach to the threshold implied that there are varying gaps between people's sweet spots and what constitutes a point of no return. Group 1 appeared already to have moved beyond the sweet spot to inhabit a vulnerable physical and psychological state. In comparison, Group 2 appeared to inhabit an enviable phenomenological state. However, when their threshold was exceeded their enviable state changed dramatically.

4.4Exceeding the threshold

Nearly all participants (98%) had exceeded their threshold for too much alcohol, an experience that was an entirely negative embodied state for 87% of the sample. The experiential differences that were evident between Group 1 and Group 2 in their approach to the threshold disappeared when they exceeded the threshold. This was an entirely negative embodied state for both groups. Some participants were aware that they were drunk but no longer cared about the consequences of being in that state. Others had blacked out completely, losing the ability to report details regarding their pre-reflective awareness of their experiences (cf. White et al., 2004). In exceeding the threshold there was an extreme loss of control for both Group 1 and Group 2. During their approach to the threshold, Group 1 participants were losing control. To that extent, their further loss of control appeared to be a continuation of a descent that was already in process. In contrast, Group 2 participants' approach to the threshold had been marked far less by loss of control. They appeared to have been riding a positive wave until they experienced a stark crash in control upon exceeding their threshold.

Crossing that point of no return resulted in both groups feeling ill, disoriented, and experiencing poor mood. They could also become vulnerable through their inability to take care

of themselves. Over the next day or two they would have a severe hangover and in the longer term could experience regret and embarrassment. They carried those experiences to the next drinking events and bore them in mind. Reflecting upon one's drinking experiences and carrying that knowledge to future occasions has been noted in young adults' attempts to avoid being seen as disgusting or repulsive by their peers (MacLean et al. 2018). As a whole, these findings strongly suggest that drinking around the threshold of too much alcohol is not simply a first-person experiential phenomenon resulting from conscious intentions; it is an experiential state that is inter-relational and contextually embedded (Graber et al., 2016; Lyons et al., 2014).

4.5Limitations

These findings must be considered alongside the limitations of the study. All responses were retrospective and the mean AUDIT score was within the 'increasing risk' range. Future work could examine whether the objective consumption level of Group 1's threshold is actually higher than that of Group 2. Group 1 described already feeling ill and out of control during their approach, whereas Group 2 did not. It is possible that there was a difference in the objective amount of alcohol that the threshold for too much alcohol represents for each of these groups even though there was no difference in AUDIT scores.

The current sample was relatively young and largely student-based. This age and environment are often associated with exploration of alcohol and social events and with particular drinking norms (Graber et al., 2016). There will likely be a different foundation for thresholds in other age groups (e.g., middle aged people may establish a threshold that still enables them to work effectively the next day or to look after children with a clear mind, see Lyons et al., 2014). Therefore, older people's concept of their threshold may change according to wider social responsibilities and not be oriented towards complete loss of control.

4.6Implications and conclusions

Notwithstanding the limitations, this study is the first to focus on the experiential threshold of too much alcohol, and also uses a theoretical framework to guide the design and the analysis of these experiences. We also examined the transition from one state (approach) to another (exceed), which is novel because most research does not address progression between different states. Participants monitored their embodied state and assessed the degree of control they felt they had and anticipated the likelihood of descending into an incoherent and nauseas state. This level of attention and anticipation of action speaks to a state that is subject to active management, implying the potential for personal agency and an opportunity to construct interventions to influence people towards less harmful consumption. The more a person seeks a sweet spot close to their threshold of too much, the more their body will adapt to the alcohol, and the further their threshold will move from safe levels of consumption (Tabakoff, Cornell, & Hoffman, 1986). People who experience entirely negative embodiment when approaching their threshold may be amenable to interventions as their bodies are already strongly signalling them to stop. People who experience entirely positive embodiment may be less willing to break their flow, but it might be even more important for them to curtail their drinking. Given the social nature of many of the participants' accounts of drinking, further research could also explore how members of Group 1 and Group 2 influence each other on a night out. Imagine someone in Group 1, witnessing the joy of those clearly in Group 2 who are ebullient, in control and interacting well with others. How might that Group 1 person change their experiential state to match that of their peer? Is the answer to drink more? A naturalistic study within a bar-lab setting may be amenable to addressing such research questions.

Finally, these results highlight the important temporal considerations that underpin drinkers' experiences and government guidelines. Participants were temporally oriented to the present and also to the immediate future and attempted to balance positive and negative experiences. As with de Visser et al.'s (2013) participants, they had no concern for long-term health consequences. Medically grounded guidelines are temporally oriented to the present (e.g., safety), the short-term future (e.g., damage from severe hangovers), the medium-term

future (e.g., diabetes), and the long-term future (e.g., early death). Therefore there is a temporal disjunction between the experiences of the drinker and authoritative recommendations for how much to drink. People construct their threshold of too much alcohol on judgements of whether their night will end badly rather than whether their life will end early (cf. Woods et al. 2018; Global Burden of Disease Alcohol Collaborators, 2018). The challenge is to find a way of incorporating the increasingly robust medical findings into people's lived experiences of drinking. Many people are intimately aware that excessive drinking would be likely to leave them feeling physically incapable, psychologically distressed, to lose control of their actions, to have a diminished sense of who they are, and to interact poorly with others. That is what it is like to exceed their threshold of too much alcohol, and yet the majority of people who are aware of what that experience is like, will do it again.

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TABLES

Table 1: *Establishment and Consistency of a Threshold of Too Much Alcohol*

Participant	Establishing a Level of Too Much	Is That Level Consistent or Changeable?
Female (20yrs) P7	Over time I have learnt that when I drink too much alcohol I end up feeling incredibly sick and the room is spinning, so now I aim to avoid this point. I can sense when I'm starting to feel that way so I stop drinking and have some water. This has changed over time as when I first started drinking I had no idea what was too much and would just continue drinking.	It usually remains consistent. However, sometimes I feel as though I am reaching that point quicker if I have not eaten much before drinking or if I haven't had a night out drinking for a while.
Male (21yrs) P105	I have a good personal gauge of certain drinks that make me more drunk than other drinks. I can also tell when I am near to my limit of drinks and will act accordingly. This is not based on counting drinks or specific measurements as the amount depends on a variety of things including if you have eaten, how hydrated you are, illness etc.	Fluctuates according to the situation. For example if I was drinking with my family or at a dinner party my limit would be considerably lower than my limit for going out clubbing.
Female (23yrs) P111	I'm not 100% sure that I would always know what too much is. I am very aware when I am drinking to NOT drink too much but there have been occasions when I have had a little too much and only realised retrospectively. My sense of too much has definitely changed over time. When I was much younger I would go out, have pre-drinks and aim to get as drunk as possible and I would never do that now.	It definitely depends on who I'm with. If I'm having a meal at a friend's house with alcohol or at home then I don't mind so much how much I'm drinking because I'm where I'm safe. If I'm out with people I don't know so well or on a work night out for example, I will drink less or not at all.
Male (19yrs) P112	I established this sense through previous drinking experiences. It is extremely rare that I drink so much that I vomit, but after having done so a couple of times I now know when I have had too much and that it is time to stop drinking. If I don't, I know I'll run the risk of being sick. This sense has improved over time.	It fluctuates. Say, for example, I was having a casual drink in the pub with my parents, I'd limit myself to a couple of drinks, not because I think I'm going to be sick, but merely because I don't like getting "drunk" around them. However, if I was out with friends at a club, then I'd be able to drink more without thinking that I've had too much.

Table 2: *Approaching and then Exceeding the Threshold of Too Much Alcohol*

Group	Participant	Approaching Too Much	Exceeding Too Much
Group 1: Entirely negative embodied approach	Male (21yrs) P2	I realize I cannot communicate properly. In my head I know what I need to say but the words won't come out. I get overly compulsive of checking I have my phone, keys and wallet. I will have a fear of being sick and the embarrassment of being caught by friends or kicked out of a club/bar. Vision is impaired and I get a headache trying to focus on something.	All sense of well-being goes out of the window. I know I am drunk but do not care of the consequences. Rely 100% on other people to get home. Majority of the time I will be sick and make a mess of myself. The next morning is my own personal hell and the hangovers can last up to 2 days.
	Female (20yrs) P62	I would feel very drunk, sick and dizzy. My thoughts are "I really need to stop drinking now". However, I usually have trouble following my own thoughts and feelings and tend to think it's a good idea to carry on.	I personally cannot describe this as it is usually when I blank out and do not remember what is going on.
Group 2: Entirely positive embodied approach	Male (20yrs) P73	The feeling of being happy, not caring about anything, just having fun with my friends. However I am acutely aware I shouldn't be drinking any more as I don't want to become out of control, so I drink water or soft drinks so I don't exceed myself.	I feel tired, anxious, start to feel ill and have double vision.
	Female (21yrs) P72	I am happy/bubbly and enjoying my evening with friends. My self-esteem increases and I feel more free from judgement.	When I exceed too much, I lose control of my actions. I am never violent but I do not have the self-control to hold back from things. Everything in my head is a blur and any more alcohol and I do not remember anything.