Author’s response to reviews

Title: Ideal, expected and perceived descriptive norm drunkenness in UK nightlife environments: a cross-sectional study

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Author’s response to reviews:

Reviewer 1

1. Thank you for the opportunity to review this important paper. Overall, I found it well written and an interesting study. However, I found myself wondering why many variables were missing, which the research team has certainly collected in the past. For example, Why didn't the team record BAC levels, given their previous work in that space? What about the link to pre-drinking. What about harms? Was higher perceived drunkenness associated with experience of harm?

We thank the reviewer for his kind comments. Unfortunately, we did not collect BAC readings in this study, nor did we measure participants’ experience of harms in the nightlife environment. We did however measure the quantity of alcohol consumed prior to survey and this was used in the multivariate analysis (Table 2). We also recorded whether individuals had participated in pre-drinking on the night of survey and this data was also included in our analysis (page 5, first paragraph of results section, Table 1, Table 2). To address this comment, we have clarified that quantity of alcohol consumption and pre-loading were included by providing more detail on these in the methods, and have raised BAC and other measures of intoxication as areas for inclusion in future research.

Page 5, Paragraph 1
“alcohol consumption on the night of survey (converted into standard UK units for analysis, where one unit = 8mg pure alcohol); whether they had preloaded (i.e. consumed alcohol in a domestic residence before attending licensed premises [30], and asked here as whether they had consumed alcohol before going out, e.g. at home, a friend’s home or a hotel room);”

Page 8, Paragraph 1

“We also did not measure participants’ blood alcohol concentration or visible signs of intoxication to assess against perceived levels of intoxication. These types of measures would be useful for inclusion in future studies.”

2. "Almost half of participants were expecting to drink beyond their ideal level of happy drunkenness on the night of survey and this increased to four fifths of those who intended to reach the highest levels of intoxication (i.e. ratings of 8 and above; Figure 2)." - I don't suppose you asked why? Was it a special event? Did you ask why they were out?

We did not collect this information in the study but again agree it would be a useful measure for future studies. We have thus included this in the limitations section and as an area for future studies. As the limitations section is now longer, we have moved this down to the end rather than the beginning of the discussion.

Page 12, Paragraph 2

“We did not ask participants the reason for their night out or if their alcohol consumption on the night of survey was typical of their usual nightlife drinking behaviour and it is therefore possible that individuals were on either more relaxed or heavier drinking sessions. We also did not measure participants’ blood alcohol concentration or record visible signs of intoxication to assess against perceived levels of intoxication. These types of measures would be useful for inclusion in future studies.”
3. "Young drinkers often assess their level of drunkenness based on bodily signs of intoxication" - Any chance you asked or assessed how many signs of intox they showed? I think it would be fascinating to compare their internal signs to the external signs.

Whilst we used visual observations of intoxication as a method of ensuring ethical research procedures we did not routinely record this information. As indicated in points 1 and 2, this issue has now been raised in the discussion.

4. The only issue I have with the paper comes in the discussion and recommendation of running a social norms campaign via social media. I feel that if you are going to recommend a strategy, you should more comprehensively review if it has been successful, and with which sub-group. Without having delved into the literature for a few years, my conclusion was that it didn't seem terribly effective in senior school students (who are only a year or two away from the group you speak to. Indeed, the Cochrane review in the space suggests "The results of this review indicate that no substantive meaningful benefits are associated with social norms interventions for prevention of alcohol misuse among college/university students.", but then, maybe it's tailored for the population or the night-time environment.


The article you quote (Previte J, Russell-Bennett R, Parkinson J. Shaping safe drinking cultures: evoking positive emotion to promote moderate-drinking behaviour. International Journal of Consumer Studies. 2014;39:12-24.) does not fill me with confidence. The authors seem to cherry pick results, and bury the real findings that "On a cautionary note, however, the overall score for intentions to drink moderately in this study was in the medium range, which may not be high enough to lead to actual moderate drinking behaviour given the social and cultural pressures to consume."

Some of these authors also then went on to work for the Australian alcohol industry front body: Drinkwise, which might be of interest to the authors of the current paper. I'd encourage much, much more caution in regards to the recommendations in that space, and focus much more on the findings and the implications they have, than theorizing in a space beyond the findings.
We thank the reviewer for raising this issue and we have revised our discussion in light of it. We have removed the sentence and reference stating that social norms campaigns can be effective in college settings and replaced it with findings from the Cochrane Review. As described by the reviewer this finds minimal evidence supporting social norms interventions. However, it also identifies very few studies that use a settings approach and reports mixed results for these studies. Thus, we have highlighted the need for further research in this area and the need to examine the potential of such campaigns in nightlife settings, where we are aware of no research.

“Whilst further research is needed to tease out the effects of perceived drunkenness norms on individual behaviour, our study suggests that interventions which seek to correct misperceptions of normal levels of drunkenness in nightlife environments may be of benefit. Evidence for the effectiveness of social norms interventions in reducing alcohol use is largely limited to their use among university and college students. Here, a review of 70 studies found some significant impacts on drinking behaviours and alcohol problems, yet concluded that effect sizes were too small to be of relevance to policy and practice [36]. However most studies had focused on the provision of social norms information to individual drinkers with only three having used a settings approach to explore the impact of social marketing campaigns across campuses. Studies of social marketing campaigns for alcohol use in campus settings report mixed results [36,37], and very little is known about the applicability of such campaigns beyond educational settings, including in nightlife settings. Thus examining the potential of such campaigns to change perceptions of drinking norms and modify drinking behaviour among nightlife patrons is an important gap for future research.”

Reviewer 2

The manuscript entitled "If you're happy and you know it drink some more" is based on a cross-sectional survey in three cities. The aim was to assess drunkenness, expected drunkenness and ideal drunkenness, in order to assess whether patrons "exceed their ideal level of drunkenness whilst on a night out and relationships between ideal and expected drunkenness and perceptions of nightlife drunkenness norms."

I have several comments on the manuscript:
1. The specific theoretical framework for this study is in my view underdeveloped. The aim as described above is somewhat vague and the statistical analyses that follow do not help the reader to understand why exactly this study was conducted as it was. Two things were new to me - if they were in fact based on previous studies, that could be clarified.

* One was the perspective that the perceived normative intoxication (i.e., what the patron believes to be normative drunkenness) rather than normative consumption, could be important for nightlife drinking. Expecting to "fit in with the crowd" rather than standing out as much more (or less) intoxicated may be an interesting variable to include in future research on nightlife drinking.

* The other was "ideal drunkenness". While the second point is backed up by reference 25 to a study in Italy, the authors could do much more to elaborate on the meaning of "ideal drunkenness", and how this variable could be studied in various contexts.

We are grateful to the reviewer for his considered comments. We chose to focus on perceived intoxication rather than perceived consumption (which has been the focus of most previous studies) for various reasons. Chiefly, our study was interested in drunkenness rather than general alcohol use and we know that different people have different tolerance levels to alcohol. Thus, asking people about consumption levels would not tell us about their own and perceptions of others’ drunkenness. The concept of a standard drink is also poorly understood and it is difficult to measure alcohol consumption accurately in nightlife environments, even on a personal consumption basis.

We were interested in measuring “ideal drunkenness” as while drunkenness is often talked about as a single harmful state in reality it has different meanings to people and can range from mild to extreme. Many young people associate drunkenness with fun and pleasure and dislike the state of extreme intoxication, yet measures to address alcohol problems tend to focus on the negatives of extreme intoxication whilst ignoring the positive meanings of drunkenness to young people. We were interested in looking at where people positioned their ideal level on a ‘scale’ of drunkenness to see if extreme drunkenness was in fact the desired level, as indicated by qualitative research, and to enable comparison with perceptions of other people’s drunkenness and intended drunkenness. As far as we are aware this is novel.
To address this point we have added more discussion into the introduction related to these concepts:

Page 3, paragraph 2:

“In policy and practice, drunkenness is often discussed as a single harmful state, yet in reality it has different meanings to different people. For some, getting drunk may mean achieving the euphoric effects that occur at relatively low blood alcohol concentrations, such as improved mood and increased self-confidence and sociability. For others, it can mean becoming ‘annihilated’ or ‘plastered’ [22]; achieving high levels of blood alcohol concentration that can result in harms including dizziness, vomiting and unconsciousness.”

Page 4, paragraph 2:

“Young people’s personal drinking behaviours are influenced by their perceptions of drinking norms among peers [26, 27]. Thus the more alcohol individuals think other people drink (descriptive norms), the more they tend to drink themselves. Studies routinely identify misperceptions of both descriptive (i.e. typical behaviour) and injunctive (i.e. approval of behaviour) alcohol norms among students [28], with a review concluding that most students believed they drank less and approved of drinking less than their peers [29]. However, despite high levels of drunkenness in nightlife environments, few studies have explored perceptions of drunkenness norms in nightlife patrons.”

2. The statistical analyses use the so-called "backward method". However, as other regression methods that rely on significance to include co-variates, the backward method is now considered exploratory, and capitalizes heavily on chance. See for instance Thompson, 1995 (https://doi.org/10.1177/0013164495055004001), and I see no reason why the analysis could not include all variables of interest.

As suggested we have now re-run the logistic regression analysis using the enter method. This made minimal changes to findings, although the significance of the relationship between expected home time and high ideal drunkenness reduced to below P<0.05. We have now added all findings to Table 2 and revised the results accordingly.
“In a separate model, high ideal level of personal drunkenness (above the median, ≥8) was associated with earlier survey time and higher self-rated drunkenness at survey, with the relationship with later home time just failing to reach significance (Table 2).”

3. The term "preloading" is not a term that I would expect the average reader of a public health journal to know - although I know what it means, I think it should be defined with a reference the first time it is mentioned. I suggest Foster & Ferguson as a reference (Alcohol and Alcoholism, Volume 49, Issue 2, p. 213-226, https://doi.org/10.1093/alcalc/agt135), although there are many others.

We have now added a definition and the suggested reference for pre-loading the first time this concept is introduced:

Page 5, paragraph 1:

“whether they had preloaded (i.e. consumed alcohol in a domestic residence before attending licensed premises [30]; here asked as whether they had consumed alcohol before going out, e.g. at home, a friend’s home or a hotel room)"

4. The authors write about "drunkenness norms". The alcohol literature generally distinguishes between descriptive norms (which is the type of norms that is relevant for this paper), prescriptive norms (norms for how one should behave), and proscriptive norms (norms for how one should not behave). I would suggest that the authors state that the norms that they refer to here are descriptive (see for instance Borsari et al, J Stud Alcohol. 2003; 64(3): 331-341).

We thank the author for raising this issue and we have now described the norms as descriptive as suggested both in the abstract and in the text:
Abstract:

Background: We aimed to compare UK nightlife users’ ideal levels of drunkenness to their expected drunkenness on a night out and their perceptions of descriptive nightlife norms.

Methods: perceived descriptive drunkenness norm in the city’s nightlife;

Page 4, paragraph 2:

“Young people’s personal drinking behaviours are influenced by their perceptions of drinking norms among peers [26, 27]. Thus the more alcohol individuals think other people drink (descriptive norms), the more they tend to drink themselves. Studies routinely identify misperceptions of both descriptive (i.e. typical behaviour) and injunctive (i.e. approval of behaviour) alcohol norms among students [28], with a review concluding that most students believed they drank less and approved of drinking less than their peers [29].”

5. In light of these considerations, I would recommend that the catchy title be changed into something that better reflects the content of the manuscript.

We have added ‘perceived descriptive norm’ to our title but would prefer to leave the rest as it is – however we are happy to change this if the editor thinks it preferable.

Title: If you’re happy and you know it drink some more: a cross-sectional study of ideal, expected and perceived descriptive norm drunkenness in UK nightlife