Reviewer's report

Title: The effect of glass shape on alcohol consumption in a naturalistic setting: a feasibility study

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Reviewer: Karen Kopciuk

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This manuscript reports on the results of a small feasibility study that examined the impact of glass shape on alcohol consumption in three public houses in the United Kingdom (UK). The study purpose was to extend results obtained from a controlled experiment to a naturalistic setting, with the expectation of planning a larger, randomized control study in the future. The use of a choice architecture intervention (e.g., glass shape) to modify alcohol consumption is an interesting approach for policy interventions.

My comments focus primarily on the feasibility aspects of this manuscript, with some additional ones on the challenges likely to be encountered when implementing a randomized controlled trial based on this study’s findings.

Major Compulsory Revisions

The most critical issue to be resolved prior to publication is the measurement of the intervention effect. Since the main purpose of a feasibility study is to determine whether a larger, follow-up study should be done, being able to measure – even simply - the impact of the intervention (glass shape) is crucial to answering the study hypothesis.

1. The use of monetary takings as the surrogate outcome measure needs to be validated, possibly through calibration against a gold standard measure, such as direct observation, in order to be able to claim it is measuring slower rates of consumption and, presumably lower consumption.

2. In this report, monetary taken amounts were not broken down into beverages that would be served with the new glassware, so it is unclear to what extent the reported decrease in revenue was directly related to the intervention. The reported results must be attributable to the intervention.

3. The reported results were pooled across the three participating public houses, even though two public house did not use the provided glassware.

4. Additional descriptive results need to be reported to capture the impact of the intervention at the public house level. Differences in revenue by public house are a reasonable compromise to keeping the revenue totals private, but there is no information on whether the two weekends of the study are representative of usual business.
5. Lastly, since this study was run in conjunction with another one that included publicity to increase patronage at these public houses during the glassware experiment, confounding is very likely. New patrons may behave differently than usual ones, including drinking more slowly or drinking less. With the extremely limited reported results, to what extent can the authors definitely attribute the reduce monetary takings to only the intervention?

Minor Essential Revisions

1. The manuscript would benefit from more clearly spelling out the focus areas for the feasibility study, perhaps using the structure suggested by Bowen et al., for instance (Am J Prev Med. 2009 May; 36(5): 452–457. doi:10.1). The areas of focus of this manuscript using the above named structure seem to be on Implementation, Practicality, Integration and Limited Efficacy. Some additional areas not considered in the manuscript but are relevant include more details on Expansion challenges that could be encountered in an extended or expanded intervention, as well as Acceptability over the long-term. Should public houses experience a noticeable and sustained decrease in sales, this could substantially reduce future participation rates that a single supply of new glassware will not overcome.

2. Ethics approval for conducting the feasibility study was not indicated within the manuscript. If this is not a requirement, this should be stated.

3. Excessive alcohol use is not defined.

4. Additional study limitations that need to be included are the impact at the population level on alcohol misuse for this choice architecture intervention. Since there is an increasing trend to more consumption at home in the UK (Reference 1, BMA, Alcohol misuse: Tackling the UK epidemic, 2008), groups that tend to drink at home (within and outside of the UK) or directly from the beverage containers are not likely to benefit.

5. The cited literature reports on a reduction in rate of alcohol consumption but the link to a reduction in overall alcohol consumption is not made.

6. Glassware labelling is an important architectural factor that is not discussed.

7. The statistical method used to calculate the 95% confidence interval for the average percentage reduction in monetary takings is not given. In particular, whether the pair-wise nature of the data is taken into account is not specified. The wide confidence interval for the mean percentage difference that includes zero is not discussed. The sample size estimation method is not mentioned in the Future Studies section.

8. Percentage change in takings is one way to provide confidentiality to individual drinking establishments, but aggregation of results is another one.

9. Challenges to conducting future studies where stakeholders are likely to
experience long-term financial loss should public policy be implemented to reduce alcohol rates of consumption or consumption are not adequately described. Co-operation with stakeholders is likely to be drastically reduced, especially as short-term incentives may no longer be relevant.

Discretionary Revisions

1. Describe frequency of patrons requesting a different glass shape per public house per weekend.

2. Create a table with suggestions to implement in a future study.

3. Will the implementation change for larger public houses or other types of public establishments where alcohol is consumed (e.g., sporting events)?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests as described above.