Reviewer's report

Title: Drinking behaviours and blood alcohol concentration in four European drinking environments: a cross-sectional study

Version: 1 Date: 23 August 2011

Reviewer: Peter Miller

Reviewer's report:

Major Compulsory Revisions:

This paper provides some interesting data on what appears to be a preliminary study. The cross cultural comparison of BAC rates could be of great interest and policy relevance. However, the paper as it stands makes claims far beyond its capacity. The sample is four cities – not four countries. The authors make a gross overgeneralisation regarding drinking cultures in specific cities to whole countries. This suggests a very poor level of critical reflection about the study’s design and what it can tell them.

Different cities have extremely different drinking cultures based on a very wide range of factors – none of which the authors mention. Issues such as price, density and most importantly – trading hours – can have huge impacts on the findings. Without such contextual information, the paper suggests relationships it cannot support.

Another issue is the simple sample size. This is ultimately an extremely small sample for such grand claims. This looks like a pilot study, and if so, the authors should acknowledge that and make claims more appropriate to their sample. The methods are interesting, but the current presentation undermines their validity.

A further design issue is the sampling on Thurs/Fri/Sat nights. Each of these would normally reflect quite different cultures and you would expect peaks in intoxication at different times.

Discretionary Revisions:

• N's should be included in all tables (e.g., to show how many people had high BAC)

• It would be helpful if the authors provided some indication of the availability and cost of alcohol in each city/country- particularly if there have been changes to the cost or availability of spirits for example

• It would be good to report the legal drinking age in each country

• Differences in consumption are reported across cities/countries, but there's currently no mention of different nightlife 'settings' in these cities. A brief paragraph describing the nightlife/entertainment precincts and types of venues in each city might be worthwhile.
• There’s currently no mention of the role/prevalence of illicit (party?) drug use in these cities/countries. Could alcohol consumption be lower in some countries because of a higher prevalence of ‘other’ drug use?

• I think ‘compliance’ (58.9%) should be mentioned in the limitations

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

No.