Reviewer's report

Title: Alcohol consumption in Estonia and Finland: Finbalt survey 1994-2006

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Reviewer: Yu Ye

Reviewer's report:

This article is a comprehensive report of alcohol consumption pattern of Estonia and Finland using recent general population data and the report is focused on adults 25-64. This report is important given the lack of data from Baltic former-Soviet countries like Estonia and particularly its sharp increase in per capita alcohol consumption from the 90’s.

Minor Essential Revisions

1. I would like to know more information about sampling frame and data collection. For example, what is the percentage of total population covered by population registries in each country? Given the relatively low response rates, are there big differences between completed sample and non-response? How the completed sample compares with census data in terms of socio-demographics? The bottom line is to get an idea to what extent the completed sample can be representative of the total population of the target age group. If there is big discrepancy and no adjustment is made (e.g. use weighting), this is a huge limitation and must be acknowledged.

2. Using data from 1994-2006, only a small part of results is from trend analysis, while most of the findings are based on pooled analysis. I can understand some rationale behind this: relatively small sample size for each year and more stable results when pooled together. But pooling the data spanning 12 years (sometimes 6 years) and ignoring period effect is problematic, particularly for Estonia the per capita consumption doubled during the period. For example, this assumes the demographic relationships presented are constant across the years. Note adding year dummies in multiple regressions doesn’t help, as we are talking about possibility of interactions. This should be mentioned as a caveat when interpreting the findings.

3. It seems no other statistical tests were performed in the analysis except for the confidence intervals presented in regression coefficient estimates. This is fine given the overwhelming information the authors tried to show. But I would suggest as a minimum do statistical test for trend effect in table 5 (e.g. correlation coefficients for volume and linear-by-linear association for dichotomous medium/high risk drinking).

4. In table 6, use “reference” rather than zeros for the reference group, as some non-reference group does report zero.
Discretionary Revisions

1. The trend analysis in table 5 only applies to those reporting at least some alcohol during the last week. It would be interesting to see how average consumption changed over the years when non-last-week-drinkers are incorporated and coded as zeros, since that will be best correspondent to the per capita consumption.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.