

Review of: "Purchasing and sourcing of e-cigarettes among youth in Scotland and England following Scotland's implementation of an e-cigarette retail register and prohibition of e-cigarette sales to under-18s"

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The motivation, the approach, the statistical analysis: all seems fine to me. But I am concerned about the presentation of the results, particularly in the Abstract (which might be the only part of the article that many perusers might read.) The problem is connected with the very small number of young vapers in the Scotland sample. The authors recognize this issue, as they refer to it in the discussion section: "Unexpectedly, purchasing from a vape shop in the past 12 months increased among minors in Scotland but not among youth of legal purchasing age or either age group in England; however, the change among minors in Scotland was limited by very small numbers of vapers, and hence lack of statistical power, and so should be interpreted with caution." The "very small numbers" referred to here really are very small: one person out of a total of six 16-17 year old vapers in the survey purchased from a vape shop in the initial period, and 14 out of 17 in the later period. It is not much of an exaggeration to say that for the purposes of tracking the behavior of 16-to-17 year old vapers in Scotland, no survey at all would have been about as informative as the one employed here.

My suggestion is that any presentation of results should refer not to vapers in Scotland, but only to surveyed vapers in Scotland, and preferably with the number of individuals the result is based on included. Here is the first sentence of the current Results section in the Abstract: "Among vapers aged 16-17 in Scotland, from 4 to 16 months post-regulations, e-cigarette purchasing increased from 21% to 50% and sale refusal increased from 14% to 16%, but these changes were not significant and did not differ from changes observed in 18-19-year-olds or England ($p>.05$)."

I would recommend a change along the lines of "Very small numbers of surveyed vapers aged 16-17 in Scotland do not allow for any conclusions to be drawn about changes in their e-cigarette purchasing or sales refusal."

The current first sentence in the Conclusions portion of the Abstract is "Youth vapers in Scotland showed no significant changes in overall purchasing, sale refusal, or sourcing of e-cigarettes, from 4 to 16 months post-regulations, and changes did not differ by age group or from England." This sounds a bit to me as if the "no significant changes" is a result, that is, that there is good evidence that these behaviors did not change in Scotland. But the "no significant changes" is all but dictated by the inadequacy of the sample, just as not taking a survey at all would also have failed to show any significant changes. My preferred replacement would at a minimum replace "Youth vapers in Scotland" with "Surveyed youth vapers in Scotland," but really, once again, something akin to "Very small numbers of surveyed vapers aged 16-17

in Scotland do not allow for any conclusions to be drawn about changes in their purchasing, sale refusal, or sourcing” would seem to better capture the story.