Reviewer's report

Title: Short-term effects of plain cigarette packaging on smoking behaviour and attitudes: A randomised controlled study

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Reviewer: Ahmed Fathelrahman

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Review Report
Paper: Short-term effects of plain cigarette packaging on smoking behaviour and attitudes: a randomized controlled study

Overall, this is a well-designed study and a well written paper. The researchers were able to take care of many important methodological details and they have made every effort to avoid most of the possible sources of bias. Although study did not find any statistically significant finding, readers would benefit much from this paper by learning from its methodology.

Discretionary Revisions

1. On page 3, lines 42-43; there is a sentence says “the first of these studies found that the negative effects of plain cigarette packaging, such as avoidant behaviors and reduced cigarette consumption”. Avoidant behaviors and reduced cigarette consumption are not seem to be going together as they are opposite to each other. While avoidance is a negative response towards the cigarette pack, the reduction of cigarette consumption is a negative response towards the smoking behavior which means the latter is actually a positive effect if it is referring to the pack.

2. On page 5, lines 96-97; it is mentioned that “randomization was stratified by sex”. I think that stratification is best fitting with sampling and data analysis and it might be better you use the term “matching”, saying “smokers in branded and plain cigarettes packs were matched by gender”. Also, is it better to use the term “gender” than “sex”?

3. On page 6, lines 110-111; there is a sentence saying “since they originated from different countries, packs differed in the shape, size and format”. This sentence was confusing. Please just make it “since they originated from two different countries, packs differed in the shape, size and format”.

4. On page 10, lines 207-209; it is mentioned that “Finally, after participants had been shown pictures of Australian plain packs, participants were asked to report their attitudes to plain packs”. It is not clear to me what the purpose of that final step was? It was seemed to me that intervention was over by completing the questionnaires.

5. On page 11, lines 221-222; you mentioned that “The sample size for the study was calculated based on the primary outcome of average volume of smoke
inhaled per cigarette”. I expected that it would be the average number of cigarette, why not?

6. On page 13, lines 280-283 and under discussion, (after declaring no statistical differences) you said “This may be due to the relatively short trial period (with smokers using the packs for only 24 hours), a lack of statistical power to detect smaller effects that this study was designed to identify, or lack of effect of plain cigarette packaging on short-term smoking behaviour”. This style of writing causes doubt and gives an impression of uncertainty. I think it is better that you start with an explanation that you think most superior, discuss and justify it then mention other alternatives which you argued inferior. If the reason of non-significance was shortness of the trial period then exposure was not enough to produce an effect, whereas lack of statistical power means sample size was not enough and both are methodological limitations that should be discussed later on in the discussion. Remains, the lack of effect of plain packaging means that plain pack are not working and that should be the focus of the beginning section of your discussion showing how you are with or against it as an explanation of study finding.

Minor Essential Revisions

1. In table 1; you did not tell what statistical test was used for testing data shown and whether there were significant differences. Yes, this is shown in results, but tables should be self-explanatory. For the variable “cigarettes smoked previous day”, please make it “number of cigarettes smoked previous day”.

2. For table 2; p values indicate regression analysis, what about the means compared between the two arms of trials? What was/were the statistical test used? Also, it is not shown that data refers to the final test day.

Level of interest: An article of importance in its field

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