Reviewer's report

Title: Exploring comorbid use of marijuana, tobacco, and alcohol among 14 to 15-year-olds: Findings from a national survey on adolescent substance use

Version: 4
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Reviewer: Tina Lam

Reviewer's report:

The authors have crafted an interesting article on the comorbid use of alcohol, tobacco and cannabis amongst adolescent New Zealanders.

Major Compulsory Revisions – nil
Minor Essential Revisions - nil

Discretionary Revisions

As I understand it, an eight level scale of comorbidity was presented. Each level is comprised of two factors (i) the number of drugs used by the participant (ranging from 1-3), and (ii) the hierarchy of harm, an indicator of the level of harm associated with that drug.

(1a) Can you please clarify the nature of the harm in used in the ‘hierarchy of harm’? I.e. does the cited reference describe physical harm, social harms, is it a general measure of harm? (pp 9).

(1b) In the section which describes the three ordinal logistic regression models, another measure of comorbidity is used. That is, the independent measure of comorbidity seemed to be “whether one, two or all three risky behaviours were present”. Is this three level IV meant to be different to the eight level scale earlier described? Please differentiate between the uses of the two similar scales.

(2) Generally speaking, the authors could replace the use of the more general phrase “risky behaviours” with something more specific such as the “use of each drug”.

E.g. in the analysis section, I think it would read more clearly with something like “… the dependent measure in each model being the frequency of use of each of the three drugs, and the independent measure being whether one, two or all three drugs were used in the past 30 days”.

The first time the term “risky behaviour” was used, I thought I had missed a general measure that summed behaviours over the domains of drug use, sex, delinquency etc.
Overall, I found the specific patterns of comorbidity (e.g. x% of tobacco smokers also used a and b) reported in the study very interesting.

The discussion section which focused specifically on the findings’ implications for NZ tobacco policy was insightful and valuable.

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