Reviewer's report

Title: Australian children's consumption of caffeinated, formulated beverages: a cross-sectional analysis

Version: 2 Date: 14 October 2014

Reviewer: Rosanna Watowicz

Reviewer's report:

This study examines caffeine and energy intake from formulated beverages in Australian children. The authors addressed the majority of the comments from the first review and have somewhat clarified the study's objectives. However, as noted below, I still do not quite follow the justification for this study. While I personally do not find the current justification compelling, this study appears to be scientifically sound. Therefore, the data presented may be important and useful to those studying caffeine consumption in children.

Major Compulsory Revisions

1. The justification for this study/explanation of its significance still needs to be strengthened and the conclusions do not seem to match what was actually studied. One of the arguments made in the manuscript is that the addition of caffeine to sugar-sweetened beverages may increase SSB intake (since caffeine is mildly addictive). However, SSBs are not studied separately from artificially sweetened beverages in most of the outcomes. The authors conclude that “these data add to the weight of evidence that removing or further restricting the addition of caffeine to formulated beverages could result in decreased consumption of SSB…” (paragraph 2 in Discussion). While previous studies may support that statement, this study does not provide any evidence as to whether caffeine is related to higher SSB consumption. This study only shows that a majority of CFB intake was as SSB (75-80%), but this could simply be reflective of overall patterns in SSB consumption (i.e. perhaps SSBs represent 75-80% of all formulated beverage consumption). The authors could have examined whether children consumed more caffeinated SSBs versus non-caffeinated SSBs, which may have provided some evidence that caffeine is related to increased SSB intake. Additionally, there is not a strong argument that formulated beverages containing caffeine are any more detrimental to health than beverages with naturally occurring caffeine (although this was improved since the first version).

Minor Essential Revisions

1. Figures are missing titles
2. Paragraph 1 of the Background states that the allowable concentration of caffeine ranges from 150-200mg/L. However, later in the paragraph the authors state that 320 mg/L is allowed in energy and sports drinks.
3. Throughout the paper, the term “soft drinks” (defined in paragraph 2 of
Beverages Classification) seems to be used instead of the term “formulated beverage”. This is particularly confusing given that the “soft drinks” category includes soft drinks. For example, in paragraph 1 of ‘CFB intake: CFB consumers only’, “CFB accounted for 83% of all soft drinks consumed…” it is unclear if this is referring to only soft drinks or all formulated beverages.

4. In the section “CFB intake: all participants” (first and third sentences), authors state that intakes were “increased”. Please rephrase to be reflective of a cross-sectional study. For example, CFB intake was higher with increasing age (instead of “increased with increasing age”).

Discretionary Revisions

1. In Table 1, in the rows showing gender, age, SES, and weight, it may be more interesting to show row percent instead of column percent. For example, currently the table shows that 55% of CFB consumers are male. It seems more pertinent to show that 16% of males are CFB consumers.

2. Figure 3 seems unnecessary since energy drinks account for such a small proportion of intake. Recommend simply describing in the text.

Level of interest: An article whose findings are important to those with closely related research interests

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