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Title	Added sugar in the packaged foods and beverages available at a major Canadian retailer in 2015: a descriptive analysis
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Reviewer 1	Hasanain Ghazi MBChB, M Comm Health SC., MRSPH, cPHN, PhD
Institution	Department of Community Medicine, Management and Science University, International Medical School, Shah Alam, Malaysia
General comments (author response in bold)	<p>1. Keywords are missing. We have added our keywords following the abstract on page 2 (lines 54-55).</p> <p>2. Why p value was not shown in tables, only within text Thank you. P values for the differences in total sugar have been added to the right-most column in Table 2.</p> <p>3. Some paragraphs in interpretation lack references, is it authors own ideas? Yes, there are several statements in the Interpretation section that simply offer our interpretation of the results. If there is no reference accompanying a statement, then it is the authors' own interpretation of the results.</p>
Reviewer 2	Shu Wen Ng
Institution	UNC Department of Nutrition, Duke University, Durham, NC
General comments (author response in bold)	<p>1. I think the title should be changed to more accurately reflect the universe of the sample used for this study, including the time frame (2015). Perhaps something like "Added sugars in products sold in 2015 by a major national retailer in Canada". Including some indication of the year of reference is quite important as the food supply can change rather quickly.</p> <p>Thank you - the title has been clarified.</p> <p>2. Introduction (page 3, line 72): the 68% from 2013 data in the Popkin & Hawkes paper not only excludes low-calorie sweeteners but also fruit juice concentrate. Including FJC would add another 2% to this. Since the authors use this as the comparison to their study, and their study does include FJC as an added sugar, then they should use 70% as the value to compare against.</p> <p>Thank you. We reviewed the data presented in Popkin and Hawkes' article, and have subsequently corrected our wording in this line from "foods and beverages purchased" to "foods and beverages available for purchase". We intended to refer here to Popkin and Hawkes' data on "Percentage of unique formulations", displayed in their figure 1C, in which the percentages of products with caloric sweeteners only (55%), both caloric sweeteners and low-calorie sweeteners (7%), and any fruit juice concentrate (6%) total to our quoted statistic of 68%. This correction has been made on page 3, line 81:</p> <p>"...68% of packaged foods and beverages available for purchase in 2013 contained added sugars, after excluding for low-calorie sweeteners."</p> <p>3. Methods (page 4, line 99-102): my understanding from this section is that there were about 9883 food/beverage items that did not have nutrition information. Please briefly explain why this may be the case (e.g., some might have been alcoholic beverages that do not require nutrition information).</p> <p>Yes, about 9883 food/beverage items were sold in the first two weeks of March 2015, which were not listed in the database of products that we analysed. The retailer informed us that this subset of food items consisted predominantly of new food products. There is a lag between when new products are stocked and sold in the retailer's stores and when these new products are added to the database of food product information that we analyzed. Slight modifications to this sentence have been made to clarify this point on page 4, lines 114-115:</p> <p>"The remaining were new products for which nutritional information had not yet been recorded (37%)."</p> <p>4. Results: The order of Table 1 & 2 in the results section is confusing. While Table 1 is referred to in the Methods section (measures), the results from table 1 are not discussed until after table 2, which is odd.</p> <p>We agree that the ordering was not ideal. We have rearranged paragraphs and table references slightly, and the ordering of the Tables is now reversed. These rearrangements can be seen on pages 5 and 6.</p> <p>5. For the results on sugar content (text & Table 1), please clarify that this is grams of sugar per 100g of the product (presumably??) Hopefully it is not per serving as serving sizes can vary considerably from product to product even within a subcategory. If it is per serving, than all of these analyses should be redone!</p>

	<p>Thank you for this note. Our intension was to report the total sugar content per 100g of the product, but after reviewing our data, we have realized that there was an oversight in processing these values. The values displayed in the Table have now been converted to accurately reflect the total sugar per 100 g or 100 ml of each product. We appreciate you bringing this to our attention! Interpretation of and references to these values have been adjusted in the 'Sugar content' and 'Total sugar in products with and without added sugar' sections of the Results (pages 7-8).</p> <p>We have also added a note regarding this conversion in the Measures section on page 6, lines 171-172:</p> <p>"We standardized this information into total grams of sugar per 100 g or 100 ml of the product, using the serving size and serving size unit of measurement of each product."</p> <p>6. Table 1 needs an additional column that shows the sample size for the various subcategories and categories. Also please add a row that shows the total across the 10 categories to relate the overall 66% to.</p> <p>Thank you. We have added a row to show the values for the overall total, as well as for each of the 10 larger categories. We have added the sample size (n) of each category and subcategory in brackets in the first column. You can view these changes in Table 2.</p> <p>7. The "juice" subcategory is tricky. I believe this includes juice drinks, nectars, purees and 100% fruit juices that can be fresh or from concentrate. Were these handled differently? Please clarify and justify.</p> <p>Yes, this subcategory includes a variety of juice products, including sweetened juice drinks, 100% fruit juice, and frozen concentrated fruit juice. We searched for added sugars for all products across this subcategory using the same method as all other categories (including searching for the terms "fruit juice concentrate" and "nectar"). In keeping with WHO's definition of free sugars, if we identified any variations of "fruit juice concentrate", "nectar", or any other added sugar term in the ingredients lists of any of these juice drinks, we considered them to be products containing added sugar. As we did not handle these any differently than the remainder of the products, we have not included any further explanation in the manuscript. If you would like us to specify in-text that these fruit juices were treated the same, we can do so.</p> <p>In terms of the total sugar information, all values are based on these juices as prepared. We have added a note about this in Table 2.</p>
Reviewer 3	Yoni Freedhoff MD
Institution	Bariatric Medical Institute, Ottawa, Ont.
General comments (author response in bold)	<p>1. Worth explaining to readers in first paragraph difference between added sugars and WHO's free sugars as definitions are not synonymous. Similarly in start of second paragraph, opportunity to explain that juice would qualify as a major source of WHO's free sugar. I realize you did cover this later in the paper, but probably best to explain differences with first mentions, especially given free sugar was the metric adopted for analysis. It might also be appropriate in your interpretation to speak to the value of added vs. free sugars in context of Health Canada's plans to adopt added rather than free and also in that you comment on the health halo effects of "juice" and yet juice's sugar might not be considered added if free sugar definition not adopted.</p> <p>Thank you. We have added a brief explanation of the difference between added sugars and WHO's free sugars to the introduction on page 3 (lines 60-62), and commented on the probable impact on added sugar estimates if WHO's free sugar definition was used (lines 77-78):</p> <p>"Alternatively, the World Health Organization (WHO) has adopted the term "free sugars", which adds to the traditional definition of added sugar by encompassing the sugars naturally present in fruit juices and fruit juice concentrates."</p> <p>"These global and Canadian estimates would increase substantially with the inclusion of sugar added from fruit juice, as suggested by WHO."</p> <p>We have also added two sentences to our interpretation regarding the impact of Health Canada's adoption of the traditional "added sugar" definition (page 9, lines 265-268):</p> <p>"Health Canada's plans indicate that they will adopt the traditional definition of added sugars, rather than including sugars added from fruit juice. If the "free sugars" definition is not adopted, there will be a missed opportunity to reduce the health halo effect surrounding sugars consumed via fruit juices."</p>

2. Reading this I wondered about the lack of inclusion of fruit pureé as well as its actual definition. I wonder how dehydrated purees are allowed to be and still call themselves purees? Clearly if dehydration allowed, or some sort of fractionation allowed, the puree would in effect be a fruit juice concentrate.

This is an excellent point. We did not include fruit pureés as an added sugar in this analysis, as we considered purées to still maintain the beneficial aspects of the whole fruit from which they are blended. It would be interesting to investigate how common dehydrated or otherwise fractionated fruit purées are in future analyses.