Reviewer's report

Title: Fifty Years of Fat: News Coverage of Trends that Predate Obesity Rates

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Reviewer: Lennert Veerman

Reviewer's report:

This article examines the number of mentions of a select set of healthy foods and a set of unhealthy foods in a US newspaper and a UK newspaper, and how this correlates with the prevalence of obesity three years later in these respective countries. They find strong correlation, with weaker correlation for the reverse relationship (% obese and ad frequency 3 years later).

This is an interesting paper, and it seems plausible enough that mentions in newspaper articles reflect trends in society (and help create or reinforce them) and possibly also advertising. This might indicate or lead to changes in consumption, which, over time, could be reflected in obesity rates. Obesity takes time to build, so the 3 year lag seems plausible too as a time in which a new equilibrium between energy intake and expenditure can be reached (see Kevin Hall’s work in the Lancet, for instance). It’s nice that the authors could show that this

However, the validity of this study is limited by a number of factors:
- Obesity rates only went up (except maybe in 2007; fig. 2), and so did the mentions of sweet and salty snacks, so the relationship has barely been tested for a reduction in either. Many other trends were also upward over this period of economic growth, and would probably give positive correlations not dissimilar to those found in the article.
- The relationship between obesity and food mentions three years later is not much weaker than the one investigated here.
- Only one newspaper in the US and one in the UK were used, and although influential, those papers are not read by the majority of citizens. The authors discuss this in the introduction, to their credit.

The authors argue that this “may provide public health officials with new tools to more quickly assess obesity interventions” (abstract). I doubt that. Many other factors could influence newspaper mentions, but also the intervention itself. A sugar-sweetened beverage (SSB) tax would give a high number of SSB mentions but might reduce obesity prevalence 3 years later. Before accepting this as a reliable tool for evaluation, it needs to be more rigorously tested. For me, the study confirms that the changing food environment has played a significant role in causing the obesity ‘epidemic’, but has little immediate practical consequences.

Compulsory revision
I would like a table for the UK part of the study too, please.

Discretionary revision

Would it be feasible to relate the changes in food mentions to the change in obesity rates? That would give a more stringent test of the relationship.

Minor essential revisions

Line 229: “It is notable to compare…” Is that a proper expression?

Line 236: .59% -> 0.59%

Line 260-263: I don’t quite understand this. When a single article contains more than one of the terms, the number of media mentions could be deflated or inflated depending on whether you counted articles or mentions, but not both at the same time?

Figure 1 does not depict what it’s title suggests it should – it is identical to Figure 2. Consequently, I could not examine the intended Figure 1.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I am not aware of any competing interests.