Reviewer's report

Title: Dietary variables associated with substantial postpartum weight retention at 1-year among women with GDM pregnancy

Version: 0 Date: 17 Oct 2016

Reviewer: Flo Harrison

Reviewer's report:

This paper makes use of a good data set, and asks a pertinent question. However, it feels as though the whole thing has been retro-fitted around the one significant finding (the association between the consumption of soda and post-partum weight retention (PPWR). The background section does not detail why soda might be a particular issue for PPWR, and the aim of the study is stated as being "to evaluate which dietary variables … predict PPWR … in women with gestational diabetes". And yet the title and discussion are entirely focused on soda and SSB consumption.

I feel that the paper needs to be refocused - please provide more background for the rationale for looking at the chosen food and drink categories, and discuss all the results more fully - including the lack of associations for other foods.

At the moment it is not clear which food variables have been analysed and why. This list given in the methods (page 8, lines 17-29) is not the same as that presented in table 2. The variables presented in table 2 represent a sub-set of the food variables collected in PrimeScreen. The methods claim that variables were selected if the validation study (reference 19) showed reasonable comparability with a semi-quantitative FFQ. But looking at the results of the validation shows that there were other food variables with equally good comparability that are not included here (e.g. whole milk dairy, low-fat dairy, eggs, margarine, pasta, fish/seafood, processed meats and deep fried foods). Why are these variables left out? The last two in particular maybe important for weight retention. This section of the manuscript really needs improving, and probably other analyses being performed and presented. It would also be interesting to know if and how the consumption variables relate to each other.

There does not seem to be any measure of socio-economic status - this has the potential to be a confounding factor in the association observed, and should be discussed as a limitation of the study.
What is the justification for stratifying by gestational weight gain? Is there an a priori reason for this? Was the interaction tested first? It seems like GWG may be a confounder rather than an effect modifier.

Minor edits:

Page 3

Line 16/17: "Women who were overweight or obese pre-gestational…" should be "pre-gestationally" or "pre-gestation"

Line 16/17: "…as well as those with excessive gestational weight gain are leading risk factor for developing GDM" needs re-wording.

Line 33/34: the abbreviation GWG has not been defined

Page 5

Lines 43-46: What is the Women's Infant and Children special supplemental nutrition program?

Page 6

Infant feeding: the first sentence is a bit odd - saying "breast feeding intensity and duration were assessed… by asking mothers to record the amount of formula fed using a weekly diary" maybe separate out the descriptions of breast and formula feeding?

Page 8

Please give the original categories of regularity of consumption (of foods and drinks), as well as how these were collapsed.
Page 9

Line 11/12 - This sentence should start "Differences in participant characteristics between weight retention categories…"

Page 10

Line 33/34: Should be "…at baseline had a 71% increase in the odds of having substantial PPWR."

Page 11

Lin 50/51: "Moreover, growing evidence to shows…” remove the "to".

Table 2

The categories used for food consumption are not inclusive - what happens to people who eat 5-6 servings per week? This could be addressed in the methods.

The percentages in brackets should refer to the % of people in each weight retention category who sit in each food category.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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