Reviewer's report

Title: An observational study of nutrition and physical activity behaviours, knowledge and advice in pregnancy: Are we doing enough?

Version: 2 Date: 20 January 2013

Reviewer: Shelley Wilkinson

Reviewer's report:

Thank you for the opportunity to review this paper highlighting gaps in best practice service provision to a maternity population. Whilst the study question is well defined by the authors - they are investigating physical activity and diet behaviours and knowledge of a cohort of pregnant women, which are articulated and presented within the paper, the aims (at the end of the introduction) could be extended with what is also explored in the paper i.e. a comparison of these outcomes according to pre-pregnancy BMI. Further, although the abstract clearly outlines the study, the paper’s title is ambiguous and could be refined. The use of 'are we doing enough?' does not fully encompass thoughts and conclusions contained within the paper; the '16 weeks' is also confusing/misleading as some 36 week data are presented. A more representative title would strengthen this manuscript

**Major compulsory revisions**

BACKGROUND

1-add 'relative to their pre-pregnancy BMI'/'and the relationship/association with their ppBMI' in your study aims. You've approached your data analysis and discussion relating to this, so adding it to your aims preps the reader for what's in store.

METHODS

2- please clarify in 'Knowledge' was the modifications replaced

3- please clarify '0-3', '0-2'/pregnancy-specific knowledge etc sentences. It is a little unclear what this means/relates to

4- add ‘o’ to ‘d’ line 157

5- add space in ‘standalone’ (line 160)

6- change ‘and’ to ‘or’ line 163 – ‘diet quality, fat, or fibre intake’

7- please indicate if you use a cut-off for minutes of activity that were not physically plausible

8-please clarify in ‘support women want and receive’ whether the SAME questions were asked of women at 16 and 36 weeks (as it seems in the table) or if women were asked at 36 weeks what they would like. Maybe also give a list of what options women were offered or if these questions were open ended – to help interpretation of the results (were all options ticked? Was one not even
considered? etc)

RESULTS
9-I’d be interested in a presentation of a broader education profile of the cohort, especially considering this is investigating what/how women want to learn as well as what they know. It’d be interesting to know % who did/didn’t finish school, who has a trade/ diploma/certificate/TAFE education – these help interpret findings and inform further interventions eg women who didn’t finish school may not engage with a class/workshop/lecture due to preconceptions and preferences based on previous experiences.
10- line 227: please clarify if you mean positive or negatively skewed physical activity data? This is usually positively skewed ie bunched to the left and a long tail to the right and you’ve reported ‘negatively skewed’ data
11- please report in your text the proportion of women who met physical activity guidelines for pregnancy
12- please see earlier discussion about table 4 – this is confusing in the text, based on methods vs Table; if you are showing % of women who were advised at 16 and 36 weeks this seems to be ‘double dipping’. It would make more sense to see at 36 weeks who had been advised, as this may occur at a number of the visits; comparing 16 with 36 weeks also relies on memory and can be influenced by drop-outs.
DISCUSSION
13- please clarify what you mean by ‘pregnancy-specific nutrition knowledge’ vs ‘practical knowledge’ … even though one is good and the other is poor, I’m not sure to what you are referring
14- new information is being brought in at line 265-67: ?did women correctly identify that diet during pregnancy affects maternal and child health? And that it’s important to eat well and be physically active? If it IS presented in the results, please make more apparent
15- from line 272, take this FURTHER. This may not results in appropriate behaviour … so, what else is required? Build your case! Make some suggestions about the direction this could go.
REFERENCES
16.Is #20 the correct author for this publication?

**Minor essential revisions

ABSTRACT
17- remove apostrophe in results (first line - participants’)
18- comma before respectively
19- you’ve said women would like education (results) - can you highlight WHEN?
20- please clarify what you mean by 'except encouragement’ - the term's a little abstract as it reads at the moment
21- change "to" to "or" with sometimes to always ... would read clearer, especially for those not familiar with the scale you've used
-22 in conclusion, please add 'behaviour' between pregnancy recommendations to clarify they 'kind' of healthy recommendations you are talking about

BACKGROUND
23- line 73, please add a reference for this statement (..mothers and babies.)
24- please insert 'their' between 'including variability'
25- please add a reference for pregnancy dietary guidelines (even though NHMRC guidelines have been rescinded, they were still valid at the time of your study)

METHODS
26- please clarify whether weight was measured or self-reported at 36 weeks (and ? is this relevant considering your title '16 weeks gestation' ... refocus required?)

RESULTS
27- please clarify the ‘pregnancy specific nutrition questions’ to which you refer (line 206)
28- line 218 -keep decimal places consistent; maybe to one or 2 for your chi-squared result
29- please define ‘social network’
30- suggest reworking line 242, “This did not differ between…”

DISCUSSION
31- line 264-5 : spacing issue
32- line 286-8, how does this relate to other studies? Why might this be the case? (I see you bring it in a bit later eg Laraia and the drop in diet quality with increasing BMI, but it might strengthen your manuscript it brought in here; ?SES. ?education, ?other
33- line 294 – why use the term ‘pre-obese’ when you’ve used overweight before?
34-suggest reworking line 308 ... why is this ‘despite’? Perhaps …. “Four out of 5 women are interested in receiving xyz, contrasted with the small proportion who are actually provided with this... we are not providing women-focussed care/meeting their needs ... highlight the disparity of what’s occurring in the system to/and advocate for change.

CONCLUSION
35- you might consider adding ‘by women in our health service with respect to…’ after not being met; and ‘related to achieving a healthy lifestyle’ after knowledge and behaviours

**Discretionary revisions**
ABSTRACT
36- depending on word count, suggest adding 'and other health outcomes' (even specifying some of them) after 'associated with future overweight...' in background
37- do you need 'semi-structured' in methods
38- can you also report % of women who met fruit guidelines; nice balance with vegetables plus it then leads into your comment about Owt women's fruit intake
39- I'm used to seeing p-values reported in italics (or maybe this is just APA guidelines?)

BACKGROUND
40-line 71 you might consider adding 'for their pre-pregnancy BMI' after gaining weight
41- suggest editing text (line 85-86) to 'moderate exercise on most if not all days of the week'
42- suggest removing 'their' (line 90) and adding 'women's' before behaviour change (line 92)
43 - line 97+ might read more clearly if phrased '..and behaviours in pregnancy, or the advice they receive from health professionals. Moreover, it is unknown whether this relationship differs for women who commence their pregnancy at a healthy weight when compared with overweight. Understanding factors which influence women's behaviour is important...."
I declare that I have no competing interests