Reviewer’s report

Title: A survey of diet self-efficacy and food intake in students with high and low perceived stress

Version: 3 Date: 13 February 2015

Reviewer: Peter Hannan

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Review Nataskin and Fiocco MS: 6169080251494678

Major issues:

1. Results section. Despite what the authors say in response to the first point in my earlier review (“…including direction and magnitude …” this is not evident. For example, lines 296 to 300 and elsewhere in the Results section the authors rely on F-statistics, p-value and d as if those communicate to the reader what is going on. This reviewer highly recommends presentation of adjusted means values, p-value (and I have a strong recommendation for 3 decimal places to distinguish, e.g., 0.035 from 0.044) and a defined d. The authors seem to think that cutting and pasting from some SPSS output does the job! E.g. lines 310-311 but everywhere in the section. Lines 314-318 would be so much more understandable if the adjusted means were included - changing the word “intake” to the accurate “score” the text might start “Post-hoc Tukey tests revealed that fat score of highPS/lowDSE participants (25.1) was significantly higher than that for highPS/lowDSE (19.4, p=0.001) …”. I also recommend putting the adjusted means on the figure. The Figures I retrieved from the reviewer access do not show adjusted mean values! All of lines 295-335 need to make the results more accessible to the reader.

2. The authors have ignored the major point in my third issue (in the earlier review) and given a glib response. Referring to lines 306-307 I quote again from my earlier review. “Related to the report of the interaction, the authors must be very cautious in presenting main effects in the presence of an interaction (lines 313-314) because any linear shift in the scale values (for example, centering) will change the main effect estimates while leaving the interaction estimate unchanged. The implication is the need to present adjusted means from the ANOVA.” I repeat, in the presence of an interaction between two variables, presentation of the main effects, if done at all, needs extreme caution as the estimates refer only to a specific combination.

3. Effect Size: The authors say (line 296) “… d is meant to indicate effect sizes.” This is inadequate as the term “effect size” can have different meanings. Simply to quote from Wikipedia

“In statistics, an effect size is a quantitative measure of the strength of a phenomenon.[1] Examples of effect sizes are the correlation between two
variables, the regression coefficient, the mean difference, or even the risk with which something happens, such as how many people survive after a heart attack for every one person that does not survive. For each type of effect-size, a larger absolute value always indicates a stronger effect.” The authors rely on the output from SPSS without interpreting for the reader what the output represents. I am forced to assume they refer to Cohen’s Effect Size (1986) but I should not have to assume anything.

4. Line 267 – In describing the models in the regression analyses, the authors talk about intakes, but everything following leads me to believe that the outcomes are in fact the fat and sodium scores. If so, why not use the amounts of fat and sodium (means are listed in Table 1) instead of the scores? The generic word “intake” is used throughout the text, without any distinction between score and amount.

5. Table 1 would benefit from proper indenting of sub-categories. Also, why give the range (cluttering up the Table) when it is simply the difference Max – Min? Why abbreviate Work to NO, PT, FT? – we know what they mean but the table has plenty of width to accommodate a fuller description. Similarly Race (%CW) presumably means “Caucasian/White” but one is left guessing! A minimum of BMI is impossible.

6. Presentation of the results leaves much to be desired and does not adequately address my comments in the initial review, despite the assurances in the Response that “… included more detail where applicable, indicating the direction and magnitude of the effects”. I don’t find that this has been done!

7. Figures 1 and 2:
   The figures would be immensely more interpretable by simply including two bits of information. First, across the bottom, give the numbers per group (admittedly the numbers are in the text, but for interpretation of the differences in levels in the bars one should be reminded that the numbers per group are about the same. Second, why not put the adjusted mean levels on the graph? E.g. for the fat score I guess that they are about 22.1, 19.4, 5.1, and 17.6. Graphs should stand on their own, just as tables should be interpretable without necessarily referring to the text. The authors say that they consistently present the fat outcome before the sodium outcome, but the figures 1 and 2 are still sodium then fat! Also note that the word “adjusted” has been added to the title of the sodium figure, BUT NOT (despite assurances) to the title of the figure for the fat score!

8. Inaccuracies/imprecisions:
   Line 205 – “…final (potential ???) scores ranging 0-40”, but the table gives the maximum as 43!??
   Line 216 – still have “validity” associated with Cronback’s alpha, despite assurances in the Response to reviewer.

9. References have errors:
a. Arcan (2012) is not the reference in the text line 225-6
b. Block et al (2000) is given after talking (lines 232-233) about validation, but no reliability study (planned for the future). But this reference has no mention of salt, sodium, or even “planned”!
c. Kanoski & Davidson, Western diet consumption and cognitive impairment: Links to hippocampal dysfunction and obesity Physiology and Behavior 103:59-68. The title is given in the references exactly as the title for Eskelinen et al!!!
d. O’connor – should have O’Connor (line 524)
e. Rimm et al (line535) came out garbled in my .pdf file??

Minor issues:
Typos and grammar
Sometimes the authors use PSS (as in Table 1, but only PS elsewhere.
Line 64 omit “what”
Line 155 omit “their” – should be singular, but the phrasing becomes clumsy.
Line 238 – “Thus, students who…” not “whom” – subject of the clause
Line 365 – semi-colon before “thus”.

Quality of written English: Acceptable

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

Declaration of competing interests: 
I declare that I have no competing interests.