Reviewer's report

Title: Participant Experiences from Chronic Administration of a Multivitamin Versus Placebo on Subjective Health and Wellbeing: A Double-Blind Qualitative Analysis

Version: 1 Date: 12 September 2012

Reviewer: Michele Larzelere

Reviewer's report:

The present manuscript reports the results of a double-blind, randomized, placebo-controlled, parallel groups trial of multivitamin ingestion on subjective health and well-being. This study examines qualitative aspects of participants’ experiences. This is a very well-written manuscript providing details sufficient for replication, in most areas. The study is well-designed, without major flaws. Although multivitamin supplementation is not a novel intervention, the authors adequately state their aim to examine qualitative data for previously unexplored effects of supplementation.

Comments:

Major compulsory revisions:

1. Were the demographic characteristics of the SMV and placebo group subjected to statistical analysis? If so, a statement describing significant differences (or lack thereof) should be inserted into the description of the sample on p 7. The SMV group appears to have a depression mean score which might significantly differ from the placebo group depression mean score. Should these groups have differed at baseline on this measure, subsequent qualitative changes in wellbeing might be attributable to regression to the mean, limiting the attribution of this effect to the multivitamin.

2. The paragraph describing the Chi Squared analysis should be revised, expanded, and moved to a different location in the article, as it is confusing as written. Were each of the 22 themes (introduced to the reader later in the manuscript) subjected to Chi Squared analysis within each possible subject grouping (total sample, females, males)? If so, the authors should consider adjusting their significance value to account for the inflated probability of observing a significant result due to multiple comparisons without a priori hypotheses. Given the number of comparisons, a bit more tentativeness is also recommended in the conclusions statement (e.g., “MV supplementation may lead to perceived increases in energy levels”, etc.)

Minor essential revisions:

3. It is noted in the manuscript that SMV’s contents can be obtained from the corresponding author; however, a bit more information about the treatment should be provided for the reader; including the range by which SMV exceeds daily intake recommendations (e.g., 200% of RDA or 50,000% of RDA?).
4. The authors are to be commended for their commitment to blinding, including modification of the placebo to account for odor and urinary coloration. If a participant check on adequacy of blinding was included in the data collection, this result should be noted in the manuscript.

5. The manuscript states that 80% compliance was required for data inclusion. The number of participants excluded from analysis should be noted and any differences (demographically) from the retained sample should be described.

6. The authors note that “22 further emergent themes” were identified and suggested that these themes would be listed in Table 2. However, Table 2 appears to list only 20 themes. Please clarify.

Discretionary revisions:

7. Why are participant numbers reported next to reported benefits on p 9?

8. Although many CONSORT reporting standards are met, the authors are encouraged to revise the manuscript for greater compliance with CONSORT guidelines applicable to this qualitative, exploratory study, including the following minor revisions:
   • Modify the title to include explicit mention of randomization
   • List settings and locations where data were collected
   • How sample size was determined
   • Inclusion of a participant flow diagram
   • Recruitment dates

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.