Reviewer's report

Title: Evaluation of effectiveness of class-based nutrition intervention on changes in soft drink and milk consumption among young adults.

Version: 1 Date: 13 April 2009

Reviewer: Steve Hertzler

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General comments

This is an interesting article, as I think most university nutrition professors are curious to know if the material they are teaching students translates to actual behavior changes. It would have been interesting to see the inclusion of a control group that was given either no intervention or a limited intervention (e.g., providing group members a textbook that they could just read on their own). This would give a little more information on the effectiveness of lecture itself versus other factors. It would also be interesting to follow up with a subgroup of these students 6 months to 1 year after the class to assess the relative permanence of the behavior changes observed.

Minor editorial revisions

There are numerous minor grammatical errors throughout the manuscript that need to be corrected. As an example, on page 2, lines 36-39, a suggested revision of this sentence would be: Although beverage consumption habits formed during young adulthood have a strong impact on beverage choices later in life, nutrition education programs for improving the nutritional quality of beverages are scarce in this population. Additional proofreading of the next version is needed to correct these types of problems.

Pages 2-3, lines 53-56: The sentence regarding minimum manpower and financial resources invokes that some sort of financial comparison of the classroom-based approach to another type of approach is in order. How would the costs of teaching a university course (professor salary, TAs, textbooks, etc) compare with students visiting a wellness dietitian on campus for individual counseling? Without doing this type of comparison to another approach, this limits the meaning of "minimum manpower and financial resources". In addition, this type of intervention can only target those enrolled in the class, versus other strategies that might target a wider audience of college students in general.

Page 3-4, lines 77-78: Please explain this statement further that age is positively associated with soft drink consumption and negatively with milk intake. Over what age range in children is this true? All ages of children? After age 8? 10? 12?

Page 7, lines 160 and 161: The p-values for the correlation coefficients
presented are listed as P=0.000. However, it is impossible to have a P-value of 0.000, given the probability density curve is asymptotic relative to the x-axis. It would be best to simply list these as P<0.001.

Page 8 (first paragraph): Although the focus of this paper was clearly on beverage intake, it would be interesting to know how the intakes of nutrients such as fat, sodium, cholesterol, vitamins, minerals, etc., were affected by the nutrition course. Is there access to reliable data on these nutrients from the 3-day food records and computerized nutrient analysis?

Page 8, lines 184-189: This sentence is much too long. It would probably be better as two separate sentences.

Page 9, lines 193-194: Just a comment--this level of calcium intake from milk itself, while increased via the classroom program, is still pretty low (233 mg/day is still less calcium than one 8-ounce glass of milk per day). Did the intakes of yogurt or other healthy calcium choices change at the same time?

Page 9, line 203: Change the word "ensure" to "promote".

Table 1: Units for the pre- and posttest headings should be fl. oz. per day. Also, consider supplying metric equivalent measurements (mL).

In addition, please re-check the estimated marginal means that were calculated. In some cases, it appeared that maybe the males still had an unduly large influence on the overall mean. For example, in the total milk category, a very simple weighted means comparison seems more reflective of the that the data are actually saying. The males make up 9/79 subjects (11.4%) and the females 70/79 (88.6%). If we take the male mean of 6.62 X 0.114 and add that to the female result (4.18 X 0.886), we get a weighted mean of 4.46 oz./day. This figure seems more representative of the actual data versus the marginal mean of 5.40 that was presented. It is hard to judge for sure without access to the actual data and maybe there are other factors that the reviewer is not aware of, but it might be worth rechecking these numbers to make sure they are accurate.

Level of interest: An article of importance in its field

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

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.