Author's response to reviews

Title: Complementary and Alternative Medicine Use Among US Navy and Marine Corps Personnel

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Author's response to reviews: see over
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Dear Editor Parkin,

Enclosed please find our revised manuscript titled, "Complementary and Alternative Medicine Use Among US Navy and Marine Corps Personnel." We appreciate the opportunity to respond to reviewer comments and all authors agree this revision has improved the clarity of our objectives in the original manuscript. We have submitted a revised version of the manuscript with comments responding to the below reviewer comments (uploaded in the additional materials files) as well as a clean version of the manuscript. Our responses to each of the reviewers’ comments (in bold) follow below:

**Reviewer 2:**

This is well conducted survey that goes beyond bivariate analyses and used multivariable analysis. Nice features are the reliability check and the inclusion of other therapies used in the figure. It is relatively old (2000-2002).

-In the discussion it is stated (or strongly implied) that a survey is done to assess potential risk or benefits. Use in itself is not enough to assess that, as additional information would be needed about allopathic medicine use as well as details of CAM use, such as product quality, dose etc. While the authors seem to recognize this, it needs to be reworded. A survey is only a very basic beginning. Similarly the abstract states that because CAM may conflict with allopathic therapy, we should capture CAM use. Again this not enough, we should assess CAM and allopathic medicine use.

We agree with the reviewer, the statements in the abstract and discussion have been revised. We have also added the inability of these data to distinguish product quality or dose.
- The study implications are fairly general and similar to what most surveys conclude, it would be helpful to be more specific, what kind of guidelines, are such guidelines already in place, and how should we do future research?

We have revised the discussion regarding guidelines and suggestions for more robust prospective analyses of health outcomes associated with CAM use.

- Percentages should be calculated differently in Table 2: for example: the percentage of CAM users amongst males is 338/1009= 33%, and among women it is 147/296=49.6%. In fact what the table now seems to show is that women have a lower percentage of use than men.

We have revised the percents to reflect the prevalence of CAM use within subgroups in Table 2.

- The discussion states that prevalence and beliefs need to be studied to assess risks or benefit. It is not clear that beliefs were not addressed in this study.

We agree that more clarity is needed in the discussion section and have revised to meet this need.

- The presentation of the logistic regression should be clarified: note that the dependent variable is CAM use, yes or no. This dichotomization is a reduction of the information the authors have (ie could have used number of CAMs) and that should be noted. In the discussion on page 8 it is not very clear why service branch, occupational category etc. should be removed from the model. This needs clarification.

We agree that an additional note regarding the reduction is important and have revised the section on page 6 regarding the CAM definition. The section on page 8 has been clarified.

- Given that agreement for satisfaction with physicians was low, the fact that this variable is significant, should be considered carefully.

We agree that the dynamic nature of some of these variables suggests a better way to examine CAM use is through a prospective repeated measures type of approach. Efforts are currently underway to attempt this type of approach. We have revised the discussion section to better address this limitation.

- The discussion speaks about trends, this cannot be concluded based on a cross-sectional study.

We agree and have removed discussion about trends pertaining to these data.
- On page 5 CAM is described as practitioner-assisted, self administered and use of dietary supplements and diet programs. On page 6 it states that CAM excludes lifestyle diets. This could be clarified.

The definition of CAM used in these analyses has been clarified.

- Page 8 line 7, should be bivariate and not univariate as two variables are included in these analyses.
  Revision completed.

Discretionary Revisions (which the author can choose to ignore)

- Is column 2 in table 1 really needed? Maybe column 1 is not needed either, as this is described in the text.

  We respectfully submit the importance of including population numbers and percents so that the reader may make their own calculations if desired.

- The use of unmanaged, unconventional and unregulated at the end of page 3 is somewhat confusing. Given the definition (or description) used in the paper it is all CAM.

  This suggestion was discussed between the authors.

Reviewer 1:

This is a standard study of CAM use in a "special population", this time an active duty military population, which makes the study noteworthy. Overall, it is well done, but I have two more serious concerns. First, the response rate is extremely low and thus, I have real questions about how generalizable the results are the military population, even if the demographic characteristics of the respondents are similar to those of the population as a whole. Second, while I am pleased the authors attempted to validate their findings in a sub-sample of the respondents, I do not find the results reassuring. For example, I would expect a kappa statistic of 1.0 for gender and race, as presumably those do not change over a period of 15 months. Conceivably household income and education could change over that time frame, but I am not certain how much and thus, question the degree of error. The kappa statistics for satisfaction with physicians and number of CAM therapies are hard to evaluate since these data could easily have changed between the first and second surveys.

We agree that the response rate of nearly 40% is not desirable. We had hoped for a 70% response rate as we had achieved in past questionnaire studies. However, we were presented with significant challenges to conducting a postal questionnaire study during that time period. After September 11, 2001, the US military operational tempo changed dramatically causing many in the military to move duty locations and change addresses. Soon after, the postal anthrax threats caused mail slow-downs and in some cases left mailed surveys sitting in boxes until mail began again.
We were able to show the population of responders reasonably resembles the target population. We had included this limitation of generalizing these data to all Navy and Marine Corps personnel in the discussion section. However, we have now expanded on this important limitation of these data. We believe these data, with noted limitations, adds to the body of literature regarding CAM by documenting CAM use in a large military cross-section. We feel that more CAM research is necessary in this population and are currently working on several efforts that will hopefully add to the understanding of CAM use.

We have revised portions of the Statistical Analyses, Results, and Discussions section to better clarify the reliability analyses. In an attempt to establish reliability in these data, we put forth significant effort into resurveying a sample of the responders. We used the Kappa statistic to measure agreement while taking into account random agreement. We found almost perfect agreement with gender and race, and substantial agreement with household income and education level. The dynamic variables tested were found to have fair to moderate agreement. This lower level of agreement may reflect the temporality of the use of CAM and the feelings of general health. As noted above, more discussion and references are added.

A more concern is the use of Chi-square testing with this large population - it's quite easy to find significant differences (e.g., education in table 2) that are actually quite modest. This seems to be common among such studies, however.

Yes, this is a common approach among studies similar to ours. The use of the chi-square provided insight into significant unadjusted associations and was a step in the progression to the multivariable analyses.

1) In the Background, I think the authors should cite the newest US CAM survey, published by Barnes in 2004, since it has data that are five years newer than Eisenberg's study.

Thank you for this suggestion, this reference is now included.

2) Background section, first paragraph, the age group most likely to use CAM based on prior surveys is 25-49, not 25-29.

Thank you, the revision has been completed.

2) Results section - paragraph 2 - the part discussing demographics should be discussed before the CAM use.

Revisions completed.
3) Page 8, paragraph 2 - line please reword the third sentence as it's confusing - do you mean that a change of less than 15% in the odds ratio with the addition of a particular variable suggests it is NOT a risk factor?

We agree that more clarity is necessary and have reworded the sentence.

4) Page 10, last sentence in first paragraph - I am not sure precisely why use of megavitamins would demonstrate perceived healthy ideas that are often evident and encouraged in military populations. Please reword sentence to clarify this.

We agree and have revised the sentence.

5) Page 10, second paragraph, first sentence - the phrase "controlling for other influential characteristics needs rewording for clarity.

We agree and have revised the sentence.

6) page 10, third paragraph - 4th and 5th sentences could be deleted, since the findings are not robust.

We agree and have removed the sentences.

7) Page 11, paragraph 2, 5th sentence - this statement, although true, is probably not meaningful, since the data set is very large, some of the Chi-square tests that are significant probably describe trivial differences.

We agree and have removed the sentences.

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Discretionary Revisions (which the author can choose to ignore)

1) In second paragraph on page 8, I suggest you have a consistent approach to describing risk as follows: replace "2 times" with twice; replace "1.5 times" with 50%; replace "1.59 times" with "almost 60%"

Revisions completed.

We sincerely appreciate the opportunity to respond to the thoughtful comments and suggestions provided by the reviewers. As corresponding author, please contact me if I can provide any additional information.
Respectfully,

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