Reviewer's report

Title: The impact of a team-based intervention on the lifestyle risk factor management practices of community nurses: Outcomes of the Community Nursing SNAP Trial

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Reviewer: John Petkov

Reviewer's report:

The article addresses an important issue in the management of health. Given that chronic health conditions make up the majority of illnesses in our society, the tools that help to manage these better are essential. I commend the authors for this. My comments are mainly in the statistical analysis of the data.

The use of Factor Analysis to reduce the dimensions of the questionnaire is helpful. I would remove reference to eigenvalues being greater than 1 as a measure of how many factors to retain. This is the Kaiser Criterion and is now regarded as obsolete. The Scree Plot is better and if the authors wish to carry out future work using Factor Analysis then I would recommend they use Parallel Analysis - regarded as the most modern and efficient way to determine the optimal number of factors. Macros for this method are widely available on the internet and exist for SPSS and other packages.

I urge the authors to look at Random Coefficient Regression when next they look at repeated measures analyses. One of the drawbacks of RMAnova is the curse of almost all such analyses - subjects drop out and power is lost. From 129 subjects only 51 remained at 12 months. Using random effects models all information is used and each subject gets a predicted score. As long as the data is missing at random (MAR) at worst then the model is valid. The best practitioners of longitudinal data analysis such as Hedeker, Davidian etc recommend that RMAnova not be used. Random effects modelling is easily implemented in SPSS under Mixed Models. I am not asking that the authors redo these analyses - only that they make themselves aware of the modern methods.

Please do not use "NS" for non-significance. Give the actual p-score. A good article on this and other less-than-perfect statistical reporting is "How to upset the statistical referee" by Martin Bland. This article is very much common sense and very easy to read.

When using a paired t-test one expects the mean difference and its confidence interval to be reported. All we get here is the p-score and the group means and these do not reflect the mean difference at all. Also effect sizes and their confidence intervals need to be reported. Confidence intervals and effect sizes tell much more than a mere p-score. Again, this is the modern approach. I would regard this as essential and needs to be fixed here. I regard this as a major
revision to this paper.

But overall the article is important in its aim and shows good results. As a person very much interested in chronic disease I did enjoy reading this.

**Level of interest:** An article of importance in its field

**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