Reviewer's report

Title: Did Past Economic Prosperity Affect the Health Related Quality of Life Predictors? A Longitudinal Study on a Representative Sample of Slovenian Family Medicine Patients

Version: 1 Date: 4 July 2013

Reviewer: Heather Orpana

Reviewer's report:

This article examines changes in HRQL among a sample of Slovenian patients of family medicine practices. A little less than half of initial participants are included in this analysis. As expected, mental component scores predicted subsequent mental component scores; physical component scores predicted subsequent physical component scores. SES, education, marital status, age and mental illness predicted change in HRQL.

This paper has potential because of its longitudinal nature. However, I have two major concerns with the analyses as they are currently presented.

First, only 44% of initial respondents are included in the analyses. This presents an important potential of bias, especially as respondents experiencing declines in health may be less likely to participate in follow up and be lost to attrition. This may explain the counter-intuitive result of higher HRQL observed at follow up, which is contradictory to other published research of general samples. I suggest that an analytical method that can incorporate missing data be employed. This could increase the sample size and the representativeness of the sample.

Second, the authors do not adequately consider their statistical approach to longitudinal analysis. It appears from the methods that the approach taken is to model Time 2 HRQL including Time 1 HRQL as a covariate. This fails to account for the assumption of independence of observations in regression analysis and does not account for any shared error variance. It would be more appropriate to take a latent modelling approach. The data would have to be reanalysed using an appropriate approach. There is sufficient sample size to do so, which is an advantage for this research team.

Minor statistical issue - to determine inclusion of IVs, a Pearson R was calculated. However, it appears to me that many of your IVs are dichotomous or categorical, in which case the Pearson R is not appropriate. Pearson's R is for determining the level of correlation between two continuous variables. Because of this, I have concerns about how the authors chose to include IVs in their models. Although this is equivalent to the point biserial, its values are more constrained the more the values of the dichotomous variable differ from 50/50, which is the case in many of the chronic somatic diseases.

I wonder about including diseases not identified at baseline but diagnosed during
the study period. This appears to me to muddy the interpretation of results, as the study intends to identify factors predicting changes in HRQL during follow up. Due to this, the time scale of the independent variables is too irregular to be able to meaningfully interpret the results.

Until issues with the large number of respondents excluded from the analysis and with the method of approaching longitudinal data are addressed, I don't suggest this article for publication. However, there is potential with these data and I encourage the authors to revisit their analyses.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.