Reviewer’s report

Title: Prospective association between self-reported life satisfaction and mortality: Results from the MONICA/KORA Augsburg survey 3 Cohort Study.

Version: 1 Date: 26 April 2011

Reviewer: Torbjørn Åge Moum

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General comments:
This paper uses a medium-sized (for the present purposes) sample of Germans, aged 25-74, followed over 12 years to investigate whether life satisfaction (LS) measured at baseline predicts all-cause mortality over the follow-up period. It is concluded that life satisfaction is indeed a predictor of mortality, at least among men. The material is described in detail and data quality appears good.

Major Compulsory Revisions
1. The literature review is limited, in particular the rather substantial literature on the role of depression / negative affectivity in mortality is mostly disregarded (see literature cited in e.g. Bjerkeset et al. 2007). This is particularly important since measures of negative affectivity are employed by the authors, and may appear to play an important role, also in the present study.

2. The statistical methods applied are adequate, but the modelling and some of the interpretations of results leave much to be desired. The interpretation of results when “psychological determinants” are controlled for (final sentence of second para on p. 12) is clearly inaccurate: when the association between LS and mortality disappears (and the hazard ratio even turns slightly positive for women (Table 2)), this indicates that the psychological determinants are indeed confounders of the association between LS and mortality. Suggesting a “mediator role” assumes that depression etc. are intervening variables between LS and mortality, which would be a very unusual assumption in this field. It seems far more reasonable to assume that the various psychological determinants are causes of LS, and if mediation should occur, the result would be that the association between mortality and “psychological determinants” disappears when LS is controlled for. The said pattern should be evaluated within the context of the prospective relationship between depression / negative affectivity and mortality. True, the authors do report results from ancillary analyses in which “self-rated health” is removed from the model with psychological determinants (Table 2), finding that the association between LS and mortality is then restored. This suggests that self-rated health acts as a confounder, but it would be far more informative if all the candidates within the “psychological determinants” had been evaluated and results reported. In any case, the interpretation of results for “psychological determinants” should focus on confounding, not on mediation. The upshot of this discussion is of course that a
direct and causal role of LS on mortality has not been established, contradicting the authors’ assertion that “.. LS has in men a substantial impact on long-term survival” (abstract).

Minor Essential Revisions

1. Effect sizes: Since the distribution of independent variables is not known, it is hard to evaluate effect sizes in Table 1. One might consider adding a column with effects sizes. In supplementary Table 1 p-values are used as proxies for effect sizes, but since many of the associations are so strong, we are unable to distinguish between the strong and extremely strong effects. Adding (linear and non-linear) effect sizes (using risk factors etc. as dependents in a series of logistic regressions) would be helpful.

2. The unusual, very strong, inverse association between LS and age should be further commented upon. The comments on top of p. 16 does not reflect the vast literature on this topic and the discrepancy between current results and those of the majority of relevant studies on the subject. Why are results so unusual in the present study? Could it be that the very specific focus on health and health-related factors are responsible for this association? What about the association between self-rated health and LS, do we find a similarly strong association there?

3. There seems to be a “not” lacking in the 6th line of para 2 on p. 9. Supposedly it should say “… health factors are not confounders..”

4. The comments in the final sentence of the second para on p. 16 does not seem to make sense. Should be clarified.

Discretionary Revisions

There are some lapses of grammar, syntax and spelling that need correcting (e.g. “loose” rather than “lose”, “worse health as”, the word order in the final sentence of the abstract).

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

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