Reviewer’s report

Title: Profiles of Physical, Emotional and Psychosocial Wellbeing in the Lothian Birth Cohort 1936

Version: 1 Date: 11 June 2012

Reviewer: Kirsten Avlund

Reviewer’s report:

The aim of the study was to analyse how profiles of physical, emotional and psychosocial wellbeing grouped coherently in 70-year-old individuals, and to identify external variables associated with membership in any observed profile groups. The topic is very relevant, but I do have some serious concerns. First, and this is a very basic problem with the article is the use of measures and terms. This is not clear, and it is a main problem that the measures are so much interrelated. Second the text is so long and wordy that the message tends to be lost in all the words. I think it would win a lot if it was shortened considerably. And will give examples of how this could be done. Third, the language is not even. It jumps from “psychological” language to technical language, which makes it difficult to read. E.g. in the abstract we suddenly see that “we accepted a 5-group solution”. This could be described in more precise language in relation to the aims.

Abstract:
The aim described in the abstract is not really clear. I will propose to use the same wording as in the main text. In general the abstract is not very clear. It is not possible to read the abstract and understand what the authors want, and what they found.

Introduction
The first 1½ page describes that states of psychological, physical and social function are interrelated. This is well-known – and could be described in one or two sentences.

The next page (beginning with “Given the interrelatedness..... and ending with “... (Mroczek, 2001).” is relevant as it describes the rationale for the present study. And this could naturally lead on to the aims of the study, described page 8. All the text in between can be considered a discussion of the population and the methods. This should be shortened and placed in the Methods section.

Methods
It would make it easier for the reader if the Methods were described more precisely, without so much discussion of each measure. For example regarding the measures of well-being. Why not just write which measures were included?

Regarding the specific measures:
Physical functioning was measured by level of physical function and depression
and anxiety to represent emotional wellbeing. Quality of life was measured using 4 domains representing physical, psychological, social and environmental well-being. It is difficult to understand what is the difference between physical well-being measured by the QOL and physical functioning – and between psychological well-being measured by the QOL and emotional wellbeing.?

Physical functioning was measured by level of physical activity, number of days active per months and activities of daily living (ADL). The problem with this measure is that it is only ADL, which reflects physical functioning. The measures of physical activity are measures of health behaviour. You can easily have a good ADL-functioning and have sedentary activity, even though they of course are interrelated.

Quality of life (WHOQOL-BREF). This covers 26 questions, but it would be nice to see a list of the items – maybe combined in groups to do it briefly.

In the description of other variables we suddenly see several measures of physical function, e.g. time to walk 6 meters and mean grip strength. Walking speed is considered a very good measure of physical functioning, so why was this not included in the measure of physical function? Further it is disturbing that “physical function” is used as an external variable” (described page 18). How can this be an external variable, when it is one of the main variables?

Cognitive function is described first as prior cognitive ability and as current cognitive ability. I will suggest that these descriptions are placed close to each other in the text, so that the text on “current” follows the text on “prior”.

Results

Again – this starts up with some very technical language and lots of abbreviations. It is again here stated that “We selected a 5-group solution”. But the reader would like here to know which five groups were selected. The technical background for the choice has been described in the methods.

The main results are that the majority of the sample can be grouped into: high wellbeing, average wellbeing, poor wellbeing, physical fit but low emotional wellbeing and high fitness/low spirits. It is then stated that the groups’ mean on each of the psychosocial factors are illustrated in Figure 1. Why are the five groups suddenly called “psychosocial factors”?

Again here: The text is too long and wordy and discussion-like. Thus the main results are lost in details! I will recommend to take the groups one by one – and describe which external factors are related to it. And to do this in a brief and precise way.

Discussion

I will recommend to stick more to a discussion of the main results in relation to the aims. Now the discussion goes in many directions.

At one point the authors say that it is a weakness that they do not have measures of successful aging. I will recommend to delete this section. It is not relevant for the present work.

The conclusion is not a conclusion – but a continuation of the discussion.
Typos.
Page 15. General cognitive ability (WAIS?)

**Level of interest:** An article of limited interest

**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.