Reviewer's report

Title: Regional differences in multidimensional aspects of health: findings from the MRC Cognitive Function and Ageing study

Version: 2 Date: 6 February 2006

Reviewer: Peter P. Groenewegen

Reviewer's report:

General

-----------------------------------------------
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
I have three major problems with this study. First, it is not a very good study of regional variation. It is basically a five region study and it is unclear how the variation in this very small sample reflects variation in the population of all UK regions. The authors mention that the three regions where chosen to represent the main national variation in a number of respects (page 5, first paragraph under methods), but this claim is not substantiated.

Secondly, the article is not oriented towards an international readership. BMC Public Health is an international journal. Variation in healthy life expectancy in other countries is only briefly referenced. The authors have apparently not searched the international literature for references in this field of research (e.g. Van Oyen, Tafforeau and Roelands, 1996 for Belgium; Kondo, Mizutami, Kazama et al, 2005 for Japan; Gutiérrez-Fisac, Gispert, Solà, 2000 for Spain; Groenewegen, Westert and Boshuizen, 2003 for the Netherlands).

Thirdly, there is no adequate discussion of the implications of the study. The issue of compression of morbidity requires the study of time trends (such as e.g. analysed by Doblhammer and Kytir, 2001, for Austria). The discussion of health care policy in tackling inequalities is very brief.

-----------------------------------------------
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

There is a number of studies outside the UK that used other indicators than self-perceived health. Please provide references to the international literature.

On page 3, the headings ‘What is already known about this topic’ and ‘What this paper adds’ are apparently left over from a previous submission elsewhere, as this is not required by BMC Public Health.

Page 6, last paragraph under ‘Health domains’: it is unclear why the presence of serious health problems is seen as a potential confounder. The measurement of serious health problems (only three conditions where measured) is rather weak.

Page 7: population data for 1991 where used, but it is unclear when the survey was done. If the survey was done at the same time, they appear to be rather old for a descriptive analysis as this article mainly is.

Page 8, first paragraph: here the term ‘frailty’ is used in an undefined manner.
References are not according to the instructions of BMC Public Health.

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

'I declare that I have no competing interests'