Reviewer's report

Title: Prevalence and pattern of cognitive impairment in rural and urban populations from Northern Portugal

Version: 1 Date: 6 April 2010

Reviewer: Monique Williams

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BMC Review
Monique M. Williams

The authors present their work examining the prevalence of dementia in rural and urban regions of Portugal. The authors assert that a number of health, socioeconomic, and lifestyle factors suggest that the prevalence of dementia in Portugal may be considerably higher than estimates. As prior estimates of dementia prevalence have been extrapolated from studies performed in other European countries, the present study has considerable public health implications for Portugal. The authors developed a population-based sample of participants identified by random selection from National Health Service clinics. Following initial screening tests, participants with abnormal scores were evaluated by a neurologist to ascertain the presence of dementia or CIND. Of note, the prevalence of AD and vascular dementia were comparable.

1. Is the question posed by the authors well defined?
The question is clearly defined.

2. Are the methods appropriate and well described?
The methods are appropriate for the study and clearly described.

3. Are the data sound?
The data are sound. The tables and figures clearly delineate study results.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes. The discussion and conclusion are appropriate and complete. The authors address several interesting implications of their work, e.g. ascertainment of cognitive decline and impairment in low-literacy populations.

6. Are limitations of the work clearly stated?
The limitations are clearly explained.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes. The references are complete.

8. Do the title and abstract accurately convey what has been found?
Yes. The title is appropriate.

9. Is the writing acceptable?
Yes. The writing is acceptable. It is clear, and the methods, and results, and discussion are carefully crafted.

Minor revisions:
1) The authors may prefer to use cognitive impairment no dementia for CIND, which is more conventional than cognitive impairment without dementia.
2) On page 3, it appears that the author intends to say the psychometric battery was “formally” rather than “formerly” translated.
3) On page 6 and 8, the authors may wish to explain that dementia risk decreased with higher levels of education to achieve greater clarity.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I have served on the Flurizan Primary Care Advisory Board until 2008. I participated in the Dallas, TX chapter of the Alzheimer's Association speakers bureau and received an honorarium. I serve on the St. Louis Chapter of the Alzheimer's Association speakers bureau and was the 2008 African American History spokesperson (no honoraria). I serve on the Centene Pharmacy and Therapeutics Committee (I have received compensation for my time and effort devoted to the committee), and I have served on the Gentiva Home Health Advisory Board (no honoraria).