Reviewer’s report

Title: Physical activity patterns in German elderly men and women: a cross-sectional study

Version: 1 Date: 6 April 2011

Reviewer: Alain P Gauthier

Reviewer’s report:

• Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

  1. In table 1, the authors should include p values with their descriptive statistics
  2. The authors do not seem to know the living arrangements of the participants, physical activity patterns (particularly domestic activities) among home-based vs. those in retirement homes or palliative care units would differ greatly. The authors should consider this in their analyses

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

  1. The authors often begin a sentence with numbers (e.g., p2, paragraph 4: 1, 937 participants). These need to be spelled out.
  2. The authors need to “tab in” the beginning of each paragraph
  3. The authors need to review their manuscript for awkward use of transition words: (e.g., Hence nowadays; Albeit; Hereby; But breaking down; Summing up; etc…)
  4. In the introduction, the authors state “To deduce reasonable health promotion and intervention strategies based on current guidelines, both insights into physical activity patterns and a deeper understanding of factors associated with reduced physical activity of specific population subgroups are necessary prerequisites to take action.” How do the results of this study provide information that are “necessary prerequisites to take action” toward increasing physical activity among the elderly? This needs to be addressed in the conclusion.
  5. The authors have placed their findings within the existing body of literature. However, I would recommend they spend more time reflecting on “what” their findings mean for public health practice.

• Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

  1. The Writing is its current state needs some work. In general, the authors need
to revise their manuscript as there are several issues with sentence structure (e.g., Knowledge on physical activity behaviour of elderly people in Germany is scarce and lacking insight into everyday physical activity patterns); grammatical errors (e.g. Discussing own results), and punctuation.

2. The major methodological limitation to this study is the lack of a theoretical framework or strong rational for the selection of predictor variables. This is further exemplified by the lack of depth in the ‘Conclusion’ and the absence of an ‘Implications’ section. Specifically, the authors fail to include items such as past activity history, social support or income as covariates, all of which have been found to predict activity levels among the elderly. For instance, if income was included, one may have seen that higher income may lead to increased sporting activities; however decreased domestic activities as 1) they can afford to participate in sporting activities and 2) they may pay others to do household chores. This would have important implications for practice. Much of the predictor variables are illness based (living with a chronic or acute conditions), it is not all that surprising, nor interesting, that persons who are ill are less active. The authors need to reconsider the inclusion of modifiable predictor variables that may inform health promotion practice.

3. The authors have included a large number of variables in their analyses, I would suggest reducing this number by combining a few (Hypertension; CHD; CHF; PAD = Cardiovascular Disease). I would also suggest the removal of variables for which add no value to our understanding of physical activity behaviour (i.e., Number of medications).

4. The authors separated their logistic regression models by gender, this has potential value given that there is an abundance of research to suggest activity patterns of men and women differ. However, the authors state that “several factors emerged to be associated with physical activity in either or both activity domains, for the entire sample, or separately for men or women”. The authors need to provide evidence based on their findings that there are meaningful differences when types of physical activity are compared and when men and women are compared. For instance, how do you explain chronic obstructive lung disease lowers the odds of participating in sporting activities among men, however has no effect on domestic activities among men or neither activity types among women. Why would women who live alone be more active in sporting activities; however this not being the case among men? Being a current smoker seems to decrease the odds of being active in general, with the exception of men in domestic activities. What does this mean?

5. In general, the authors present important research questions that merit investigation; however I believe the variables presented only provide a very partial explanation. I would urge the authors to revise their manuscript using more meaningful variables, as well they should reconsider their existing findings beyond their ‘statistical significance’.

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

Quality of written English: Not suitable for publication unless extensively edited

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