Author's response to reviews

Title: Patterns and associates of cognitive function, psychosocial wellbeing and health in the Lothian Birth Cohort 1936

Authors:

Andrea R Zammit (a.r.zammit@sms.ed.ac.uk)
John M Starr (jstarr@staffmail.ed.ac.uk)
Wendy Johnson (wendy.johnson@ed.ac.uk)
Ian J Deary (iand@staffmail.ed.ac.uk)

Version: 2  Date: 27 March 2014

Author's response to reviews: see over
Authors’ responses

Reviewer #1

“This is an interesting cross-sectional study that examined the Patterns and associates of cognitive function, psychosocial wellbeing and health in the Lothian Birth Cohort 1936. Findings indicate that higher life-long intelligence, personality traits associated with less mental distress, and basic health practices such as avoiding smoking are important associates of wellbeing in old age. It is a well-written study.”

Response: We thank the reviewer for this comment.

Major Compulsory Revisions

“It will be helpful for the reader to include grouping criteria and support from the literature in the introduction section.”

Response: We do not think that this is possible. There are no specific grouping criteria across studies, especially because of the different variables used in different samples. We now state this explicitly in the Introduction (lines 173-180). However, we have given as much information as possible, given the space, to indication of the variables and methods used to group people in previous research. In our own research we judge that we have used a very good range of variables and up-to-date methods to do the grouping, and that this does build on previous research. As we discuss in the methods section (pp 16-17 lines 399-422), we used a technique called latent class analysis, which produces a number of subgroups defined by the researcher (we specified 2, 3, 4, 5, 6, and 7 subgroup solutions) and then the analysis assigns cases to the group they have the highest probability of belonging. Given that we were dealing with a relatively healthy population, we did not need to exclude anyone based on medical or cognitive pathologies to help us in our grouping/profile development.

“The aims of the study should be more explicit in relation to this study. It is vague and speculative. “Like our previous study, this one was cross-sectional; we considered it important to extend our profile/group analysis to the broader definition of ageing status before beginning any investigation of the several important longitudinal/developmental questions that must follow”.”

Response: We thank the reviewer for this comment. We agree that we were not explicit or specific enough in our aims. We have included our aims in the revised draft on p 9 lines 205 – 213.

“All the outcomes measures that have been used in the study should be supported with reliability and validity for this age group.”

Response: We have now added a column in Table 5 that shows the associations between times 1 (age = 70) and 2 (age = 73) of the cohort’s results of the outcome variables indicating reliability scores for this age group. We have also included a note indicating that we have this information on p 21 line 509 – 511.

“It will be helpful to state comorbidities for the sample and the impact they may have on selected outcomes (findings).”

Response: Thank you for mentioning this. We took comorbidity into consideration when we were constructing our domains of wellbeing. In Table 1, under the health status domain, it can be seen that the Lack of Morbidity component is included number of medical conditions. We also state the mean of the whole sample which was 2.9 [SD = 1.7] and medications used (mean = 3.0 SD = 2.5). Figure 2 depicts how this impacted the groups: The Low Bio-psychosocial group was poor on Low Morbidity whereas the High Wellbeing group had high Low Morbidity.
“The social class strata should be commented on the discussion section and relevance for current practice in study of ageing. It will be helpful to provide an example for each social class.”

Response: We have now added descriptive statistics for each social class in Table 5. We have also commented on our social class results and their implications on p. 28 lines 679 – 689.

“All the analyses should also report 95% confidence interval limits, where appropriate e.g. Table 4 and Table 5.”

Response: We thank the reviewer for this comment. We have now added 95% confidence intervals in Tables 4 and 5.

“The discussion should focus on more the main findings of the study on the first paragraph.

Response: We appreciate this comment. We have added some more discussion focusing on the main findings of this study in the first paragraph of the discussion (p 23 lines 568 - 574).

“This is a cross-sectional study, therefore, how the findings are going to improve the body of knowledge and research is worthy of commenting.”

Response: We thank the reviewer for this comment. We think our results have the potential to inform health-care practice and policy-making to help reduce health inequalities. Being aware of individual differences relating to intelligence and personality traits may help in addressing clinical issues on risk prevention, compliance and patient-practitioner relations in a more informed manner. We have added a section in the conclusion (p 30 lines 747 - 762) which discusses these issues.

Reviewer # 2

(There were no comments)