Author's response to reviews

Title: Association between life-course socioeconomic position and inflammatory biomarkers in older age: a nationally representative cohort study in Taiwan

Authors:

Yu-Hsuan Lin (yuhsuanl@hpa.gov.tw)
Min-Hua Jen (minhuajen@gmail.com)
Kuo-Liong Chien (klchien@ntu.edu.tw)

Version: 2 Date: 04 Dec 2016

Author’s response to reviews:

Response to Reviewer #1 Comments:

Comment: The main issue is that the authors do not know what their finding really is. They suggest that they are looking at lifetime SEP. This is correct. However, their findings suggest that they have a different finding than the one that they report on - they really find that low SEP in childhood, and not in adulthood, was the predictor of systemic inflammation. I would suggest that they need to think through what that means and discuss it clearly and in a focused manner. This finding is novel and should be highlighted thus.

Response:

The aim of this study was to examine how life-course SEP predicts inflammatory biomarkers in older age. To echo the aim of the current study, we used group-based trajectory modeling to identify the distinct trajectories of life-course SEP; then used the trajectory group membership of each participant for subsequent analyses. The results showed that life-course SEP is related to inflammation in older age and supported the notion that childhood SEP may act either as a sensitive period or as part of the accumulation of risk.

In response to the reviewer’s comment, we revised the manuscript by thinking through what that means and amended some of the paragraphs to make them clear and focused.

Amendments have been made to the manuscript text in Background section, line 4-7, page 5. Following the statement saying that “the aim of this study was to examine how life-course SEP predicts inflammatory biomarkers in older age.”, we rewrote the sentence to clarify that “Life-course SEP frameworks, including the “accumulation of risk,” “social mobility,” and “sensitive periods,” were discussed based on the trajectories of life-course SEP identified to gain a better understanding of the effects of SEP at time points throughout a life course.”
Also, in the Discussion section, from line 20 on page 13 to line 9 one page 14, after saying that “Low SEP in childhood was associated with elevated CRP and IL-6 in older age.”, we further indicated that “The results showed that only participants in the High-High group, but not those in the Low-High group, had a significantly lower level of adjusted CRP concentration and similarly lower IL-6 concentration.”, as well as “which implied upward social mobility was not significantly associated with lower levels of inflammation in older age”. Then, summarized in the end of the paragraph by saying that “This demonstrated that childhood SEP may act as a sensitive period.”

As for the “accumulation of risk”, it was mainly discussed on page 15, in the paragraph of line 8. Amendments have been made to the manuscript text by adding “Childhood SEP may act as part of the accumulation of risk.” as topic sentence of the paragraph.

Finally in the Conclusion section, line 15-16, page 19, not only saying that “our data support the notion that childhood SEP may act either as a sensitive period or as part of the accumulation of risk.”, we added a sentence saying that “Upward social mobility is not significantly associated with lower levels of inflammation in older age”.
