Reviewer’s report

Title: Exposure to the Chinese famine in early life and the risk of anaemia in adulthood

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Reviewer: Cheng Huang

Reviewer’s report:

This is a very interesting paper written in the spirit of previous research utilizing famines as a natural experiment to examine the effect of malnutrition in the critical period of life on adult chronic disease, a hypothesis originally raised by Barker and his team and later caught increasing attention in research community. This paper is well written and easy to follow. The data are appropriate to test the hypothesis that prenatal exposure to the Chinese famine of 1959-61 may increase anemia in adulthood. That being said, several issues should be addressed before it could contribute to the literature with solid evidence.

Major Compulsory Revisions

First, the interpretation of Barker’s hypothesis was overly simplified. A more careful review of previous work is also needed, which may better present the scientific significance of the present study in the context.

Second, this present study applied a simple comparison between cohorts. A more rigorous analytical approach is needed to disentangle the “famine” effect from age effect and other potential confounding factors. A difference in difference like model may work here (Chen and Zhou, 2007; Huang et al., 2010). The authors may either consider to measure and include regional differential in famine intensity at county level in the model (Huang et al., 2010) or to construct a difference in difference model with an interaction between rural/urban* cohorts. At minimum, results from analysis on rural sample only should be presented, since food supply to urban residents was guaranteed even in famine years.

Reference:
Huang et al., 2010. Already cited.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests