

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Associations between socioeconomic factors and proinflammatory cytokines in children, adolescents and young adults: A systematic review protocol
<b>AUTHORS</b>	Fredman, Nick; Duque, G; Duckham, Rachel; Green, Darci; Brennan, Sharon

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Kandauda (K. A. S.) Wickrama University of Georgia USA
<b>REVIEW RETURNED</b>	23-Nov-2017

<b>GENERAL COMMENTS</b>	<p>This is the first systematic review on socioeconomic factors and the level of proinflammatory cytokines. So, this is a commendable task.</p> <p>The authors have clearly indicated the objectives, selection of studies, methodologies and criteria for the evaluation for this meta-analysis.</p> <p>I do not have any major concern.</p> <p>Minor issues:</p> <ol style="list-style-type: none"><li>1. Since the total bone mass is considered to peak between early and late 20's the proposed age range (6-24 yrs) may not capture the peaks fully. Moreover, young adulthood only begins from age 24. So, it is better to broaden the age-range from 6 to 30 years?</li><li>2. The authors should consider or discuss the potential heterogeneity due to heritable factors and race/ethnicity.</li></ol>
-------------------------	--

<b>REVIEWER</b>	Antonino Catalano University of Messina, Messina, Italy
<b>REVIEW RETURNED</b>	14-Dec-2017

<b>GENERAL COMMENTS</b>	This is an interesting and well designed protocol.
-------------------------	--

## VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Kandauda (K. A. S.) Wickrama

Institution and Country: University of Georgia, USA

Please state any competing interests or state 'None declared': None

Please leave your comments for the authors below

This is the first systematic review on socioeconomic factors and the level of proinflammatory cytokines. So, this is a commendable task.

Response: Thank you.

Comment: The authors have clearly indicated the objectives, selection of studies, methodologies and criteria for the evaluation for this meta-analysis.

Response: I do not have any major concern.

Minor issues:

1. Since the total bone mass is considered to peak between early and late 20's the proposed age range (6-24 yrs) may not capture the peaks fully.

Moreover, young adulthood only begins from age 24.

So, it is better to broaden the age-range from 6 to 30 years?

Response: We agree, and have broadened our age range accordingly to 6-30 years: these amendments appear on pages 2 (abstract), 3 (strengths and limitations box), 5 (objectives), and 7 (main text; 'age' section).

2. The authors should consider or discuss the potential heterogeneity due to heritable factors and race/ethnicity.

Response: We have amended our strengths and limitations box, which now reads:

Page 3: Possible limitations of this review include heterogeneity due to variation in the (i) measurement of socioeconomic factors, (ii) study populations, particularly with respect to age ranges, and the impact of heritable factors and race/ethnicity on associations, and (iii) methods used to measure proinflammatory cytokine levels.

Reviewer: 2

Reviewer Name: Antonino Catalano

Institution and Country: University of Messina, Messina, Italy

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

This is an interesting and well-designed protocol.

Response: Thank you.

Note regarding other changes:

Title page: We have amended the email address of our first author, Dr Nick Fredman.

Page 8, Paragraph 3: We have also included the full wording of QUORUM (Quality Reporting of Meta-analyses).

END

**VERSION 2 – REVIEW**

<b>REVIEWER</b>	K. A. S. Wickrama University of Georgia USA
<b>REVIEW RETURNED</b>	09-Jan-2018
<b>GENERAL COMMENTS</b>	Authors have addressed all my concerns. Thanks.