Reviewer's report

Title: An association of adult personality with prenatal and early postnatal growth: the EPQ lie-scale.

Version: 1 Date: 9 October 2013

Reviewer: Marius Lahti

Reviewer's report:

Major Compulsory Revisions
1. Although it is wide, the literature review is not thorough enough. The authors should discuss at least the following earlier studies on topics related to the study:
   1a. Concerning the associations between personality traits, body size at birth, and also postnatal growth, there is the recent study in the Helsinki Birth Cohort Study by Lahti et al in J Pers Soc Psychol. 2013 Jul;105(1):154-69 entitled: Trajectories of physical growth and personality dimensions of the Five-Factor Model. That study looked at the associations between pre- and postnatal growth FFM personality dimensions. Please add this study to the reference list and discuss its findings in the text, both in the introduction and the discussion sections of the text
   1b. Another important study on the associations between birth weight and mental disorders is the study by Abel et al. (2010). Birth weight, schizophrenia, and adult mental disorder: is risk confined to the smallest babies? in Arch Gen Psychiatry. 2010;67(9):923-30. Please add also this reference to the reference list.
   1c. On page 3, please add personality disorders to the list of mental disorders that are predicted by smaller body size at birth. Such associations have been found in the studies by Fazel et al., 2012; Monfils Gustafsson et al., 2009, and Lahti et al., 2010.
   1d. There is an incorrect citation in the text. The authors are describing the associations between temperament and birth size. This was not the cited study by Lahti et al. (2010): Rather that study looked at the associations between personality disorders and birth size. The correct citation would be. Lahti J, Räikkönen K, Heinonen K, Pesonen AK, Kajantie E, Forsén T, Osmond C, Barker DJ, Eriksson JG. Body size at birth and socio-economic status in childhood: implications for Cloninger's psychobiological model of temperament at age 60. Psychiatry Res. 2008;160(2):167-74.

Other major compulsory revisions:
2. Concerning the statistical analyses, it would be interesting to see whether there are specific postnatal growth periods that are especially relevant for later personality traits and particularly social acquiescence. The authors should add also analyses on growth conditional on previous growth, as described in Osmond C et al. (2007) Infant growth and stroke in adult life: the Helsinki birth cohort
study. Stroke. or in Lahti et al. (2013) in JPSP, to their analyses. To do this, body
size at each age needs to be regressed upon body size at all earlier ages, in
sex-stratified models, and the residuals are then used as measures of conditional
growth. This method would enable them to study in detail whether there are
specific growth periods that are related to the development of personality traits.
By using only measures of body size, this is not possible since body size at the
different studied ages is highly inter-correlated.

3. The authors should present the findings also for the other personality traits in a
table, or omit them completely also from the text. The current description of the
findings concerning these traits is imprecise and unclear. I would suggest either
removing them completely, or showing the basic and adjusted models
somewhere also for these traits.

4. Were there any significant effects on the other personality traits when looking
at the sample as a whole, not stratified by sex?

5. Please specify which were the significant interactions of body size by sex in
predicting the lie scale scores

6. Were there significant by sex interactions for the other personality traits?

7. The DOHaD framework is not restricted to the prenatal period; rather it
concerns also early life influences on later health that occur after birth. The
authors should cite the studies on the associations between infancy and
childhood growth and later personality traits, mental disorders, and also possibly
somatic health as a basis for them assessing not only the associations of the
EPQ-scales to birth size but also to attained body size in infancy and in
childhood.

Minor Essential Revisions

8. There is a missing comma at the end of the introduction.

9. Please specify the significance level of the correlations between the different
scales.

10. Please specify whether there were lots of missing values for the different
confounding variables

11. Please specify if there were quadratic effects on any of the other personality
traits?

Discretionary Revisions

12. The authors could specify what the possible causal prenatal factors
contributing to the associations found could be. For example, psychosocial
stress, malnutrition, or substance use during pregnancy or pregnancy illnesses
are all factors that have been shown to predict individual differences in birth size
and could thus be contributing factors.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests: 

I declare that I have no competing interests