Reviewer's report

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

Version: 2
Date: 13 December 2013

Reviewer: Marius Lahti

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Major Compulsory Revisions

1. Even though their effect sizes were small, if quadratic effects were nevertheless found on some personality traits as stated in the cover letter, it should not be stated that these were not significant for any of the exposure variables.

2. The last sentence in the introduction is not well justified. Several twin studies have shown that with increasing age, growth is more under genetic control. Thus to state that if associations increase in strength with age, psychological factors influencing size play a more relevant role is not very well justified. The authors should rather state that "postnatal growth plays a more relevant role", without suggesting any etiological factors to account for such an effect because based on the current data the contribution of the different predictors of growth to these associations cannot be distinguished. Psychological factors have their own effect on childhood growth but are by no means the sole contributors.

3. Epigenetic changes in gene expression as a consequence of prenatal (or early postnatal) adversity and contributing to personality development offer one possible explanation for the findings and ought to be discussed in the discussion section when considering the underlying explanations. A number of recent studies have shown that both specific prenatal environmental adversities and differences in body size at birth are associated with changes in gene expression (an example is the study by Turan and colleagues in BMC Med Genomics. 2012 Apr 12;5:10). On the other hand, studies by Beach and colleagues in Psychosom Med. 2011 Jan;73(1):83-7. and in J Fam Psychol. 2013 Feb;27(1):3-11 have shown epigenetic changes associated with antisocial personality traits in adulthood. Dammann and colleagues in Epigenetics. 2011 Dec;6(12):1454-62. found epigenetic changes among borderline personality disorder patients.

Minor Essential Revisions

4. There is evidence suggesting that the effects of maternal age and possibly also of parity on mental health outcomes may not be linear. Assessing the main effects of these two variables, was there any differences in personality traits, if a) maternal age was classified into three categories; adolescent (<20 years); 20-39 years old 40 years old or older mothers.

b) or if parity is classified into categories 1, 2-3, 4-5, 6 or more? If there is small amount of subjects in some categories, broader categorizations may be justified.
5. There are some inconsistencies in the citation format in the reference list. Please check these out and revise the list carefully.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.