Reviewer's report

Title: Externalizing behavior in early childhood and body mass index from age 2 to 12 years: longitudinal analyses of a prospective cohort study

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Reviewer: Simon Rueckinger

Reviewer's report:

This paper addresses the association of externalizing behaviours with BMI in children. The paper is well written but the analyses do not seem that much meaningful to me.

It seems the authors make no real beneficial use of the prospective design of the study. This is an important limitation, since being overweight may also contribute to externalizing behaviour (reverse causation). The results presented in Table 2 are cross-sectional. The results presented in Table 3 and the Figure refer to linear mixed effects models. This approach basically models the dependency between age and BMI. This dependency could however be addressed more straightforward and conventional by the use of BMI z-scores using age- and sex-specific reference values as e.g. provided by the WHO. The impact of externalizing behaviours could then simply be addressed by modelling BMI z-score at any time point after two years of age, dependent on externalizing behaviours and baseline BMI z-score at two years of age. This would allow conclusions about the direction of the association.

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