Reviewer's report

Title: The prevalence of stunting, obesity, and metabolic disease risk in contemporary rural South African children

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Reviewer: Herculina Salome Kruger

Reviewer's report:

1. The authors report a ‘high’ prevalence of stunting, underweight and overweight/obesity. There are specific cut-off points for a prevalence of each of these indicators to represent ‘high’ or “low” prevalence. The authors should read the article by Gorstein et al. Bulletin WHO 1994;72:274. Table 2 gives the criteria for low, medium and high. A high prevalence of stunting is >30% for example. Especially in the abstract it will be useful to report the percentage of children being stunted in groups, such as pre-school or adolescent (with a definition), instead of reporting a “high prevalence”.

2. In tables add a column with the number of participants in each age group. This will help with interpretation, especially if there were smaller number of participants in some age groups. It is necessary to describe if the 20% of participants (80% response rate) who were not included were mostly from the older age groups. If so the final sample may be overrepresented with younger children and include relatively smaller numbers of participants 18-20 years old. It is surprising that only 45 boys reached Tanner stage 5, if it is considered that there should be 3x100 boys in the age groups 18, 19 and 20 years. Even the girls in Tanner stage were only 139. Girls often reach Tanner stage 5 by the age of 16-17y and should have been many more than 139. Smaller number of participants in the older age groups should be discussed as a limitation of the study. The authors could also consider to exclude older participants due to smaller numbers and describe only the sample of 1-18y old, which could qualify as children.

3. No limitations of the study are discussed. The authors refer to possible changes in dietary intakes and physical activity in similar South African settings, and state that further work in this area is planned. Lack of data on dietary intakes, even types of foods available in the area and facilities for physical activity could be named as limitations of this study.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

'I declare that I have no competing interests'