Reviewer's report

Title: Area deprivation and the prevalence of type 2 diabetes and obesity. Analysis at the municipality level in Germany

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Reviewer: Thandi Puoane

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Area deprivation and the prevalence of type 2 diabetes and obesity. Analysis at the municipality level in Germany

The manuscript is based on secondary analysis to investigate the association between the area of deprivation at municipality level and the prevalence of Type 2 diabetes, obesity across Germany. This is an important subject area which may be useful in informing the development of policies for improving the lives of vulnerable populations.

The background to the study and the justification is well described. The title of the manuscript and abstract accurately convey the findings.

Methods

Although the data used in the manuscript is based on the secondary analysis of data from a survey which has been used in other scientific publications. The following questions remain unanswered:

• What was the purpose of the survey for data used for this manuscript? How was the sampling done?

• The setting should be described briefly for the reader, that is: Germany—population size, socio-economic levels—as this will give an idea to the reader about why other areas in the same country are deprived than the other. Some of this information appears for the first time in the discussions—such as small federal states. This information would be beneficial if it appeared in the background.

• The municipality and deprived regions need to be defined

Although the area of deprivation for the municipalities was assessed by the German Index of Multiple Deprivation it is not clear what the seven deprivation domains are under demographic, socioeconomic and environmental features. For people who are not familiar with the subject, this information is incomplete.

Presentation of the data

The manuscript is well written, data is well presented and the tables are clearly
labelled

The discussions

• The authors have listed and described the limitations related to the study very well. The discussion and conclusions are well balanced and adequately supported by the data. The authors clearly acknowledge the work upon which they are building both published

I therefore suggest that the authors attend to the suggested additions to the manuscript then the manuscript will be ready for publication

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’