Reviewer's report

Title: Good places for ageing in place: a trans-disciplinary, cross-sectional study investigating the links between physical characteristics of neighbourhoods and older people's wellbeing

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Reviewer: Vanessa Taler

Reviewer's report:

Summary:
The manuscript describes a study investigating links between features of the built environment and multiple measures of well-being in a sample of 200 older adults living in the UK. Five major factors were found to be linked to older adults' wellbeing: density, location, mix of uses, amount of greenery, and street layout.

Overall, the manuscript addresses an important issue (features improving older adults' well-being while aging in place) and, admirably, takes an interdisciplinary approach to the issue. However, the research suffers from issues with design and interpretation, exacerbated by unclear reporting of statistical methods and especially results.

Major compulsory revisions:
I have some issues with the way in which the construct of well-being is defined and operationalized in this paper. It appears to me that a number of different domains are confounded (notably psychological and environmental characteristics). Although these are analyzed separately, well-being “type” does not appear to be reflected in the results section. For example, “frequency of trips” and “enjoyment of trips” are fundamentally different types of measures and may be affected by different variables, a point that is not acknowledged in the manuscript.

Although social class is considered as a potential intervening (confounding?) variable, I see no mention of income, which is a very strong predictor of health, well-being, and quality of living environment. Moreover, cognitive status of the subjects is not addressed at all. These are issues that must be addressed in order to allow interpretation of the findings.

Throughout the manuscript, the authors appear to infer causal links, although there is no evidence that this is the case (a point that is acknowledged, but not consistently, e.g., page 5: “…it identified 1) the physical characteristics most closely linked with wellbeing; and 2) the aspects of wellbeing most influenced by these characteristics.”). Importantly, the cross-sectional nature of the research is not the reason that causality cannot be inferred – longitudinal research suffers the same drawbacks (for example, rich people may move into nicer neighborhoods and also have better health, leading to greater frequency of trips,
and the difference between rich and poor may increase over time, independent of the neighborhood in which the person is living). Notably, almost the entire discussion and conclusion sections are premised on the assumption that the links identified are causal in nature.

The layout of the results section is confusing. The authors need to explain more clearly how the relationships were determined and what the tables mean. The three stages of analysis are described, but I cannot understand how the results in the tables relate to the described analyses. Perhaps more detailed statistical analysis and results sections would rectify this problem.

Minor essential revisions:
Page 9: “an assumption that older people walk more slowly than the average fit male adult”: this is an imprecise measure and should be better defined.
Page 11: Social class: how was this measured?

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

**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.