

Review of: "Could geographical features of green spaces influence physical exercise? Examining the roles of neighbourhood diversity and single status"

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Potential competing interests: No potential competing interests to declare.

1. The conclusions in the abstract need to be more explicit, addressing how green spaces and marital status influence the choices of transport modes and vigorous exercise time.
2. The introduction section appears to be a compilation of existing research. This section needs to include an evaluation of the shortcomings of previous research to establish the rationale for the current study.
3. There are four flaws in the literature review section: firstly, it should not only review literature to propose research hypotheses but also evaluate previous studies to explain why these hypotheses are proposed. Secondly, some research hypotheses should be merged. Additionally, Hypothesis 3 seems unrelated to physical exercise. The comprehensive hypothesis should be: Geographical features of green spaces are associated with transport modes, and transport modes affect physical exercise. Furthermore, personal factors of respondents also influence physical exercise and should be considered as research hypotheses. The variables mentioned in the paper, such as age, are too few. Core personal health variables such as height and weight have not been included. The final research framework should control variables unrelated to geographical features of green spaces and focus on the relationship between geographical features of green spaces and physical exercise. However, in the analysis of "Associations with visiting and exercise time," variables unrelated to geographical features of green spaces have been fixed. In summary, the logical relationships among the five hypotheses are unclear, making it difficult to understand the author's research direction.
4. The "Main variables" section needs to specify the positive or negative impact of independent variables on dependent variables. The regression model in this paper requires the absence of multicollinearity among variables. However, the paper does not discuss this issue.
5. In Table 2, it is unclear what Model 1, Model 2, Model 3, and Model 4 represent. Are they Level 1, Level 2, Level 3, and Level 4? Hierarchical regression models have other key indicators, but these indicators are not mentioned in this paper. Additionally, the "Associations with daily visit" section proves Hypothesis 2 but seems to prove other hypotheses as well, such as personal factors affecting daily visits, not just geographical features of green spaces. The authors should conduct a more in-depth analysis and visually show readers the relationship between geographical features of green spaces and daily visits after controlling for other significant variables.
6. In the "Associations with transport modes" section, the authors should further discuss the relationship between transport modes and physical exercise.

7. In the "Associations with transport modes" and "Associations with visiting and exercise time" sections, ordinary readers cannot understand variables like Perceived quality × neighbourhood diversity, Perceived accessibility × neighbourhood diversity, LGS% × neighbourhood diversity, etc. Consequently, they cannot comprehend the moderated effect of the neighborhood. The authors should clarify the meanings of these variables in simple language.
8. The discussion and conclusion sections are not in-depth enough and fail to highlight the innovation of this study. The impact of geographical features of green spaces on physical exercise needs to be expressed qualitatively and quantitatively in simple language. The goal should be to enlighten readers on the issue rather than confuse them further after reading the paper.