Reviewer’s report

Title: Prevalence of sarcopenia in multi-ethnic adults and the association with cognitive impairment: findings from West-China Health and Aging Trend Study

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Reviewer: Ken Sugimoto

Reviewer's report:

The authors examined the prevalence of sarcopenia and the association between sarcopenia and cognitive impairment in multi-ethnic adults in Western China. It might be important to know the ethnic difference in the prevalence of sarcopenia; however, the most important thing is to standardize the definition of sarcopenia to the fine details. The authors used the AWGS definition; however, the prevalence of sarcopenia was too high, considering the community-dwelling subjects aged 50 years and older (60% of this population was less than 65 years old). In table 1, the average gait speed was too low in the no-sarcopenia group. This might be because gait speed was evaluated, including the acceleration phase. The AWGS recommends evaluating at normal gait speed of more than 4 meters, excluding the acceleration and deceleration phase. Moreover, the percentage of the male was low (about 35%) in this study, so this data was not able to be generalized.

Other Comments:

1) The authors should revise table 1 to know the gender difference. Sarcopenia was the disease with a gender difference.

2) As the authors know, the prevalence of sarcopenia increased 65 years and older, they should show the association of cognitive impairment and sarcopenia after age stratification.

3) In table 3, why did the authors exclude the prevalence or absence of outdoor housework from confounding factors in the multiple regression model even though this was included in the analysis of table 2?

4) If the authors would like to emphasize an ethnic difference, they should show some data or comments about it (among Han, Zang, Qiand, and Yi).
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
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Yes

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