Reviewer’s report

Title: Dog ownership, dog walking, and leisure-time walking among Taiwanese metropolitan and nonmetropolitan older adults

Version: 0 Date: 25 Dec 2017

Reviewer: Masami Akai

Reviewer's report:

Overall evaluation: This article examined the prevalence of dog ownership and dog walking and its association with leisure-time walking among metropolitan and nonmetropolitan older adults.

This is a cross-sectional survey targeting Taiwanese older adults, and, I think, a well-written, interesting, and joyful study. Their working hypotheses are that (1) people who own dogs increase their physical activity, centering on walk, because of dog walking, (2) the prevalence of dog ownership and dog-walking status might differ according to cities with different residential densities (i.e., metropolitan vs. nonmetropolitan areas).

Comparison between older adults lived in metropolitan and nonmetropolitan areas were clearly showed. However, my main concern is its sample size and interpretation of the results.

Major Points:

(1) Sample size

As for study aim, their sample size calculation was indicated to examine the prevalence of dog ownership and dog walking and its association with leisure-time walking among metropolitan and nonmetropolitan older adults. However, the actual number of focused group (dog walker) is remained as 40 (19 in metropolitan area and 21 in nonmetropolitan area). Is the participants number as 40 adequate?

I am afraid that a subgroup analysis of 40 cases is not enough to draw a definite conclusion.

(2) Statistics

Is it able to overcome the above-mentioned issue by forced-entry adjusted logistic regression?

(3) Preference for dog breeds
As dog walking is just a tool to enhance physical activity of dog owners, I would like to know the dog type and dog size (general trend in Taiwan) if possible. I think these issues directly relate to the dog owners' view and dog walking. If they prefer small dogs, they can keep dogs indoors.

Minor Points:

None

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?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal