Author’s response to reviews

Title: Handgrip Strength, Depression, and All-Cause Mortality in Korean Older Adults

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In Responses to the Editor’s Comments/Critics

Again, we thank the editor for the comments/critics; “we note that the current submission contains some textual overlap with other previously published works”.

1. In response to the comments and critics, the description of Methods is revised as follows (two of our previous works [21-22] are cited in Methods);

Methods
Study Design and sample (data source)

By using data from the 2008 and 2011 Living Profiles of Older People Survey (LPOPS), which is a national wide 3-year longitudinal survey by the Ministry of Health Welfare and Family in Republic of Korea, we conducted a population-based prospective study to evaluate the relationship of low HGS and depression with all-cause mortality in Korean older adults.
The design of the LPOPS has been described previously [20]. In brief, a total of 14,071 older adults aged >60 year participated in the 2008 baseline assessment. During the follow-up period, 800 subjects were excluded due to refusal or loss of contact, resulting in 13,901 subjects (43% men and 57% women) who were included in the study analysis. The Institutional Review Board (IRB) of the Keimyung University reviewed and approved the study protocol in accordance with the Declaration of Helsinki. All participants provided written informed consent to participate in the survey.

Variables

Determination of handgrip strength, depression, and all-cause mortality

Detailed description of measurement procedures for exposures (i.e., handgrip strength and depression) and outcome (i.e., all-cause mortality) has been published elsewhere [21-22]. In brief, HGS was measured using a hand grip dynamometer (TANITA No. 6103, Tokyo, Japan). Individual HGS values were divided into age and sex-specific quartiles and categorized as high HGS (upper 50th percentile) or low HGS (lower 50th percentile). The Korean version of the short form of the geriatric depression scale (SGDS-K) was administered as a screening measure for depression, as described in detail elsewhere [23]. All-cause mortality was defined as number of deaths from all causes, as described in detail elsewhere [21-22].

Determination of Confounders

Body mass index was calculated by dividing body weight (kg) by height squared (m2). Socio-demographic (i.e., age, gender, education) and health behavioral factors (i.e., alcohol consumption, smoking, and number of comorbidity and medications) were measured as potential confounders, as described in detail elsewhere [21-22]. In addition, nutritional status was assessed using the nutrition screening initiative checklist [24]. Disability, cognitive function, and physical activity were assessed using the Korean activities of daily living scale (K-ADL) [25], the Korean version of the mini-mental state examination (MMSE-KC) [26], and the International Physical Activity Questionnaire (IPAQ) short form [27], respectively.

2. In addition, the following part of Discussion is also revised as follows;

Discussion

Several explanations can be given for gender difference in the all-cause mortality risk of depression. First, the gender difference may result from cultural, social, behavioral or adaptive differences between men and women. Women are more likely to report symptoms and distress
than men [31], thereby seeking medical treatment. On the other hand, depression is less likely to be recognized and treated in men [32], and therefore the presence of detectable depression in men may signify a more extreme condition [33], accounting for the stronger association with premature death. Second, difference in the nature or intensity of exposure to risk factors or in the vulnerability to the same risk factors may contribute to gender difference in the association between depression and all-cause mortality [28]. Third, genetic and biological factors may some role in the emergence of gender differences in depression and its relation to all-cause mortality [34]. Lastly, in older adults with depression, men are more likely to die and women to be first disabled, which should be tested in a longer follow-up study.

3. List of Newly Added References
