

## LETTER TO THE EDITOR

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**Vulnerability to suicide in short, elderly men: a nationwide survey in Korea**

Some anthropometric indices, mainly on adiposity, have been studied in association with suicide. Height is a relatively neglected index in that area and remains relatively unexplored. Previous studies of the association between suicide and adult height explored only a crude association, had a small sample size, or were limited to a specific group (Magnusson *et al.*, 2005; Mukamal *et al.*, 2007; Song *et al.*, 2003). To date, no nationwide study that fully investigates the possible mediators of suicide has been performed.

We used data from the 2007–2013 Korean National Health and Nutrition Survey. We identified a total of 42,117 individuals over 18 years of age with available height information. Of those, we excluded 3,299 patients who had a history of any cancer or major vascular disease or who had received ongoing treatment for major depression. After excluding missing data, we obtained a dataset of 37,566 participants for our analysis. We assessed suicidal ideation on the basis of self-reported responses to the question: “Have you ever thought about committing suicide within the last 12 months?” We collected information on height, demographics, medical conditions, and other mental issues.

In this study, we found that short height was significantly associated with suicidal ideation in elderly men, even after adjustment for socioeconomic status, medical conditions, and current mental health (Table 1). Additional information about the participants will be available on request. If our findings are reproduced in future studies, more attention will need to be paid to suicidal ideation in short, elderly men.

A large-scale population-based study, the Nord-Trøndelag Health Study (the HUNT study) (Bjerkeset *et al.*, 2008), with a rigorous methodology, comparable to ours, reported no association between height and the incidence of suicide. Our study differed from the HUNT study in certain aspects. First, the outcome in the HUNT study was suicide mortality, not suicidal ideation. Suicidal death is the most severe outcome, passing through ideation or attempt, and might be influenced by the preventive system for suicide of each country. Second, the HUNT study used the bottom quartile of the overall height distribution as the cutoff value for short height, but the distribution of height is different across individuals of different ages as well as genders.

Our results should be interpreted carefully. The lack of an association between height and suicide in women means a relatively higher contribution of other factors. In addition, we hypothesized that the lack of association between height and suicide in young and middle-aged men was an example of the “Napoleon effect.” In general, most societies set

**Table 1.** Odds ratios and 95% confidence intervals for having suicidal ideation by height and age

	MALE			FEMALE		
	<40 YEARS	40–59 YEARS	60+ YEARS	<40 YEARS	40–59 YEARS	60+ YEARS
Height, cm						
180+	1					
175–179.9	0.83 (0.47–1.46)	1				
170–174.9	0.73 (0.55–0.99)	0.74 (0.51–1.08)	1			
165–169.9	0.91 (0.75–1.11)	1.03 (0.86–1.24)	1.17 (0.82–1.65)	1		
160–164.9		1.00 (0.86–1.15)	1.23 (1.04–1.47)	0.78 (0.58–1.06)	1	
155–159.9			1.20 (1.05–1.37)	1.00 (0.86–1.16)	1.12 (0.90–1.38)	1
150–154.9				1.01 (0.89–1.14)	1.05 (0.93–1.18)	1.04 (0.85–1.27)
145–149.9					1.00 (0.90–1.12)	1.00 (0.89–1.11)
<145						1.06 (0.96–1.16)
<i>P</i> for trend	0.982	0.914	0.003	0.725	0.147	0.534

The reference group approximately corresponded to the 75th percentile in each age group.

Multivariate logistic models were used with adjustment for age (as a continuous variable), economic status, marital status, educational status, body mass index (as a continuous variable), smoking status, problem drinking, regular physical activity, hypertension, diabetes, perceived stress, and depressive mood.

a premium on height, and taller people exhibit greater confidence (Batty *et al.*, 2009). Against that adverse social climate, short men may pretend to be active or competitive or may have psychological dispositions to offset a feeling of inferiority due to their shortness. However, as individuals age, the mechanisms by which short men compensate for their physical stature may become exhausted.

### Conflict of interest

None declared.

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