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Response

The Association between Sleep Duration and Overweight in a School-Age Population in Seoul (J Obes Metab Syndr 2017;26:45-51)

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In Korea, few studies have addressed sleep and obesity, especially in school-age population. In addition, sleep as an intervention to prevent or manage obesity was not considered until a recent study.[1] My previous study investigated the association between the sleep duration and overweight status (including obesity) and was published in *Journal of Obesity & Metabolic Syndrome*. It was also honorable to reply to the Letter to the Editor with great comments for my study. Thus, I would like to respond to the issues raised in the Letter.

First, it was established previously that the quality of the sleep was related with obesity and cognition.[2-4] However, this could not be analyzed in my study, because data on sleep quality was not available in secondary data from Seoul Student Health Examination Standard Survey, only sleep duration. Survey time may have been a concern affecting what variables could be included; the time required is an important issue in mass surveys on multiple health-related items. Therefore, I suggest that a question be added Seoul Student Health Examination Standard Survey versions in future, "How do you feel about your quality of life?"

Second, the World Health Organization (WHO) definition of body mass index (BMI) >1.0 standard deviation score (SDS) for overweight[5] was used in my study instead of Percentile criteria for overweight based on the 2007 Korean Growth Chart.[6] The strength of the WHO definition of BMI >1.0 SDS is that it is possible to compare between international studies[7-9] and to identify gaps in the 2007 Korean Growth Chart defined by the Korean Pediatric Society. As noted in the Letter, the association between sleep and obesity or severe obesity was also not analyzed in my study. Therefore, in future study, the WHO BMI SDS and 2007 Korean Growth Chart should be compared, and the effects of sleep on obesity or severe obesity should be investigated.

Third, I suggested that school health policy should consider ensuring optimal sleep duration in the school-age population because only 23.2% school-age students in my study slept more than 8 hours daily. I think we need to consider student's right to sleep fully for quality of life. As an alternative strategy to improve student sleep quality, there is napping improving the attention.[10] However, the effects of sleep on overweight and obesity status should be proven using nationwide representative data, as the Letter also noted.

Finally, I thank you for the Letter and the opportunity to respond. I hope the *Journal of Obesity & Metabolic Syndrome* will develop forever.

CONFLICTS OF INTEREST

The author declares no conflict of interest.

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