

3rd World Congress on

PUBLIC HEALTH AND NUTRITION

February 26-28, 2018 London, UK

THE EFFECT OF ASSOCIATION BETWEEN SLEEP DURATION AND SERUM VITAMIN D LEVEL ON OBESITY IN KOREAN ELDERLY POPULATION

Miae Dooa and Eugene Chang*

*Ewha Womans University, republic of Korea.

Recently, we reported that the association between sleep duration and obesity. Also, the vitamin D deficiency is common in elderly population and is associated with obesity. We analyzed the combined interaction between serum level of vitamin D and sleep duration on the obesity-related variables among 3,757 Korean elderly population using Korean National Health and Nutrition Examination Survey. The average age was 71.61 years (65~97 years) and serum vitamin D was 19.03ng/mL (4.11~53.54ng/mL). The obesity-related variables, such as BMI (P=0.001), WC (P=0.014), FG (P=0.016) and TG (P=0.019), were significantly higher in vitamin D insufficient than in sufficient group. There were significant difference in interaction between serum level of vitamin D and sleep duration on obesity-related variables, such as BMI (P=0.004) and risk for obesity (P<0.001). Subjects who were vitamin D insufficient status and short sleep duration had higher BMI than those who were vitamin D sufficient status and proper sleep duration. Using vitamin D sufficient status and proper sleep duration as a reference, the subjects with vitamin D sufficient status showed no difference in the risk of obesity, regardless of sleep duration. However, among subjects who were vitamin D insufficient status, the risk of obesity showed increased trend with proper sleep duration compared with short sleep duration [1.293 (95% CI = 1.10-1.657) for proper sleep duration vs. 1.374 (95% CI = 1.066-1.770) for short sleep duration].