

中文題目：睡眠效率和夜間缺氧與記憶力減退有關

英文題目：Sleep efficiency and nocturnal hypoxia related to memory problem

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Background Sleep efficiency (SE) is defined as total sleep time divided by time in bed, which plays a pivotal role in sleep quality. Previous studies indicated that poor sleep among the elderly can lead to memory loss and brain deterioration. Decreased oxygen to the brain may trigger memory loss. Thus, we aimed to evaluate the effect of SE and nocturnal hypoxia on memory problem.

Method The current study investigated participants aged ≥ 18 years, who received full-night polysomnography at a sleep center between 2007 and 2015. We identified demographic characteristics, the least pulse oxygen saturation (SpO₂) during sleep, and SE at dataset of the sleep center. Outcome variable was memory problems, which the study participants filled out the questionnaires. We excluded the patients with CPAP titration and incomplete data of age and sex. Logistic regression analysis measured the risk of memory problems by including the variables of sex, age, the nocturnal SpO₂ nadir, and SE.

Results The 5790 participants (4388 male and 1402 female) attended full-night polysomnographic examination. Their mean age was 46.3 ± 14.2 years. Among them, 2458 (42.5%) of the participants had memory problem. The participants with memory problem showed higher age, higher male probability, lower SE, and lower SpO₂ nadir than did the participants without memory problem. Multivariate logistic regression indicated that age, sex, SE, and SpO₂ nadir were independent risk factors of memory problem.

Conclusion The current study suggested that less SE and SpO₂ nadir increased risk of memory problem.

Keywords: sleep efficiency, SpO₂ nadir, memory problem