

## Prevalence of Sleep Problems and Its Impact on Anxiety, Depression and Quality of Life in Korean Fire Fighters

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**Background:** Professional fire fighter is a strenuous and unique occupation due to the high levels of stress and risk involved as well as the low control nature of the job. Anxiety and depression are prevalent in the professional fire fighters' population and constitute a dominant area of investigation. Limited attention have been given to impact of sleep problems on the anxiety, depression and quality of life in fire fighters. The aim of this study is to evaluate prevalence of sleep problems and its impact on anxiety, depression and quality of life in Korean fire fighters.

**Methods:** Using simple sampling method in a cross-section study in Jeonbuk province of Korea, sleep problems, anxiety, depression and quality of life of 1669 professional fire fighters were measured with Patients Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder 7 item (GAD-7) and brief version of World Health Organization Quality of Life assessment scale (WHOQoL-Brief). Sleep problem was measured with 3 item of PHQ-9, the definition of sleep problems group was not able to initiate sleep or maintaining sleep. We measured cross-sectional Odds ratios for sleep problems group on depression and anxiety by logistic regression analysis.

**Results:** The prevalence of sleep problem of Korean fire fighters was 51.2%. Korean fire fighters with sleep problems showed not only more anxiety ( $p < 0.001$ ) and depression ( $p < 0.001$ ) but also lower quality of life ( $p < 0.001$ ). The sleep problems group was more likely to suffer from depression (OR=47.537, 95%, CI: 33.669- 64.323) and anxiety (OR=9.822, 95%, CI: 7.529-12.813). The severity of sleep problems in Korean fire fighters was positive correlated with depression and anxiety.

**Conclusion:** These results show that higher prevalence of sleep problems in Korean fire fighters and Korean fire fighters with sleep problems have more depression and anxiety, and less quality of life than fire fighters with-out sleep problems. Sleep problems are important risk factor on the depression and anxiety in Korean fire fighters. Early detect of sleep problems of fire fighters will be needed to manage of depression and anxiety'.

**Keywords:** Insomnia, Prevalence, Anxiety, Depression, QoL, Fire fighter.