# Factors Related to Self-Reported Sleep Quality in Older Korean Americans With Chronic Pain

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**Purpose:** To investigate the biopsychosocial factors associated with subjective sleep quality in Korean American older adults experiencing chronic pain.

**Methods:** Elderly Korean Americans (n=135) were recruited from adult Medical daycare centers, local Korean churches, and senior centers in Maryland. The study's inclusion criteria were an age of 65 or older, having chronic pain, being able to read and understand Korean, and Mini Mental Status Examination score of 23 or greater. Data was collected using survey questionnaires, which included questions related to sleep quality, pain severity, pain interference, depression symptoms, quality of life, acculturation, number of chronic illness, and demographic variables. The Pittsburgh Sleep Quality Index (PSQI) was used to evaluate the outcome variable of sleep quality during the previous month. The index generates a composite score of seven components, including perceived sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleeping medications, and daytime dysfunction. Higher scores indicated lower sleep quality, and the score of greater than five determined poor sleep quality.

**Results:** There was no difference in demographic variables between higher and lower sleep quality groups. However, quality of life, pain severity, pain interference and depression symptoms were significantly worse and more pronounced in the lower sleep quality group ($p<.01$). Participants were divided into four quartile groups based on the level of pain severity and pain interference and found that as their level of pain severity and interference were worse, the perceived sleep quality ($p<.01$), sleep latency ($p<.01$), sleep disturbances ($p<.01$), and daytime dysfunction ($p<.01$) were worse. Participants with mild to severe depression symptoms were found to have significantly poorer sleep quality in all seven components of sleep quality ($p<.01$) compared to the group without depression symptoms. In regression analysis, depression symptoms ($\beta=.324$) and pain severity ($\beta=.199$) were the significant predictors for sleep quality ($R^2=.20$, $p<.01$).

**Conclusion:** Our findings suggest an association between self-reported sleep quality and changes in quality of life, pain, and depression symptoms in older Korean Americans experiencing chronic pain. It is highly recommended that sleep quality should be comprehensively assessed and managed among older Korean Americans, especially those with multiple chronic conditions that have potential to impact sleep

quality negatively. Further research is needed to determine the detailed mechanism through which these factors affect sleep quality.

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**Title:**
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**Keywords:**
Depression, Pain and Sleep quality

**Abstract Summary:**
The study was conducted to explore the factors related to self reported sleep quality among older Korean Americans with chronic pain. Older Korean Americans with chronic pain showed significantly different levels of quality of life, pain and depression symptoms depending on their level of sleep quality.

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**Author Summary:** Dr. Park's area of research has been focused on cultural diversity and self care. Dr. Park works closely with older Korean American immigrant population

as she conducts research and provides community services. Dr. Park studied culturally specific sleep quality and quality of life in this study.

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**Author Summary:** Dr. Kim's area of research is pain and cultural diversity. In this currently study, she investigated whether pain could be a significant predictor for sleep quality.

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**Author Summary:** Dr. Choi has been working with older Korean American population in the community. He conducted research on dementia and has interests in health promotion of older population.