Cannabis Use is Related to Self-Efficacy but not Sleep or Pain Symptoms: A Survey of Adults Prescribed Opioids for Pain or Opioid Use Disorder

Teresa Bigand, RN-BC, MSN, CNL1, Samantha Riedy, MS, RPSGT2, Mary Lee Roberts, RN, PhD, BS1, Caden Rogers, EMT1, Jamie Lewis, MD1, Marian Wilson, PhD, MPH, RN-BC3
1College of Nursing, Washington State University, Spokane, WA; 2Sleep and Performance Research Center, Elson S. Floyd College of Medicine, Washington State University, Spokane, WA; 3Northwest Spine and Pain Medicine, Spokane, WA

Background
• Adults use prescribed opioids for persistent pain (PP) conditions and for medication-assisted treatment for opioid use disorder (OUD).
• Adults with PP and OUD both suffer poor health outcomes such as high pain and poor sleep (Hazeckamp et al., 2013; Wilson et al., 2017).
• Self-efficacy is the confidence that one can autonomously manage health, and helps reduce pain and distress in PP (Jackson et al., 2014) and OUD adults (Wilson et al., 2017).
• Cannabis use is reported to manage pain, sleep problems, and psychological distress for PP (Bonn-Miller et al., 2014) and OUD adults (Wilson et al., 2017).
• Research Question: What are the relationships between cannabis use and sleep quality, pain intensity, and self-efficacy among adults who use opioid medications for OUD or PP?

Methods
• Valid, reliable measures on sleep quality, pain intensity, self-efficacy for symptom management, and self-efficacy for emotions were analyzed.
  • Patient-Reported Outcomes Measurement Information System (PROMIS) sub-scales for pain intensity and self-efficacy (symptom management and managing emotions).
  • Pittsburgh Sleep Quality Index for sleep quality.
  • A cannabis use questionnaire assessed frequency of cannabis use in the past month.
  • Sample size included 150 adults with OUD and 150 with PP (total N = 300).
  • Baseline comparability between groups analyzed using non-parametric analyses.
  • ANOVAs were conducted to explore:
    • Main effects for sample (PP or OUD) and cannabis use in the last month (yes/no), and their interaction.
    • Relationships between sleep quality, pain intensity, and self-efficacy.
    • Relationships among variables with participant type (PP or OUD) as a covariate.

Findings
• Non-parametric analyses showed that adults with PP were significantly older and had higher education, and less frequently used cannabis than adults with OUD (p < 0.01), while there were no statistically significant differences in other demographic factors between the two populations (p > 0.05).
• Cannabis use in the last month was not predictive of sleep quality, pain intensity, or self-efficacy for managing symptoms (p>0.21), but was predictive of self-efficacy for managing emotions (p < 0.05) where greater frequency of cannabis use was associated with lower self-efficacy for managing negative emotions.
• Better sleep quality was associated with greater self-efficacy (F(1,128) = 23.41, p<0.001) and less pain intensity (F(1,128) = 24.6, p<0.001).
• Adults with PP had poorer sleep quality (F(1,128) = 6.41, p = 0.001) and greater pain intensity (F(1,128) = 20.81, p = 0.001) than OUD patients while self-efficacy did not differ (F(1,128) = 2.76, p = 0.10).

Sample Demographics

Discussion
• Adults with PP have worse sleep quality and pain intensity than those with OUD.
• Cannabis is used more frequently among OUD than PP.
• This study provides no evidence that cannabis use influences pain, sleep, or confidence in symptom control.
• Higher frequency of cannabis use may reduce confidence in managing emotions.

Implications
• Adults with PP or OUD who frequently use cannabis have less confidence in managing distressing emotions.
• Targeted interventions that reduce symptoms and enhance self-efficacy are needed, as well as research that can test causal relationships between cannabis use and symptoms.

References

Contact Information
Teresa Bigand, RN, MSN, PhD Student Teresa.bigand@wsu.edu (253) 365-1161