Social determinants of health and insomnia in people receiving buprenorphine for OUD

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Introduction

- Sleep difficulties are common in people with opioid use disorder (OUD)[1].
- Reduced sleep quality and quantity have been noted during the different stages of OUD treatment, including after stabilization on buprenorphine[2,3].
- Psychosocial factors impact sleep health, yet this intersection has yet to be studied in OUD patients[4,5].
- Achieving a better foundational knowledge of the interplay between psychosocial factors and co-morbidities, such as insomnia, in this unique patient population would illuminate opportunities for intervention to improve OUD outcomes.

Objectives

- The objective of this study is to report on and compare patient-reported social determinants of health (SDoH) between individuals with and without insomnia among a sample of people receiving buprenorphine in outpatient OUD treatment.

Methods

- Secondary analysis of data collected from an ongoing cross-sectional survey study investigating the relationship between sleep and recovery from OUD
- **Inclusion criteria:** people between the ages of 18-65 stabilized on buprenorphine from an outpatient program
- **Primary outcome:** The Insomnia Severity Index (ISI), with scores of >=10 identifying clinically significant insomnia[6].
- **Social determinants of health:** SDoH survey items were adapted from the PhenX toolkit and selected based on domains represented in the Healthy People 2030 Framework
- Analysis: SDoH were compared between insomnia groups using chi-squared and Fisher's exact t-tests.

Results

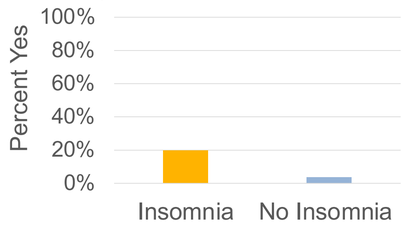
- Participants (n=87) are predominantly female (78.2%) who are White (52.3%) and Black (38.6%), with Medicare/Medicaid (93.8%).
- The median daily buprenorphine dose was 24mg (range: 6mg-30mg), and the median length of time on buprenorphine was 1.5 years (range: 21 days-5.0 years).

Results

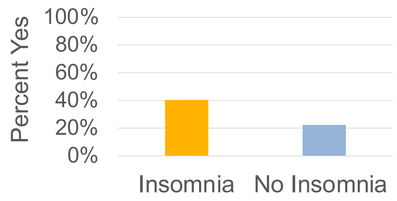
SDoH and Sleep

Over half (66.7%) of patients met criteria for clinically significant insomnia (ISI score >=10).

Health and Healthcare Domain: Inability to see a provider due to cost



Neighborhood/Built Environment Domain: Housing insecurity



Nearly half of patients with insomnia reported concern over **housing insecurity** in the next 2 months, and almost a quarter of patients with insomnia reported challenges with **affording health care.**

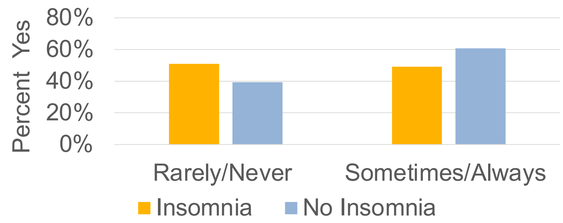
Demographics

Table 1. Patient demographics among sample of people receiving buprenorphine for OUD (N=87)

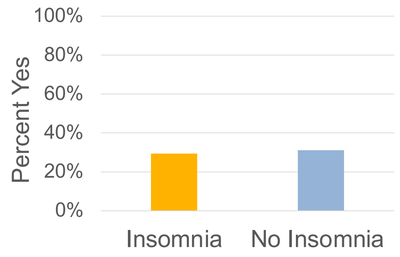
Demographics	Participants
Age (years; Mean± SD)	38.2± 9.7
Sex	
Male	21.8%
Female	78.2%
Race	
White	52.3%
Black	38.6%
Other	9.1%
Insurance	
Public	93.8%
Private	6.2%
Employment status	
Employed	30.7%
Unemployed	52.3%
Disabled	17.0%
Education	
High school/GED equivalent	73.9%
Some college	22.7%
4-year college	3.4%

Results

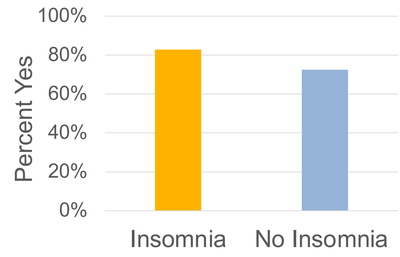
Social and Community Context Domain: How often do you meet with friends or relatives?



Economic Stability Domain: Percent Employed



Education Domain: High school education or equivalent



Discussion

- Consistent with research in other clinical populations, the insomnia-OUD co-morbidity exists in a complex socioecological context.
- Although not significant, people with insomnia more commonly reported housing insecurity and challenges affording healthcare than people without insomnia.
- Future research at the intersection of sleep dysfunction and MOUD should evaluate social determinants as well as medical and psychological factors in larger sample sizes.

References

1.Esmaeili HR, Ziaddinni H, Nikravesh MR, Baneshi MR, Nakhaee N. Outcome evaluation of the opioid agonist maintenance treatment in Iran. Drug Alcohol Rev. 2014 Mar;33(2):186-93. doi: 10.1111/dar.12112. Epub 2014 Jan 16. PMID: 24428135.
2.Zheng WH, Wakim RJ, Geary RC, Lander LR, Wen SJ, Xiao MC, Sullivan CR. Self-reported Sleep Improvement in Buprenorphine MAT (Medication Assisted Treatment) Population. Austin J Drug Abuse Addict. 2016;3(1):1009. Epub 2016 Jul 25. PMID: 28133635; PMCID: PMC5270620.
3.Ellis JD, Mayo JL, Gamaldo CE, Finan PH, Huhn AS. Worsening sleep quality across the lifespan and persistent sleep disturbances in persons with opioid use disorder. J Clin Sleep Med. 2022 Feb 1;18(2):587-595. doi: 10.5664/jcsm.9676. PMID: 34569924; PMCID: PMC8805005.
4.Wilkerson AK, McRae-Clark AL. A review of sleep disturbance in adults prescribed medications for opioid use disorder: potential treatment targets for a highly prevalent, chronic problem. Sleep Med. 2021 Aug;84:142-153. doi: 10.1016/j.sleep.2021.05.021. Epub 2021 May 27. PMID: 34153796; PMCID: PMC8503844.
5. Pengo MF, Won CH, Bourjeily G. Sleep in Women Across the Life Span. Chest. 2018 Jul;154(1):196-206. doi: 10.1016/j.chest.2018.04.005. Epub 2018 Apr 19. PMID: 29679598; PMCID: PMC6045782.
6.Morin CM, Belleville G, Bélanger L, Ivers H. The Insomnia Severity Index: psychometric indicators to detect insomnia cases and evaluate treatment response. Sleep. 2011 May 1;34(5):601-8. doi: 10.1093/sleep/34.5.601. PMID: 21532953; PMCID: PMC3079939.

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