disturbance p=0.250; fatigue p=0.709) were associated with physical health over time.

Conclusion: Measures of sleep-related impairment, fatigue, and sleep disturbance remained stable over time, suggesting that they can provide clinicians and researchers with a brief, accurate, and reliable way to assess patient-reported sleep outcomes in adults with ASD. Furthermore, given the stability of these sleep measures and their independent association with elevated mental health outcomes, there is a need for evidence-based treatments targeting sleep difficulties and associated symptomology in adults with ASD, a particularly underserved population.

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SLEEP HEALTH IN THE YOUNG ADULT CLINIC: A RETROSPECTIVE OBSERVATIONAL COHORT STUDY

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Introduction: The Toronto Academic Pain Medicine Institute (TAPMI) Young Adult Clinic (YAC) was developed to offer transition services for clients aged 17–25 with persistent pain. It was noticed that YAC patients had significant problems with their sleep and the program was expanded in January 2019 by including a sleep medicine specialist for systematic evaluation of sleep health. Long-term sleep disruption has been associated with increase sensitivity to pain, prolonged pain duration, and predicts chronic pain. The degree of pain relief can directly impact the quality and disruption of sleep.

Methods: After approval from institutional review board, we reviewed YAC medical charts from March 2018 to April 2019 and extracted information pertaining to demographics, chronic pain and sleep. We present here the preliminary data of our multidisciplinary clinic

Results: 55 medical charts were reviewed which included 40 females, 13 males, 2 nonbinary individuals, with a mean age of 20.3±2.4 years. 53% of the patients had chronic widespread pain. Symptoms of or disorder of sleep were reported in 72.7% of the patients. The various nighttime disorders of sleep were trouble falling asleep, insomnia, problems with sleep initiation, difficulty in maintaining sleep, poor sleep continuity, frequent night awakenings due to pain, restless leg syndrome (RLS), obstructive sleep apnea, parasomnic behavior, circadian rhythm disorder such as delayed sleep phase disorder. As assessed by Epworth Sleepiness scale, 7% of the patients had mild, 7% had moderate and 2% had severe daytime sleepiness. 42% of the youths demonstrated a low self-efficacy score as per Pain Self Efficacy Questionnaire (PSEQ). Patient Health Questionnaire (PHQ-9) was used to measure the severity of depression which showed that 5.5%, 27%, 18%, 14.5%, 22% of the YAC patients suffered from minimal, mild, moderate, moderately-severe and severe depression respectively. The information collected on Pain Catastrophizing scale (PCS) suggested that 24%, 29% and 31% were at low, moderate, and high risk respectively in having catastrophizing thoughts and feelings related to pain. There was no statistical difference in the means PSEQ, PHQ-9 and PCS scores of young adults.

Conclusion: Sleep disturbances may be an important modifiable risk factor for alleviating distress in young adults with chronic pain.

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INSUFFICIENT SLEEP LINKED WITH HIGHER COVID-19 INFECTION CASES AND DEATHS IN THE UNITED STATES

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Introduction: Causes of COVID-19 burden in urban, suburban, and rural counties are unclear, as early studies provide mixed results implicating high prevalence of pre-existing health risks and chronic diseases. However, poor sleep health that has been linked to infection-based pandemics may provide additional insight for place-based burden. To address this gap, we investigated the relationship between habitual insufficient sleep (sleep <7 hrs./24 hr. period) and COVID-19 cases and deaths across urban, suburban, and rural counties in the US.

Methods: County-level variables were obtained from the 2014–2018 American community survey five-year estimates and the Center for Disease Control and Prevention. These included percent with insufficient sleep, percent uninsured, percent obese, and social vulnerability index. County level COVID-19 infection and death data through September 12, 2020 were obtained from USA Facts. Cumulative COVID-19 infections and deaths for urban (n=68), suburban (n=740), and rural (n=2331) counties were modeled using separate negative binomial mixed effects regression models with logarithmic link and random state-level intercepts. Zero-inflated models were considered for deaths among suburban and rural counties to account for excess zeros.

Results: Multivariate regression models indicated positive associations between cumulative COVID-19 infection rates and insufficient sleep in urban, suburban and rural counties. The incidence rate ratio (IRR) for urban counties was 1.03 (95% CI: 1.01 – 1.05), 1.04 (95% CI: 1.02 – 1.05) for suburban, and 1.02 (95% CI: 1.00 – 1.03) rural counties.. Similar positive associations were observed with county-level COVID-19 death rates, IRR = 1.11 (95% CI: 1.07 – 1.16) for urban counties, IRR = 1.04 (95% CI: 1.01 – 1.06) for suburban counties, and IRR = 1.03 (95% CI: 1.01 – 1.05) for rural counties. Level of urbanicity moderated the association between insufficient sleep and COVID deaths, but not for the association between insufficient sleep and COVID infection rates.

Conclusion: Insufficient sleep was associated with COVID-19 infection cases and mortality rates in urban, suburban and rural counties. Level of urbanicity only moderated the relationship between insufficient sleep and COVID death rates. Future studies should investigate individual-level analysis to understand the role of sleep mitigating COVID-19 infection and death rates.

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CANNABINOIDS AND SLEEP HEALTH IN PATIENTS WITH CHRONIC NEUROPATHIC PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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