

for OSA diagnosis. We examined the diagnostic validity of the WatchPAT and assessed the correlation between its sleep indices and those measured by PSG in a cognitive normal predominantly older Black/African-American sample.

**Methods:** Preliminary data analysis on a limited sample of 26 participants without a prior diagnosis of OSA who underwent HSAT and 2-nights of nocturnal polysomnography (NPSG). An apnea-hypopnea index (AHI)  $\geq 15$  events/h characterized moderate to severe OSA. Pearson correlation statistics (Fisher's z Transformation) for PAT/NPSG indices including respiratory disturbance index (RDI), oxygen desaturation index (ODI), mean oxygen saturation (Spo<sub>2</sub>), REM Latency (min), awake period during sleep (WASO), and sleep onset latency (SOL) were determined.

**Results:** Of the 26 participants, 17 (65.4%) were Black/African-American, 9 (34.6%) were non-Hispanic White, and 19 (73.1% [13/19 (68.4%) Black/African-American]) were female. Mean (SD) age, BMI and education was 66.3 (4.5) vs. 69.9 (3.7) years, 29.6 (6.4) vs. 26.6 (5.5) kg/m<sup>2</sup> and 15.6 (3.1) vs. 17.6 (1.3) years for Black/African-American vs. non-Hispanic White, respectively. 35.3% vs. 33.3% and 17.7% vs. 22.2% of participants met criteria for moderate to severe OSA based on HSAT and NPSG, for Black/African-American vs. non-Hispanic White, respectively. The HSAT had a sensitivity and negative predictive value of 100% for both races, specificity of 78.6% vs. 85.7%, and positive predictive value (PPV) of 50% vs. 66.7%, for Black/African-American vs. non-Hispanic White, respectively. Analyses stratified by sex suggested that the WatchPAT had better diagnostic validity in Black/African-American women than men, with specificity of 83.3% vs. 75.0%. Among Blacks/African-Americans, the correlation for PAT/NPSG AHI, ODI and RDI were modest ranging from  $r = 0.65$  to  $0.70$   $P = .004$ , and mild for Spo<sub>2</sub> and Nadir oxygen desaturation ( $r = 0.53$  [95%CI, 0.04-0.79];  $P = .03$  for both). WASO, REM Latency and SOL showed no significant correlations.

**Conclusion:** Our preliminary data show HSAT having lower specificity, PPV, insights on sleep architecture for OSA diagnosis, and respiratory indices' correlations with those from PSG, in Blacks/African-Americans compared to general population samples. The measure performed better among women.

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## 0735

### SLEEP DISTURBANCES IN POST-ACUTE SEQUELAE OF COVID-19 (PASC)

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**Introduction:** Sleep difficulties and fatigue are highly prevalent, pervasive symptoms reported in patients with Post-Acute Sequelae of COVID-19 (PASC). As little is known of the predictors and severity of PASC-related sleep disturbance and intersection with fatigue, we leverage systematic data collected from the Cleveland Clinic ReCOVER Clinic for further elucidation

**Methods:** Analysis of data collected from Cleveland Clinic ReCOVER Clinic patients (February-November 2021) who completed the Patient-Reported Outcomes Measurement (PROMIS) Sleep Disturbance and PROMIS Fatigue questionnaires was performed. Data were extracted from the Cleveland Clinic COVID-19

registry and the electronic health record. PROMIS scores are standardized to the general U.S. adult population on a T-scale with mean  $50 \pm 10$ . PROMIS sleep disturbance and fatigue T-scores  $\geq 60$  indicates at least moderate disturbance and  $\geq 70$  indicate severe disturbance. T-test and Chi-square tests were used to examine cross-group differences. Multivariable logistic regression adjusted for age, race, sex, and body mass index (kg/m<sup>2</sup>) was performed to investigate factors associated with sleep disturbance severity.

**Results:** Out of 1321, 682 patients completed the PROMIS Sleep Disturbance questionnaire with age  $49.8 \pm 13.6$ , 75.2% female and 12.3% black race. Average T-scores were  $57.7 \pm 8.3$ , 281 (41.2%) patients reported at least moderate sleep disturbance and 50 (7.3%) reported severe sleep disturbances. Average PROMIS Fatigue T-score was  $63.0 \pm 9.2$ ; 68.6% patients reported at least moderate fatigue, 22.6% reported severe fatigue. Patients with moderate-severe compared to normal-to-mild sleep disturbances respectively had higher BMI ( $32.3 \pm 8.7$  vs  $30.9 \pm 7.5$ ,  $p = 0.049$ ), were more likely of black race ( $40.0 \pm 10.0$  vs  $41.0 \pm 15.7$ ,  $p = 0.010$ ), had worse general Anxiety Disorder (GAD)-2 questionnaire scores ( $2.8 \pm 2.1$  vs  $1.6 \pm 1.7$ ,  $p < 0.001$ ), Patient Health Questionnaire (PHQ)-2 scores ( $2.8 \pm 2.0$  vs  $1.6 \pm 1.7$ ,  $p < 0.001$ ) and PROMIS fatigue scores ( $66.7 \pm 7.8$  vs  $60.4 \pm 9.1$ ,  $p < 0.001$ ) with no difference in age, sex, or hospitalization due to COVID-19. In the adjusted model, black race was associated with moderate-severe sleep disturbance (OR = 3.42, 95%CI: 1.64-7.13).

**Conclusion:** The prevalence of moderate to severe sleep disturbances reported by patients presenting for PASC was very high i.e.  $>40\%$  and associated with obesity, black race and mood symptoms. Notably, after adjustment for demographics, black race conferred a 3-fold higher odds of moderate-severe sleep disturbance emphasizing the need to characterize race-specific determinants and disparities in COVID-19 survivors.

**Support (If Any):**

## 0736

### MANDIBULAR MOVEMENTS ARE A RELIABLE NONINVASIVE ALTERNATIVE TO ESOPHAGEAL PRESSURE FOR MEASURING RESPIRATORY EFFORT IN PATIENTS WITH SLEEP APNEA SYNDROME

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**Introduction:** Differentiation between obstructive and central apneas and hypopneas requires quantitative measurement of respiratory effort (RE) using esophageal pressure (PES), which is rarely implemented. This study investigated whether the sleep mandibular movements (MM) signal recorded with a tri-axial chin sensor (Sunrise, Namur, Belgium) is a reliable surrogate of PES in patients with suspected obstructive sleep apnea (OSA).

**Methods:** In-laboratory polysomnography (PSG) with PES and concurrent MM monitoring was performed. PSGs were scored manually using AASM 2012 rules. Data blocks ( $n = 8042$ ) were randomly sampled during normal breathing (NB), obstructive or central apnea/hypopnea (OA/OH/CA/CH), respiratory effort-related arousal (RERA), and mixed apnea (MxA). Analyses were: evaluation of the similarity and linear correlation between PES and MM using the longest common subsequence (LCSS) algorithm and Pearson's coefficient; description of signal amplitudes; estimation of the marginal effect for crossing from NB to a