

Title: Protocol to Improve CPAP Adherence & Quality of Life in Patients with OSA

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❖ PROBLEM STATEMENT

Obstructive sleep apnea (OSA) is a common sleep disorder with repetitive collapse of the upper airway. OSA patients are at a higher risk of poor health outcomes, increased risk of neurologic and cardiovascular disease, occupational, vehicular accidents and death.

❖ PROJECT PURPOSE

The overarching aim is to improve continuous positive airway pressure (CPAP) adherence and quality of life in patients with obstructive sleep apnea by implementing a CPAP management protocol.

- In patients, 30 years of age and older with an established diagnoses of OSA, will a continuous positive airway pressure (CPAP) management program lead to improved CPAP adherence and improved quality of life compared to CPAP education alone over a sixteen-week period?

❖ MODEL/NURSING THEORY

FADE Model/ Bandura's Social Cognitive Theory.

❖ METHODS

• Subjects (Participants)

- Nine patients, 30 years of age and older with an established diagnosis of OSA who are non-adherent with their CPAP device.

❖ Setting

Conducted at an outpatient pulmonology practice.

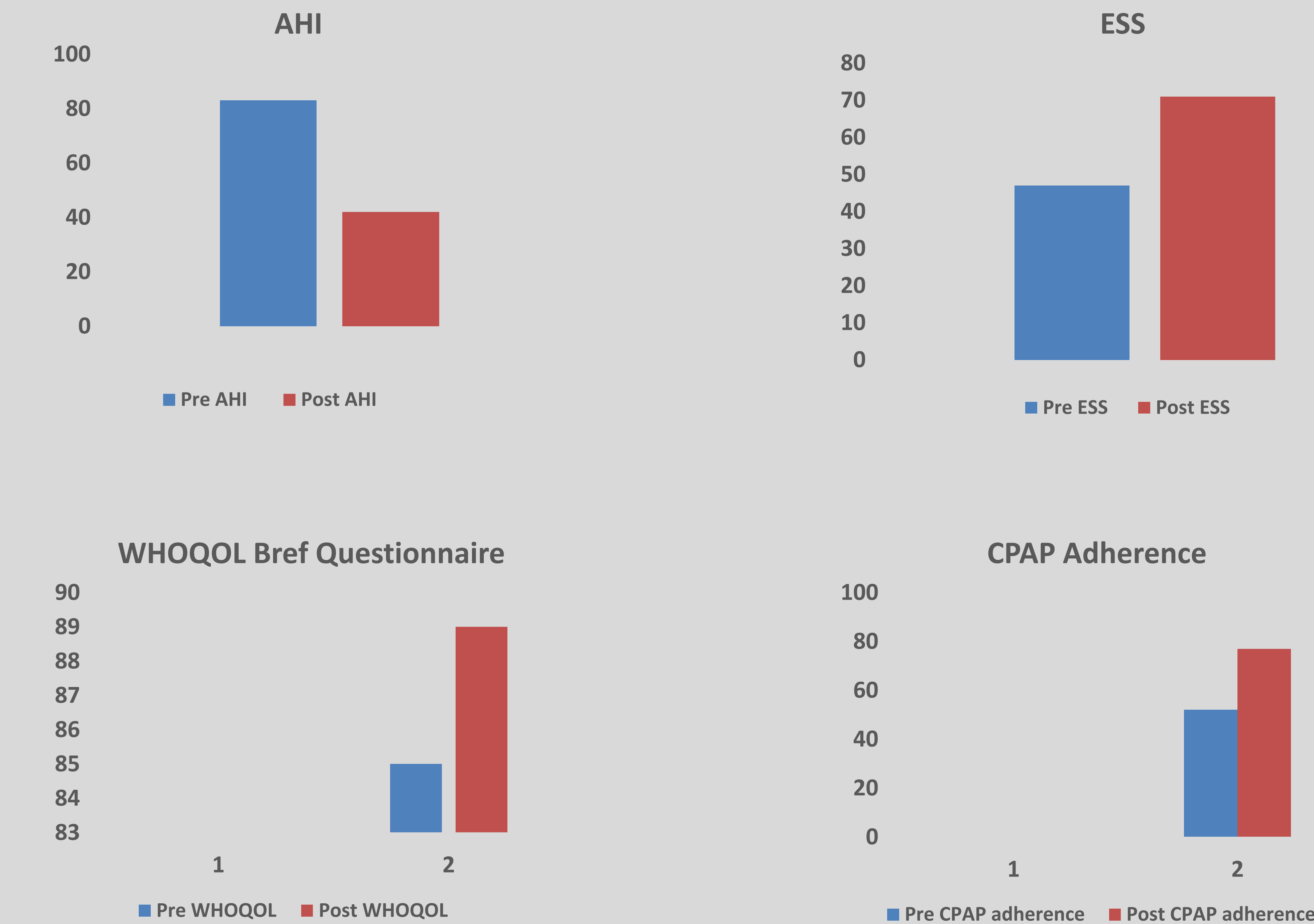
• Instruments/tools

- Measured sleep, quality of life, adherence and AHI score.
- Using the ESS and WHOQOL –Bref questionnaire and adherence report with AHI score.

• Intervention and Data Collection

Staff was educated on how to properly implement the protocol. Refitting of the mask and education done at the initial visit, followed by weekly phone calls and ESS questionnaire at their monthly visit and the WHOQOL at the initial and at the end of the 16-week period.

RESULTS



- AHI (Apnea-hypopnea Index)- a decrease means that patients are having less of these episodes during sleep while wearing the CPAP device.
- ESS (Epworth Sleepiness Score)- an increase means that the patients are experiencing an increased level of daytime sleepiness.
- WHOQOL-Bref Questionnaire (World Health Organization Quality of Life- Bref Questionnaire)- an increase in scores which means the patients are experiencing a better quality of life since they started to be more adherent with CPAP therapy.
- CPAP (Continuous Positive Airway Pressure) Adherence- an increase in scores means that the patients are more adherent with wearing the CPAP device.

❖ Results

- Apnea-hypopnea index scores decreased by 40.7% indicating less apnea-hypopnea episodes during sleep.
- CPAP adherence increased by 25% which shows that patients were wearing the device as advised.
- The WHOQOL- Bref Questionnaire score increased by 4% indicating that the patients had a slight improvement in their quality of life after improved CPAP adherence.
- The ESS scores increased by 24% meaning patients were not getting quality sleep.

❖ Discussion

- The number of patients decrease after the implementation of the project. A larger sample size would have yielded more of the results that were expected with this project.
- The next step would be to expand the project to other clinical areas to help improve CPAP adherence in not only patients 30 years of age and older who are diagnosed with OSA.

❖ NURSING IMPLICATIONS FOR ADVANCE PRACTICE

- There was a decrease in the apnea hypopnea index, improvement in CPAP adherence from the compliance reports and improvement in two domains of quality of life from the WHOQOL questionnaire at the clinical site. Ultimately, this may lead to fewer hospitalizations and a decrease in cost to the healthcare system.

❖ Sustainability

- The protocol is concise and straightforward, and staff was trained on how to properly use it.
- By integrating this protocol as part of the EMR, this will likely help to improve CPAP adherence rate and help to keep patients out of the hospital and improve their overall quality of life.

❖ References

