

Purpose The SEMSA was developed in response to research indicating that cognitive factors like self-efficacy can significantly predict compliance with continuous positive airway pressure (CPAP), even in the first week of treatment [1]. The scale consists of 26 items and evaluates three cognitive subscales: the perceived risk of obstructive sleep apnea, CPAP outcome expectations, and treatment self-efficacy. By examining these cognitive issues prior to treatment, clinicians can identify those patients with low levels of self-efficacy and initiate educational interventions to improve treatment outcomes.

Population for Testing The scale has been evaluated in a study of participants with a mean age of 47.7 ± 12.3 years.

Administration The SEMSA is a self-administered, paper-and-pencil measure requiring approximately 15 min for completion.

Reliability and Validity In a psychometric evaluation conducted by Weaver and colleagues [2], the scale was found to have an internal consistency of .92 and a test–retest reliability ranging from .68 to .77.

Obtaining a Copy An example of the scale's items can be found in the original article published by developers [2].

Direct correspondence to:

Terri E. Weaver

University of Pennsylvania School of Nursing

420 Guardian Drive

Philadelphia, PA 19104-6096, USA

Email: tew@nursing.upenn.edu

Scoring Respondents use a four-point, Likert-type scale ranging from 1 to 4 to indicate their agreement with statements regarding the risks of OSA, their expectations for treatment, and their dedication to CPAP therapy. For each of the instrument's subscales, resulting scores indicate different things. High scores on the perceived risk scale denote greater perceived risks of OSA; high scores on the outcome expectations scale denote more positive beliefs about treatment; high scores on the treatment self-efficacy scale denote a greater willingness to engage in CPAP treatment despite certain obstacles. These three scores can be used to target specific patient cognitions that could potentially hinder treatment outcomes.

Self-Efficacy Measure for Sleep Apnea (SEMSA)

Here are some sample questions from the scale.

My chances of having high blood pressure compared to people my own age and sex who do not have sleep apnea are:

Very low <input type="checkbox"/>	Low <input type="checkbox"/>	High <input type="checkbox"/>	Very high <input type="checkbox"/>
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My chances of falling asleep while driving compared to people my own age and sex who do not have sleep apnea are:

Very low <input type="checkbox"/>	Low <input type="checkbox"/>	High <input type="checkbox"/>	Very high <input type="checkbox"/>
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If I use CPAP then I will not snore.

Not at all true <input type="checkbox"/>	Barely true <input type="checkbox"/>	Somewhat true <input type="checkbox"/>	Very true <input type="checkbox"/>
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If I do not use CPAP I will be less alert during the day.

Not at all true <input type="checkbox"/>	Barely true <input type="checkbox"/>	Somewhat true <input type="checkbox"/>	Very true <input type="checkbox"/>
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I would use CPAP, even if I have to wear a tight mask on my face at night.

Not at all true <input type="checkbox"/>	Barely true <input type="checkbox"/>	Somewhat true <input type="checkbox"/>	Very true <input type="checkbox"/>
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I would use CPAP, even if it made my nose stuffy.

Not at all true <input type="checkbox"/>	Barely true <input type="checkbox"/>	Somewhat true <input type="checkbox"/>	Very true <input type="checkbox"/>
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References

1. Stepnowsky, C. J., Marler, M. R., & Ancoli-Israel, S. (2002). Determinants of nasal CPAP compliance. *Sleep Medicine*, 3(3), 239–247.
2. Weaver, T. E., Maislin, G., Dinges, D. F., Younger, J., Cantor, C., McCloskey, S., & Pack, A. I. (2003). Obstructive sleep apnea risk: instrument development and patient perceptions of obstructive sleep apnea risk, treatment benefit, and volition to use continuous positive airway pressure. *Sleep*, 26(6), 727–732.

Representative Studies Using Scale

- Olsen, S., Smith, S., Oei, T., & Douglas, J. (2008). Health belief models predicts adherence to CPAP before experience with CPAP. *European Respiratory Journal*, 32(3), 710–717.
- Baron, K. G., Smith, T. W., Czajkowski, L. A., Gunn, H. E., & Joes, H. R. (2009). Relationship quality and CPAP adherence in patients with obstructive sleep apnea. *Behavioral Sleep Medicine*, 7(1), 22–36.