

# THE EFFECT OF SUSTAINED NATURAL APOPHYSEAL GLIDES (SNAG) WITH THE ADDITION OF CHIN TUCK ON HIGH SCHOOL STUDENTS WITH FORWARD HEAD POSTURE

Mohammad Burhanudin Mawardi, Dea Linia Romadhoni  
[mohammadburhanudinmawardi@gmail.com](mailto:mohammadburhanudinmawardi@gmail.com)  
Universitas 'Aisyiyah Surakarta

## ABSTRACT

**Background:** *Forward Head Posture is defined as the position of the head structure that is more forward, not parallel to the ears with the shoulders away from the normal body center of gravity. There are studies that apply the intervention of sustained natural apophyseal glides (SNAG) but none have combined it with chin tuck exercises to determine the effect on Craniovertebral angle (CVA) values. This study aims to determine the effect of adding chin tuck exercises on sustained natural apophyseal glides (SNAG) interventions in high school students with Forward Head Posture conditions.* **Methods:** *This research is an experimental study with a pre- and post-experimental group design consisting of 36 respondents. With the inclusion criteria of men and women aged 16-18 years who have a craniovertebral angle  $<45^\circ$  and the exclusion criteria are students who have injuries such as fractures, have vertebral abnormalities and feel pain with a value of  $> 5$ . Respondents are divided into one group and an intervention is carried out with SNAG added chin tuck exercise. This intervention was carried out 3 times a week for 4 weeks. Craniovertebral angle was measured with the smartphone application On Protractor.* **Results:** *The Wilcoxon test was used to measure the effect of the intervention on the value of the Craniovertebral angle The results of the effect test using the Wilcoxon were obtained in the groups before and after being given the SNAG treatment with the addition of Chin Tuck showing a significance value of 0.046 ( $p < 0.05$ ).* **Conclusion:** *It can be concluded that the addition of chin tuck exercises to the SNAG intervention can increase the Craniovertebral angle in the forward head posture.*

**Keywords:** *forward head posture; SNAG; chin tuck; Craniovertebra angle*