Improving Forward Head Posture Through Kinesiology Taping and Exercise in College Students

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Objectives

- Compare the effectiveness of different interventions to determine which produced the greatest improvements in neck posture by changes in craniovertebral angle.
- Assess changes in cervical alignment and head position following intervention to identify which strategies had the most impact on improving posture.
- Consider the convenience and effectivenss of short-term posture interventions for college students with excessive screen use of ≥4 hours/day.

Background & Hypothesis

Background: Forward head posture, commonly referred to as "tech neck," is increasingly prevalent among college students due to prolonged screen use, defined as four or more hours of daily device use, which places sustained stress on the cervical spine. This posture deviation is associated with muscular imbalance, reduced cervical stability, compromised proprioception, and increased strain on the neck and upper back, potentially leading to discomfort and long-term functional limitations.[1] To address this growing concern, this study compares four intervention groups: Kinesiology Tape (KT), a Home Exercise Plan (HEP), a combined KT + HEP approach, and a control group with no intervention, to determine which method most effectively improves cervical alignment and neck posture in a college students.

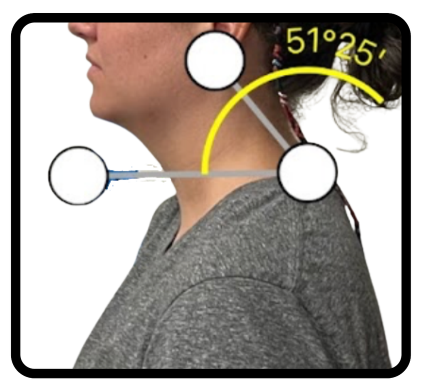
Hypothesis: It is hypothesized that participants receiving Kinesiology Tape & Home Exercise Plan will demonstrate the most significant improvement in posture.

Methodology

- This study used four groups, KT, HEP, combined KT + HEP, and control, to identify the most effective intervention for improving posture in college-aged students over 4 weeks.
- Posture was measured using the craniovertebral angle, where values below 48–50° indicate impairment[2]. Pre and post comparisons show which intervention best improves posture and neck posture.
- KT tape was applied to participants to target the upper trapezius and cervical extensors to support postural alignment, reduce forward head posture, and enhance proprioceptive feedback.

KT Tape Placement

Posture Focused HEP



Craniovertebral Angle Measure

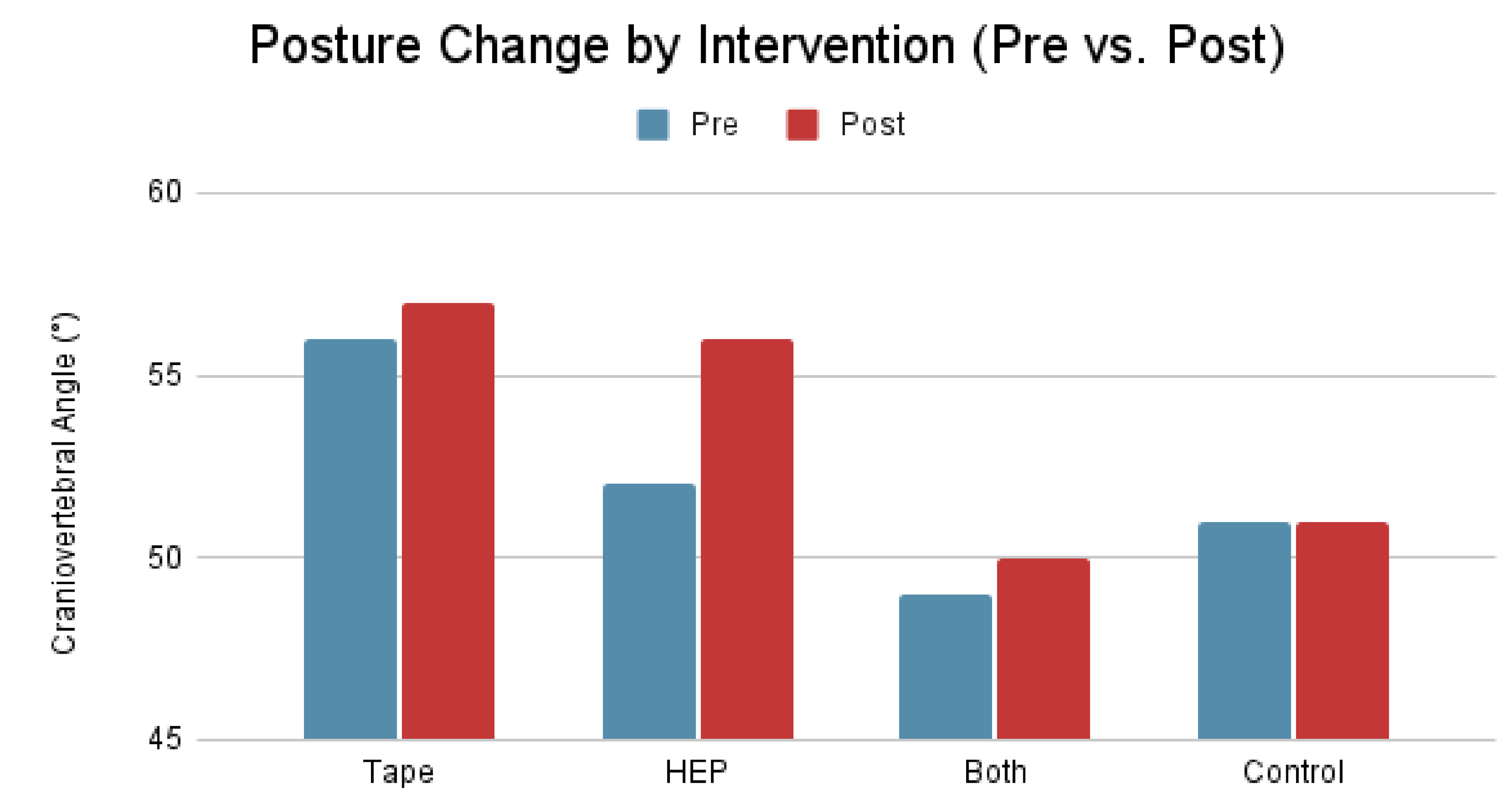
Results

All intervention groups, including KT tape, HEP, and the combined approach, showed improvement in posture compared to the control group.

- No single intervention was statistically superior. A significant within-subjects effect was observed ($p = .047$), while the time × group interaction was not significant ($p = .294$). Between-group differences were also not significant ($p = .349$). These results suggest that posture improves over time with intervention.

Average Angle Change	
KT Tape	+1.3°
HEP	+3.7°
Combined	+1.0°
Control	+0°

Intervention Comparison



Conclusion

All intervention groups, KT tape, Home Exercise Program (HEP), and the combined approach, demonstrated measurable improvements in posture over the 4-week period. While the HEP group showed the greatest overall gains, no single intervention proved statistically superior. This suggests that even brief, accessible posture-focused programs can positively influence alignment and muscular control. However, the absence of significant differences between groups highlights the need for future studies with larger sample sizes to more clearly determine which interventions may provide the greatest benefit.

References

1. El-Abd AM, Al-Shenqiti AM. Efficacy of kinesio taping versus postural correction exercises for neck pain: a randomized trial. J Bodyw Mov Ther. 2017;21(4):894-901
2. Zárate-Tejero CA, López-de-Uralde-Villanueva I, Gil-Martínez A, et al. Craniovertebral angle as a postural assessment tool: reference values and clinical implications. Appl Sci. 2024;14(7):3044.