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# The Impact of Kinesio Taping on Forward Head Posture: A Systematic Literature Review

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**Abstract:**

**Background:** Forward head posture (FHP) is one of the most common postural deviations associated with neck pain, altered cervical biomechanics, and functional limitations. Physiotherapy plays a key role in its conservative management. Kinesio taping has been increasingly used as an adjunct therapy to improve posture and reduce pain through proprioceptive feedback and neuromuscular facilitation.

**Objective** To systematically review the literature evaluating the impact of kinesio taping on forward head posture.

**Methods:** Electronic databases including PubMed, PEDro, Google Scholar, and Scopus were searched for studies published between 2015 and 2025. Randomized controlled trials and experimental studies assessing kinesio taping in individuals with forward head posture were included. The review followed PRISMA guidelines.

**Results:** Included studies demonstrated short-term improvement in craniovertebral angle, reduction in neck pain, and improved functional outcomes following kinesio taping. Greater and more consistent improvements were noted when kinesio taping was combined with physiotherapy exercises.

Conclusion: Kinesio taping is an effective adjunct in the physiotherapy management of forward head posture, particularly for short-term postural correction and pain reduction.

**Keywords:** Kinesio Taping; Forward Head Posture; Craniovertebral Angle; Neck Pain; Postural Correction; Physiotherapy

## INTRODUCTION

Forward head posture (FHP) is characterized by anterior displacement of the head relative to the trunk, resulting in abnormal cervical spine alignment. It is commonly observed among students, office workers, and individuals with prolonged computer or smartphone use. FHP increases the mechanical load on cervical structures, leading to muscle imbalance, pain, fatigue, and functional impairment.

Forward head posture (FHP) is one of the most common postural deviations observed in contemporary society and is increasingly recognized as a significant musculoskeletal concern within physiotherapy practice. It is characterized by the anterior positioning of the head relative to the vertical plumb line of the body, often accompanied by rounded shoulders and increased thoracic kyphosis. This altered alignment shifts the head's center of gravity forward, resulting in increased mechanical load on the cervical spine and associated musculature. With the rapid rise in sedentary lifestyles, prolonged screen exposure, and excessive smartphone usage, the prevalence of forward head posture has increased markedly across different age groups, particularly among students, office workers, and healthcare professionals.

Biomechanically, forward head posture significantly alters normal cervical spine loading patterns. In an ideal posture, the head is balanced over the trunk, requiring minimal muscular effort to maintain alignment. However, with forward translation of the head, the moment arm acting on the cervical spine lengthens, substantially increasing the compressive forces on cervical vertebrae, facet joints, and intervertebral discs. It has been suggested that for every inch of anterior head displacement, the effective load on the cervical spine increases

by approximately 3–4 kg. Over time, this excessive loading contributes to muscle fatigue, altered neuromuscular control, and chronic cervical dysfunction.

Muscle imbalance plays a central role in the development and maintenance of forward head posture. Individuals with FHP commonly exhibit over activity and tightness of superficial cervical extensors such as the upper trapezius, elevator scapulae, and sub occipital muscles, alongside weakness and inhibition of deep cervical flexors including the longus capitis and longus colli. Additionally, altered scapular positioning and weakness of scapular stabilizers, particularly the lower trapezius and serratus anterior, further compromise postural control. This muscle imbalance not only perpetuates faulty alignment but also increases the risk of developing associated musculoskeletal disorders.

Clinically, forward head posture has been strongly associated with a variety of symptoms including chronic neck pain, cervicogenic headache, shoulder pain, temporomandibular joint dysfunction, and reduced respiratory efficiency. Persistent abnormal cervical alignment can lead to degenerative changes in cervical intervertebral discs and facet joints, contributing to long-term disability. From a physiotherapy perspective, FHP is frequently encountered in both symptomatic and asymptomatic individuals and is often linked with decreased functional performance, poor quality of life, and reduced work productivity.

The assessment of forward head posture commonly involves measurement of the craniovertebral angle (CVA), which represents the angle formed between a horizontal line through the spinous process of the seventh cervical vertebra and a line connecting this point to the tragus of the ear. A decreased craniovertebral angle indicates greater severity of forward head posture. CVA assessment using photographic analysis is widely accepted in clinical and research settings due to its reliability and ease of application. In addition to postural assessment, functional measures such as pain intensity scales, neck disability indices, and muscle endurance tests are often employed to evaluate the clinical impact of FHP.

Physiotherapy management remains the cornerstone of conservative treatment for forward head posture. Traditional rehabilitation strategies include postural education, ergonomic modification, stretching of shortened musculature, strengthening of weakened muscles, and motor control retraining aimed at restoring optimal cervical and scapulothoracic alignment. Deep cervical flexor training and scapular stabilization exercises have been widely advocated to correct postural deficits and improve neuromuscular coordination. Although exercise-based interventions have demonstrated effectiveness, patient adherence and the ability to maintain corrected posture during daily activities remain ongoing challenges in clinical practice.

To address these challenges, kinesio taping has emerged as a popular adjunct intervention in physiotherapy rehabilitation. Kinesio taping is an elastic therapeutic taping method designed to mimic the properties of human skin, allowing a full range of motion while providing continuous sensory input. Unlike rigid taping techniques, kinesio taping does not mechanically restrict movement but is proposed to influence muscle function, proprioception, circulation, and pain perception through neurophysiological mechanisms.

The theoretical rationale for using kinesio taping in forward head posture lies in its ability to enhance postural awareness and provide proprioceptive feedback. By applying tape along the cervical spine or scapular region, patients may receive constant tactile cues that encourage correction of faulty posture during static and dynamic activities. Additionally, kinesio taping is believed to facilitate weak muscles, inhibit overactive muscles, and reduce pain through stimulation of cutaneous mechanoreceptors. This makes it an attractive intervention for early rehabilitation phases, where pain reduction and motor re-education are primary goals.

Several studies have investigated the effects of kinesio taping on postural alignment, neck pain, and functional outcomes in individuals with forward head posture. While some reports suggest improvements in craniovertebral angle and pain reduction following kinesio taping application, others indicate limited or short-term benefits when kinesio taping is used in isolation. Importantly, emerging evidence highlights that combining kinesio taping with corrective exercises may yield superior results compared to taping alone, suggesting a complementary role within comprehensive physiotherapy programs.

## AIM

To systematically review the impact of kinesio taping on forward head posture.

## OBJECTIVES

To evaluate the effect of kinesio taping on craniovertebral angle

1. To evaluate the effect of kinesio taping on craniovertebral angle
2. To assess the impact of Kinesio taping on neck pain and functional disability
3. To analyse the effectiveness of kinesio taping as an adjunct to physiotherapy intervention

## METHODOLOGY

### Study Design

Systematic literature review.

### Search Strategy

Electronic search was conducted in PubMed, PEDro, Google Scholar, and Scopus databases.

### Study Period

January 2015 – December 2025.

### Inclusion Criteria

1. Adults aged 18–60 years
2. 4 Diagnosed forward head posture
3. Kinesio taping as intervention

### Exclusion Criteria

1. Case reports
2. Observational studies
3. Paediatric populations
4. Non-English publications

### Quality Assessment

Methodological quality was assessed using PRISMA guidelines and PEDro scale.

## RESULTS

A total of 26 studies met the inclusion criteria. Most studies reported short-term improvement in craniovertebral angle following kinesio taping. Reduction in neck pain intensity and functional disability was consistently observed, especially when kinesio taping was combined with strengthening and postural correction exercises.

| Author &year | Title | Aim | Participants | Intervention | Outcome measures | Results |
|---|---|---|---|---|---|---|
| Gurudut Gauns, 2016 | Effect of kinesio taping on neck flexors and craniovertebral angle in FHP | To evaluate the effect of KT on FHP | 30 adults with FHP | Kinesio taping vs placebo for 6 days | CVA, neck flexor endurance | Improvement in CVA and pain in both groups |
| Kim et al., 2018 | Effects of Mckenzie Exercise, kinesio taping and myofascial release on FHP. | To compare combined physiotherapy interventions | 28 adults with FHP | McKenzie exercise + KT | CVA, NDI | Significant CVA improvement |
| Choi et al., 2019 | Effect of kinesiology taping and posture and proprioceptive on FHP | To evaluate kinesio taping vs postural exercises | 17 young adults with FHP | KT vs posture stabilization exercise | CVA, pain proprioception | Pain reduced in both groups CVA improved |
| Yoo & choi., 2018 | Effect of kinesio taping and proprioceptive training on FHP | To examine effect on pain and posture | 37 university students | KT + posture exercise | CVA, NDI | Greater improvement in CVA |

| | | | | | | |
|---|---|---|---|---|---|---|
| Raichura & Patel., 2025 | Effectiveness of scapular stabilization on CVA | To compare kinesio taping | 36 young adults with FHP | Kinesio taping vs SSE | CVA, NDI | SSE with KT greater improvement in CVA and NDI |
| Augustsson et al., 2022 | Short term Effects of postural Taping on pain and FHP | To assess postural taping | 26 adults with neck pain | Postural taping for 3 weeks | CVA, pain | Pain reduced no significant CVA change |

## DISCUSSION

The findings indicate that kinesio taping can positively influence forward head posture by enhancing postural awareness and reducing pain through neuromodulation. However, the effects appear to be temporary when used alone. Studies consistently emphasize that kinesio taping is most effective when integrated with exercise-based physiotherapy programs. This supports its role as an adjunct rather than a primary intervention.

## CONCLUSION

Kinesio taping is a safe and effective adjunct in the physiotherapy management of forward head posture. It provides short-term postural correction and pain relief, with superior outcomes observed when combined with corrective exercises.

## LIMITATIONS

1. Small sample sizes
2. Short intervention durations
3. Lack of standardized taping protocols

## RECOMMENDATIONS

1. Long-term randomized controlled trials
2. Standardized kinesio taping application methods
3. Combination with ergonomic interventions.

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