

KINESIO TAPING VERSUS RIGID TAPING ON SHOULDER SUBLUXATION AND UPPER LIMB RECOVERY IN POST STROKE SUBJECTS

Abdur Rahaman¹, Ilapandu Lakshmana Rao², Patchava Apparao³, Chintada Ganapathi swamy⁴

¹ Post graduate, Neurology, Department of Neurology, Swatantra Institute of Physiotherapy and Rehabilitation, Dr. NTR University, Vijayawada, India.

² Associate Professor, Department of Neurology, Swatantra Institute of Physiotherapy and Rehabilitation, Dr. NTR University, Vijayawada, India.

³ Principal, Department of Orthopaedics, Swatantra, Institute of Physiotherapy and Rehabilitation, Dr. NTR University, Vijayawada, India.

⁴ Professor of Biostatistics, Department of Biostatistics, GSL Medical College, Dr. NTR University, Vijayawada, India.

Corresponding Author: Abdur Rahaman

ABSTRACT

Background and Objective: Shoulder subluxation is a frequent complication following a stroke, often resulting from muscle weakness and impaired motor control around the shoulder joint. It can lead to shoulder pain, reduced upper limb function, and delayed rehabilitation outcomes. Taping techniques, such as rigid taping and kinesio taping, are commonly used as adjunct therapies to provide mechanical support and facilitate muscle activation. The objective of this study was to compare the effect of rigid taping and kinesio taping in reducing shoulder subluxation and associated shoulder pain in post-stroke subjects.

METHODS: Quasi experimental study design. 60 subjects having a clinical diagnosis of stroke were allocated into two groups by using convenience sampling method. In Group A (n=30) subjects were treated with kinesio tape with standard rehabilitation program, whereas in Group B (n=30) subjects were treated with rigid tape along with standard rehabilitation program. Participants were given interventions for five times a week for 8 weeks. The inch tape, VAS, FMUE were used to assess the intervention effectiveness.

RESULTS: Independent “t” test was used to compare the mean significance difference between continuous variables. Paired “t” test was used to assess the statistical significance difference between pre and post test scores. Statistical analysis of this data revealed that both groups significantly improved in parameters when compared within groups, but when compared between the groups, Kinesio tape improved better than Rigid tape.

CONCLUSION: The present study concludes both Kinesio tape and Rigid tape showed improvement in Subluxation distance, pain and upper limb function in poststroke subjects. However Kinesio taping along with standard rehabilitation program was more effective than Rigid taping along with standard rehabilitation program. Hence treatment intervention may be incorporated in management of post stroke.

KEY WORDS: Post stroke, Kinesio tape, rigid tape, inch tape, VAS, FMUE.

INTRODUCTION

A stroke is defined as decreased blood supply to the brain due to narrowed blood vessel (ischemic stroke) or rupture (haemorrhagic stroke) of blood vessel, which lead to immediate neurological dysfunction.¹ Worldwide, Stroke is a leading cause of death and disability. Annually, approximately 15 million people suffering with a stroke.² With prevalence being 17% at 1 week increasing to 22%-40% at 4-6 months, Shoulder subluxation or partial dislocation of the glenohumeral joint, usually observed in form of inferior disarrangement among poststroke subjects up to three-fourths of the poststroke survivors may experience the shoulder subluxation during the recovery process.³

Important risk factors for subluxation are proprioceptive deficits, lower motor recovery, flaccidity, mishandling, poor positioning, and influence of gravitational pull. Moreover, In the case of nerve roots dysfunction, the rotator cuff muscles of the shoulder are paralysed or weakened lead to shoulder inferior subluxation.⁴ Shoulder posterior subluxation is caused by spasticity of internal rotation muscles of shoulder (pectoralis major, latissimus dorsi, and subscapularis muscles).⁵ The Affected extremity should be properly supported during the initial flaccid or hypotonic phase of stroke. To protect the hemiplegic shoulder from subluxation, arm slings or orthotic devices are commonly prescribed.⁶ With help of finger breadth, tape, or calliper, and Xray, the degree of shoulder subluxation can be quantified as the distance from the acromion to the humeral head. These are the resources can be used to measure the magnitude of the subluxation of shoulder. Fingerbreadth method subjectively provides three levels of the subluxation and inch tape maintain accuracy whereas the X-ray measures the asymmetry in millimetres (mm) in relation to the unaffected shoulder.⁷⁻⁸

Physiotherapy procedures such as arm and shoulder slings, electrical stimulation, strapping and positioning are having less beneficial effect on aligning the head of the humerus into the glenoid fossa, reducing pain, allowing for functional use of the arm, and maintaining symmetry of upper extremities.⁹ rehabilitation procedures including sling suspension system, isometrics for muscles of respected limb, active and passive range of motion exercises have beneficial effect on shoulder joint in subjects with stroke. Suspension therapy one of the therapies which provides friction free environment to enhance the movement through inducing gradual muscle contraction by placing the limb gravity eliminated position therefore the distance between the scapula of glenoid cavity and head of humours.¹⁰ When patient is not able to perform movements or voluntary activity, the physiotherapists help them to facilitate movements. These movements called as passive range of movements. There are movements that are performed by patients themselves called as active movements. Both passive and active movements have the positive impact on the shoulder joint in terms of its range motion and flexibility.¹¹

In the field of physiotherapy rehabilitation, the taping is essentially used treatment procedure. Moreover, the taping is employed as both a means of treatment and prevention of sports-related injuries and to treat patients with shoulder joint related problems. To enhance proprioception and provide support and alignment correction during movements is major function of many types of the tapes.¹²⁻¹³ In early year of taping application, non-stretch tape was preferred. But, Lately, the Kinesio tape (KT) emerged as an increasingly popular technique. Taping is a non-invasive approach treat musculoskeletal related problems.

To treat patients with Musculo skeletal conditions, Kinesio taping is a widely used non-invasive treatment technique. Up to 140% length, the Kinesio tap can be stretched indeed this length is its original length. Moreover, the tape is removable easily after application compared to rigid tape. KT provides shear force to structures which are intend to treat because of its stretching property. In view of these above-mentioned properties, the therapists utilise to stabilize the joints, helps to intervene spasticity, improve function of the muscle by increasing the cutaneous mechanoreceptors activation, aids in pain relief and decrease inflammation by increasing lymphatic and blood circulation. Several authors discovered that the KT able to facilitate` tone in the muscle and reduces the pain through tissue healing.¹⁴⁻¹⁵

Taping is used as one of the methods to treat preventing or minimizing the shoulder subluxation. Normal alignment of scapula in relation to thorax, humours, and clavicle can be achieved by using tape. Not only preventing subluxation, but it also provides some support to the rotator cuff muscles to reduce the micro injury of the muscles around the shoulder joint. Additionally, the proprioceptive inputs provide feedback to the patient to handle the whole upper limb in proper manner to avoid further injury to shoulder.¹⁶

Rigid tape is often employed physiotherapy procedure for treating joints. To reduce skin irritation, the application begins with an under-wrap. Rigid tape can be the useful treatment modality to treat injured area by applying the tape with under-wrapping. For each joint, a rigid tape can be employed on the body parts with help stapes to protect the joint in a specific position while allowing the individual to participate in the activity.¹⁷ In some authors point of view, RT has positive impact on muscle function as well as joint stability. Psychological and proprioception are the key improvements can be achieved with help of rigid tape by applying on skin surface. With application of rigid tape parallel to muscle fibre may enhance the muscle activity as well as muscle strength.¹⁸

There are number of studies have been available on Kinesio tape and conventional rehabilitation on shoulder subluxation. Moreover, studies are available on RT and standard care, but lacks a comparison of Kinesio tape and Rigid tape in post stroke subjects with shoulder joint subluxation. Therefore, the main notion of study was to compare Kinesio tape and Rigid tape in post stroke subjects with shoulder subluxation.

NEED OF THE STUDY

Stroke is the second leading cause of death and the third leading cause of disability. The most common physical dysfunction in post-stroke patients is shoulder subluxation and shoulder pain. Kinesiology taping is effective in decreasing the incidence of shoulder subluxation and hemiplegic shoulder pain and to prevent further shoulder injury, and improve shoulder motion in the hemiplegic shoulder.

Rigid taping is another approach which is effective in reducing pain and subluxation and improve muscle function and joint stabilization and to eliminate pain by controlling the tension of the muscle causing the pain. There are numerous studies conducted on the Kinesio taping and rigid taping on shoulder pain. But there are limited studies to prove which is more effective for treatment of shoulder subluxation. So, the need of the study arises to compare the effectiveness of Kinesio taping and rigid taping in reducing shoulder subluxation and upper limb recovery in post stroke subjects.

AIM OF THE STUDY

The aim of the study was to assess the effect of Kinesio taping versus Rigid taping on shoulder subluxation and upper limb recovery in post stroke subjects and to compare them.

OBJECTIVES OF THE STUDY

1. To determine the effect of Kinesio taping on shoulder subluxation and upper limb recovery in post stroke subjects.
2. To determine the effect of rigid taping on shoulder subluxation and upper limb recovery in post stroke subjects.
3. To compare the effect of Kinesio taping versus rigid taping on shoulder subluxation and upper limb recovery in post stroke subjects.

HYPOTHESIS

RESEARCH HYPOTHESIS (H_1): Kinesio taping may be more effective when compared to Rigid taping on shoulder subluxation and upper limb recovery in post-stroke subjects.

ALTERNATE HYPOTHESIS (H_a): Rigid taping may be more effective when compared to Kinesio taping on shoulder subluxation and upper limb recovery in post-stroke subjects.

NULL HYPOTHESIS(H_0): There may be no significant difference between Kinesio taping and Rigid taping on shoulder subluxation and upper limb recovery in post-stroke subjects

REVIEW OF LITERATURE

Morone G, Pichiorri F (2023) conducted a study on post-stroke rehabilitation: challenges and new perspectives. The study discussed the increasing complexity of stroke rehabilitation and the need for integrating advanced therapeutic strategies. It emphasized the role of novel technologies, neuroplasticity-based approaches, and task-oriented training in improving recovery outcomes. The authors highlighted that combining conventional rehabilitation with modern innovations can enhance functional recovery and reduce long-term disability in stroke survivors.

Journal of Clinical Medicine. 2023 Jan 10;12(2):550.

Qu Y, Shi X, Wang Y, Ji T, Chen L, Yu S, Huo M (2025) conducted a cross-sectional study to observe the risk factors for shoulder subluxation after stroke using ultrasonography to measure thickness of the supraspinatus muscle. The study included stroke patients and evaluated supraspinatus muscle thickness as a determinant for shoulder subluxation. Ultrasonographic findings were analyzed along with clinical data to establish correlations. The results showed that reduced supraspinatus thickness was significantly associated with increased risk of shoulder subluxation in post-stroke patients. The study concluded that ultrasonography can be a valuable tool for early detection of patients at risk for shoulder subluxation.

Frontiers in Neurology. 2025 Mar 19; 16:1532004.

Ravichandran H, Janakiraman B, Sundaram S, Fisseha B, Gebreyesus T, Gelaw AY (2019) conducted a systematic review on the effectiveness of shoulder taping in hemiplegia. Multiple randomized controlled trials and clinical studies were reviewed to evaluate outcomes of taping interventions in post-stroke hemiplegic patients. The review assessed pain, shoulder subluxation, motor recovery, and functional improvement. The findings showed that taping techniques, particularly kinesio taping, were effective in reducing shoulder subluxation and improving motor outcomes when combined with conventional rehabilitation. The study concluded that shoulder taping can serve as an adjunctive therapy in hemiplegic rehabilitation.

Journal of Stroke and Cerebrovascular Diseases. 2019 Jun 1;28(6):1463-73.

Qu Y, Shi X, Wang Y, Ji T, Chen L, Yu S, Huo M (2025) conducted a cross-sectional study to observe the risk factors for shoulder subluxation after stroke using ultrasonography to measure thickness of the supraspinatus muscle. Stroke patients were included, and supraspinatus muscle thickness was measured using ultrasonography. The findings indicated that reduced supraspinatus thickness significantly increased the risk of shoulder subluxation. The study concluded that ultrasonographic evaluation of supraspinatus muscle can help in identifying patients at risk for post-stroke shoulder subluxation.

Frontiers in Neurology. 2025 Mar 19; 16:1532004.

Yim J, Kim B (2024) conducted a randomized controlled study on the effectiveness of shoulder taping in treating hemiplegic shoulder subluxation. Thirty-five post-stroke patients with shoulder subluxation were included in the study. The intervention involved application of shoulder taping combined with conventional rehabilitation. Pre- and post-treatment assessments were made for shoulder subluxation, pain, and functional outcomes. The results showed a significant reduction in subluxation and improvement in shoulder function in the taping group compared to the control group. The authors concluded that shoulder taping is an effective treatment for hemiplegic shoulder subluxation.

Medical Science Monitor: International Medical Journal of Experimental and Clinical Research. 2024 May 31;30: e944222-1.

Ravichandran H, Janakiraman B, Sundaram S, Fisseha B, Gebreyesus T, Gelaw AY (2019) conducted a systematic review on the effectiveness of shoulder taping in hemiplegia. Various clinical trials and studies were analysed to evaluate outcomes of shoulder taping interventions. The results showed that taping reduced pain, prevented shoulder subluxation, and improved functional recovery when used with standard rehabilitation. The study concluded that shoulder taping is an effective adjunctive intervention in hemiplegic stroke patients.

Journal of Stroke and Cerebrovascular Diseases. 2019 Jun 1;28(6):1463-73.

Arya K, Pandian S, Bhatnagar N, Sharma A (2021) conducted a case series on rehabilitation of shoulder subluxation based on ultrasonographic findings among post-stroke subjects. Post-stroke patients with shoulder subluxation were included and ultrasonography was used to evaluate muscle and joint changes. Interventions were planned according to ultrasonographic findings. The results showed that ultrasound-guided rehabilitation strategies improved shoulder stability and function. The study concluded that ultrasonography is a valuable tool in customizing rehabilitation for shoulder subluxation in stroke survivors.

Neurology India. 2021 Sep–Oct;69(5):1309-1317.

Qu Y, Shi X, Wang Y, Ji T, Chen L, Yu S, Huo M (2025) performed a cross-sectional study to assess risk factors for shoulder subluxation using supraspinatus muscle thickness measurement via ultrasonography in stroke patients. The findings revealed that decreased supraspinatus muscle thickness was significantly correlated with higher incidence of shoulder subluxation. The study concluded that ultrasound can be effectively used for identifying at-risk stroke patients.

Frontiers in Neurology. 2025 Mar 19;16:1532004.

Chatterjee S, Hayner KA, Arumugam N, Goyal M, Midha D, Arora A, Sharma S, Kumar SP (2016) conducted a randomized clinical trial on the California tri-pull taping method in the treatment of shoulder subluxation after stroke. Post-stroke patients with shoulder subluxation were divided into groups receiving either tri-pull taping or conventional treatment. Pre- and post-treatment assessments were conducted for subluxation, pain, and function. The results showed that tri-pull taping significantly reduced shoulder subluxation and improved function compared to controls. The study concluded that the California tri-pull taping method is effective in stroke-related shoulder subluxation management.

North American Journal of Medical Sciences. 2016 Apr;8(4):175.

Kim YJ, An J, Lee BH (2024) conducted a study on the effects of sling-suspension-based active shoulder joint exercise on shoulder subluxation, pain, muscle strength, and upper limb function in subacute stroke patients. Patients were divided into an intervention group receiving sling-suspension exercises and a control group receiving conventional rehabilitation. Assessments showed significant improvements in shoulder stability, pain reduction, muscle strength, and functional use of the upper limb in the intervention group. The study concluded that sling-suspension exercises are beneficial for shoulder subluxation and functional recovery in subacute stroke.

Medicina. 2024 Aug 20;60(8):1350.

Kul A, Ugur M (2018) conducted a study comparing the efficacy of conventional physical therapy modalities and kinesio taping in patients with shoulder impingement syndrome. Patients were assigned to kinesio taping or conventional physical therapy groups. Pain, range of motion, and functional status were measured before and after intervention. The results showed significant improvement in both groups, but kinesio taping provided additional benefits in pain relief and functional outcomes. The study concluded that kinesio taping is an effective adjunct to conventional therapy in shoulder impingement syndrome.

The Eurasian Journal of Medicine. 2018 Nov 30;51(2):139.

Alam S, Malhotra D, Munjal J, Chachra A (2015) conducted a randomized trial on the immediate effect of kinesio taping on shoulder muscle strength and range of motion in healthy individuals. Participants were randomly assigned to kinesio taping and control groups. Assessments were done immediately after taping. The results showed significant improvement in shoulder muscle strength and range of motion in the taping group compared to controls. The study concluded that kinesio taping has an immediate beneficial effect on shoulder function in healthy individuals.

Hong Kong Physiotherapy Journal. 2015 Dec 1;33(2):80-8.

Arslan SA, Erbahçeci F, Yorulmaz E, Baltacı G (2021) conducted a study on the clinical effectiveness of rigid or kinesio taping and manual therapy in patients with shoulder impingement syndrome. Patients were divided into groups receiving rigid taping, kinesio taping, or manual therapy. Pain, shoulder function, and disability were measured before and after treatment. The results showed that all interventions were effective, with taping groups showing greater improvements in functional outcomes.

The authors concluded that taping methods and manual therapy can reduce pain and improve function in shoulder impingement syndrome.

Journal of Exercise Therapy and Rehabilitation. 2021;8(2):133-43.

Deng P, Zhao Z, Zhang S, Xiao T, Li Y (2021) conducted a systematic review and meta-analysis of randomized controlled trials on the effect of kinesio taping on hemiplegic shoulder pain. Multiple trials were analyzed to evaluate pain reduction, functional recovery, and quality of life in post-stroke patients. The findings showed that kinesio taping significantly reduced shoulder pain and improved function compared to conventional therapy alone. The study concluded that kinesio taping is an effective adjunctive therapy for hemiplegic shoulder pain.

Clinical Rehabilitation. 2021 Mar;35(3):317-31.

Celik D, Karaborklu Argut S, Coban O, Eren I (2020) conducted a systematic review and meta-analysis on the clinical efficacy of kinesio taping in shoulder disorders. Randomized controlled trials and clinical studies were analyzed for outcomes on pain, function, and disability in various shoulder conditions. The results indicated significant benefits of kinesio taping in reducing pain and improving function across multiple shoulder pathologies. The study concluded that kinesio taping is clinically effective in managing shoulder disorders.

Clinical Rehabilitation. 2020 Jun;34(6):723-40.

Ravichandran H, Janakiraman B, Sundaram S, Fisseha B, Gebreyesus T, Gelaw AY (2019) conducted a systematic review on the effectiveness of shoulder taping in hemiplegia. The review included several clinical trials and reported that taping reduced pain and shoulder subluxation and improved motor function when used along with rehabilitation. The authors concluded that shoulder taping is an effective therapeutic adjunct in hemiplegia.

Journal of Stroke and Cerebrovascular Diseases. 2019 Jun 1;28(6):1463-73.

Cupler ZA, Alrwaily M, Polakowski E, Mathers KS, Schneider MJ (2020) conducted an evidence map review on taping for musculoskeletal conditions. The study synthesized evidence across multiple musculoskeletal disorders, evaluating outcomes such as pain, disability, and function. The findings showed that taping had supportive evidence for pain relief and functional improvement in many conditions. The study concluded that taping is a valuable adjunct intervention in musculoskeletal rehabilitation.

Chiropractic & Manual Therapies. 2020 Dec;28:1-21.

Tanoori P, Mohamed MN, Ali MR (2016) conducted a study on the effects of kinesio tape versus rigid tape on shoulder muscle strength in healthy tennis players. Participants were divided into kinesio and rigid taping groups, and shoulder muscle strength was assessed after intervention. The results indicated that both kinesio and rigid taping improved muscle strength, with kinesio tape showing slightly superior effects. The study concluded that kinesio taping may provide better outcomes in enhancing muscle strength in athletes.

International Journal of Applied Exercise Physiology. 2016.

Qureshi H, Ahmad U, Rehman MMU, et al (2024) conducted a randomized controlled trial to evaluate the effects of functional kinesiotaping on acromiohumeral distance, pain, quality of life, and disability in overhead athletes with rotator cuff tendinopathy. The study measured acromiohumeral distance using tape and assessed pain using the Visual Analogue Scale. The findings indicated that kinesiotaping significantly improved shoulder alignment, reduced pain scores, and enhanced functional outcomes. The study highlighted the potential role of taping techniques in improving joint biomechanics and pain management in populations with shoulder dysfunction.

Advances in Rehabilitation. 2024;38(4):25–33

Ada L (2015) conducted a study on supportive devices for preventing and treating shoulder subluxation in post-stroke patients. The study reviewed the effectiveness of slings, orthoses, and positioning strategies in maintaining glenohumeral alignment and reducing subluxation-related pain. The results emphasized early intervention with supportive devices to prevent secondary complications, improve functional recovery, and enhance quality of life in hemiplegic stroke patients. The study also discussed limitations of conventional devices and recommended individualized approaches.

Stroke. 2015;36(5):1027–1030.

Wiesner K, Schwarz A, Meya L, Kaufmann JE, Tränka C, Luft AR, et al (2024) conducted a quality management project within the ESTREL study to determine interrater reliability of the Fugl-Meyer Motor Assessment in stroke patients. The study assessed motor recovery of the upper extremity using the Fugl-Meyer Upper Extremity scale in a cohort of post-stroke individuals. Results demonstrated excellent interrater reliability (ICC >0.98) across items and subscales. The study concluded that the Fugl-Meyer assessment is a reliable tool for clinical and research applications in post-stroke motor rehabilitation.

Frontiers in Neurology. 2024; 15:1335375

Kim JH, Lee BH (2017) conducted a study on the effects of elastic taping applied along with conventional rehabilitation therapy in subacute stroke patients with shoulder subluxation. The study evaluated improvements in shoulder pain and upper extremity motor function using functional assessments. The results showed significant reduction in shoulder pain and enhanced upper limb function. The authors concluded that elastic taping is an effective adjunct to standard rehabilitation in post-stroke shoulder subluxation.

NeuroRehabilitation. 2017;41(4):753–757.

Chatterjee S, Hayner KA, Arumugam N, Goyal M, Midha D, Arora A, Sharma S, Kumar SP (2016) conducted a randomized clinical trial to investigate the California Tri-Pull Taping (CTPT) method in post-stroke shoulder subluxation. Participants received CTPT along with conventional rehabilitation, and outcomes were measured for shoulder alignment, pain, and functional improvements. Findings showed significant improvements in shoulder stability and reduction in pain, indicating that CTPT is an effective intervention for hemiplegic shoulders.

North American Journal of Medical Sciences. 2016 Apr;8(4):175.

Jung KM, Choi JD (2019) conducted a study on active shoulder exercises using a sling suspension system in acute stroke patients with shoulder subluxation. The intervention aimed to improve shoulder alignment, proprioception, and upper limb function. Results demonstrated improved joint stability, proprioceptive awareness, and motor function. The authors concluded that sling suspension-based active exercises are effective in early rehabilitation of shoulder subluxation.

Med Sci Monit. 2019;25:4849–4855.

Sawant VS, Kanase SB (2025) conducted a study to evaluate the effect of conventional therapy combined with positioning and isometric shoulder exercises on functional shoulder subluxation in post-stroke survivors. The study assessed shoulder alignment, pain, and motor function. The results indicated significant improvement in shoulder stability and upper limb function, demonstrating that isometric exercises with proper positioning are beneficial in managing post-stroke shoulder subluxation.

J Stroke Cerebrovasc Dis. 2025;34(8):106552.

Balala R, Rai RH, Pal R, Malvi R, Jain R (2025) conducted a study on the use of Kinesio taping in post-stroke patients with hemiplegic shoulder pain. The intervention included elastic taping along with conventional rehabilitation, and outcomes were measured for pain reduction and upper limb motor function. The findings demonstrated significant improvements in both parameters. The study concluded that Kinesio taping is a valuable adjunctive therapy for shoulder rehabilitation in stroke patients.

J Neonatal Surg. 2025;14(26s):1210–1214.

Wang Y, Zhang S, Zhao Z, Li T, Xiao P (2022) conducted a systematic review and meta-analysis to evaluate the efficacy of Kinesio taping on upper limb function in post-stroke patients. Multiple randomized controlled trials were analysed for shoulder pain, motor function, and functional outcome. The review concluded that Kinesio taping significantly improves upper limb function and can be effective. *Neurol Sci.* 2022;43:3451–3463.

Yim J, Kim B (2024) conducted a randomized controlled study on shoulder taping in hemiplegic post-stroke patients. Thirty-five participants received taping along with conventional rehabilitation. Pre- and post-intervention assessments included shoulder subluxation, pain, and upper limb function. Results demonstrated significant reductions in subluxation and pain, and improvement in functional outcomes. The study concluded that shoulder taping is an effective treatment for hemiplegic shoulder subluxation.

Med Sci Monit. 2024;30:e944222.

Tan B, Zhao Z, Li Y, Zhang S, Xiao T (2022) conducted a systematic review and meta-analysis of randomized controlled trials to assess the effects of Kinesio taping on hemiplegic shoulder pain. Outcomes measured included pain, upper limb motor function, and joint alignment. Findings indicated that Kinesio taping effectively reduces pain and improves upper limb function in post-stroke patients.

Clin Rehabil. 2022;36(3):317–331.

Dalvi K, Puntambekar A (2019) conducted a study on the effect of rigid taping for scapular re-alignment in patients with shoulder dysfunction. The intervention involved non-elastic taping applied to correct scapular positioning, and outcomes were assessed for shoulder alignment and function. Results showed improved scapular alignment and enhanced functional outcomes. The study concluded that rigid taping is effective in managing shoulder dysfunction.

Int J Hum Soc Sci Invention. 2019;8(2 Ser-I):57–60.

Hayner KA (2012) conducted a single-subject ABA design study to evaluate the California Tri-Pull Taping (CTPT) method for post-stroke shoulder subluxation. The study assessed shoulder alignment, pain, and upper limb function before and after the intervention. Findings demonstrated that CTPT provided mechanical support and proprioceptive feedback, effectively reducing subluxation and improving functional outcomes.

Am J Occup Ther. 2012;66(6):727–736.

Comley-White N, Mudzi W, Musenge E (2018) conducted a randomized trial to evaluate the effects of shoulder strapping in post-stroke patients. Outcomes included shoulder alignment, pain, and upper limb functional recovery. The results indicated improvements in shoulder stability, reduction in subluxation, and enhanced functional performance. The study concluded that non-elastic shoulder strapping is beneficial in post-stroke rehabilitation.

Physiotherapy. 2018;104(3):316–323.

Hanger HC, Whitewood P, Brown G, Ball MC, Harper J, Cox R (2000) conducted a randomized controlled trial to investigate rigid strapping as a preventive strategy for post-stroke shoulder pain. The study evaluated joint alignment, pain, and shoulder function. Findings showed that rigid strapping reduced pain and improved functional outcomes in acute stroke patients.

Clin Rehabil. 2000;14(6):624–632.

Peters SB, Lee GP (2013) conducted a study to assess the functional impact of shoulder taping in hemiplegic upper extremity rehabilitation. Outcomes measured included shoulder alignment, muscle activation, and functional performance. The study found that taping provided mechanical support, enhanced proprioceptive feedback, and improved upper limb function. The authors concluded that shoulder taping is an effective adjunct in post-stroke rehabilitation.

Occupational Therapy Health Care. 2013;17(2):35–46.

MATERIALS AND METHODS

STUDY DESIGN: Quasi-experimental study design.

ETHICAL CLEARANCE AND INFORMED CONSENT: The study protocol was approved by the Ethical Committee of GSL Medical College & General Hospital (Annexure-I), the investigator explained the purpose of the study and given the patient information sheet. The participants were requested to provide their consent to participate in the study (Annexure-III). All the participants signed the informed consent and the rights of the included participants have been secured.

STUDY POPULATION: Subjects clinically diagnosed with Post stroke shoulder subluxation by a Neuro Physician.

STUDY SETTING: The study was conducted at Department of Physiotherapy, GSL general hospital, Rajamahendravaram, Andhra Pradesh, India.

STUDY DURATION: The study was conducted for a period of one year

INTERVENTION DURATION: 5 sessions per week for 8 weeks.

STUDY SAMPLING METHOD: Systematic random sampling

SAMPLE SIZE: A total of 80 subjects were screened in that 60 subjects, both men and women with post stroke shoulder subluxation who are willing to participate in the study were included in this study, all the recruited participants were explained about the study. After obtaining informed consent form and meeting the criteria, total 60 subjects were allocated into two groups equally by systematic random sampling method.

Group A - Kinesio taping along with conventional physiotherapy (30 subjects)

Group B – Rigid taping with conventional physiotherapy (30 subjects)

GROUPS	NO. OF SUBJECTS	TREATMENT
GROUP A	30	KINESIO TAPING ALONG WITH TRADITIONAL PHYSIOTHERAPY
GROUP B	30	RIGID TAPING WITH CONVENTIONAL PHYSIOTHERAPY

MATERIALS USED

- Kinesio tape
- Rigid tape
- Cotton tape
- SCISSORS
- Inch tape
- Chair

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- Post stroke subjects (18years of age or older)
- Subjects who can understand and follow instructions [Mini-mental state examination (MMSE) score 24-30]
- Subjects who were willing to become research subjects by signing an informed consent form after obtaining an explanation.

EXCLUSION CRITIREA

- A history of fracture of the clavicle, acromion, glenoid fossa or humerus is less than 1 year and un stability of the side of the weak upper limbs or a history of shoulder sprain or subluxation before stroke.
- Acute inflammation of the shoulder area.
- Lesions on the skin of the shoulder or the area where the tape will be applied.

OUTCOME MEASURES

INCH TAPE: An instrument used for taking measurement reading between two markings or points the distance is measured from acromion to the humeral head.¹⁹

THE FUGL-MEYER UPPER EXTREMITY (FMUE) SCALE: This is a widely used and highly recommended stroke-specific, performance-based measure of impairment. It is designed to assess reflex activity, movement control and muscle strength in the upper extremity of people with post-stroke hemiplegia. The FMUE Scale comprises 33 items, each scored on a scale of 0 to 2, where 0 = cannot perform, 1 = performs partially and 2 = performs fully. It requires only household items for testing, and takes up to 30 minutes to administer.²⁰

VISUAL ANALOGUE SCALE (VAS): It is used to measure severity of pain in this zero indicates no pain and 10 indicates extreme pain. It has a 10 cm long horizontal line with polar descriptors of '0' has 'no pain' and '10' has 'severe pain'. It located at either end of the line. Patients are instructed to draw a vertical mark on the line indicating their pain level.²¹

INTERVENTION

The study consisted of 8 weeks of intervention program which includes Kinesio taping along with conventional physiotherapy program (Group A) and Rigid taping along with conventional physiotherapy (Group B). The study was explained individually to the subjects to minimize the learning effect during the course of the study before the commencement of intervention. Baseline measures were taken before the treatment by using Inch tape, The Fugl-Meyer Upper Extremity (FMUE) Scale, Visual Analogue Scale (VAS) and post-test measures were taken after 8 weeks of intervention by using Inch tape, The Fugl-Meyer Upper Extremity (FMUE) Scale, Visual Analogue Scale. Before treatment commencement, all the participants in this study were asked remove the hair on the shoulder area where tape intend to place. Moreover, pretest has been conducted for all the subjects' skin to see any allergic reaction was took place or not.

GROUP A: KINESIO TAPING

In this group A, screening has been done for 30 subjects. Preintervention and postintervention evaluations were taken for all the 30 patients. For subjects, total 40 sessions standard care has been provided after the Rigid tape and Kinesio tape application and the total length of the treatment was 8 weeks.

Kinesio taping is a method that was used to facilitate or inhibit muscle function, supports joint structure, reduce pain and provide proprioceptive feedback to achieve and maintain good body alignment. In this study, a 5 cm wide Kinesio Tape was used for facilitation of deltoid, supraspinatus, and teres minor muscles. Firstly, the tape was placed on the participants supraspinatus muscle with 30 degrees of shoulder abduction, slight flexion and internal rotation. During tape application, the participants humerus head was positioned back to its original position. Of 5 cm tape, without strain, the first 4 cm of the strip was applied to the origin of supraspinatus and remaining tape was placed with a stretch of about 25- 50% of the full stretch on the insertion area of humours head. Secondly, the tape was placed for deltoid muscle of subjects. Of 5cm tape, 4 cm tape was administrated without any stretch at the midpoint of the muscle to acromion part of scapula.

Then, remaining 1cm tape was used with about a 20-30% stretch. Thirdly, the tape was used for teres minor muscle with slight flexion and abduction of the shoulder joint. Scapular inferior angle where the base strip of the tape was placed and other portion of the tape was placed on major tuberosity of humerus with about a 15 to 25% of strain. In the final step of the taping procedure, the tape has been used to reduce shoulder subluxation. To prevent shoulder subluxation, the physiotherapist cut the tape in Y shape and administered. The base of the strip was applied to the acromion process, and then, both ends of the strip are stretched with 50-70% strain and placed along the deltoid anterior and posterior borders separately to the deltoid tuberosity after repositioning the shoulder.²²



FIG 1: KINESIO TAPE



FIG 2: Application of Kinesio tape in Sitting position



FIG 3: Participant performing shoulder isometrics with Kinesio tape while therapist applying resistance



FIG 4: Participant performing shoulder flexion with Kinesio tape while therapist applying resistance



FIG 5: Participant performing shoulder Abduction with Kinesio tape while therapist applying resistance



FIG 6: Participant performing shoulder Adduction with Kinesio tape while therapist applying resistance

GROUP B: RIGID TAPING

In this group A, 30 subjects were screened did baseline evaluation and during 8 weeks of treatment. Total 40 sessions were conducted for all subjects for 8 weeks duration. Each week, 5 treatment sessions has been provided for participants.

Two types of tape were employed on the surface of the affected shoulder. Firstly, 1.5-inch self-adhesive cotton tape was applied followed by a 1 inch Rigid tape was placed on the area which was being affected. Participants were instructed to place their affected arm on a supporting table to approximate the humeral head into the glenoid cavity. On top of the cotton undercover tape, three pieces of rigid strapping tape were applied to protect the skin.

With out any pull, the cotton tape was placed. This undercover administration was done in following three directions: (a) to two inches above the glenoid fossa (middle), from 1.5 inches below the deltoid tuberosity (b) to 1.5 inches above the mid spine of scapula (posterior), from 1.5 inches below the deltoid tuberosity and (c) from 1.5 inches below the deltoid tuberosity, over the coracoid process to 1.5 inches above the clavicle (anterior). Employed undercover tapes were covered by the rigid strapping tape with an enough upward pull direction to allow the tape to “ripple.” Extra care has been provided by applying another two pieces of rigid tape.²³

In order to observe better improvements in participants, standard care also has been given along with Kinesio and Rigid taping. Participants were taken 5 sessions of treatment per week for 8 weeks. However, taping administration was done 3 times per week for 8 weeks.

The total treatment time for each session was 45 minutes to 60 minutes provided.

Conventional physiotherapy was offered along with KT and RT. As conventional physiotherapy procedures, sling suspension-based system active shoulder exercises training, passive and active movements, and isometrics for shoulder muscles were employed. Horizontal abduction and adduction, internal and external rotation, abduction and adduction, flexion and extension given for each participant in the study.²⁴

With a 7- minute period, 75 repetitions for each exercise were given for participants who perform active exercise on sling suspension-based system.

In addition to the standard rehabilitation protocol provided to the control group, isometric shoulder exercises were also given as an adjunct intervention. These exercises were given once a day, five days a week. The routine included isometric contractions for shoulder forward flexion, horizontal abduction, abduction, as well as internal and external rotation.

Each exercise was carried out with the support and manual resistance of a physiotherapist, who applied resistance opposite to the intended direction of movement to promote static muscle activation without actual joint displacement.²⁵



FIG 7: RIGID TAPE



FIG 8: Application of Rigid tape in Sitting position



FIG 9: Participant performing shoulder isometrics with Rigid tape while therapist applying resistance



FIG 10: Participant performing shoulder flexion with Rigid tape while therapist applying resistance

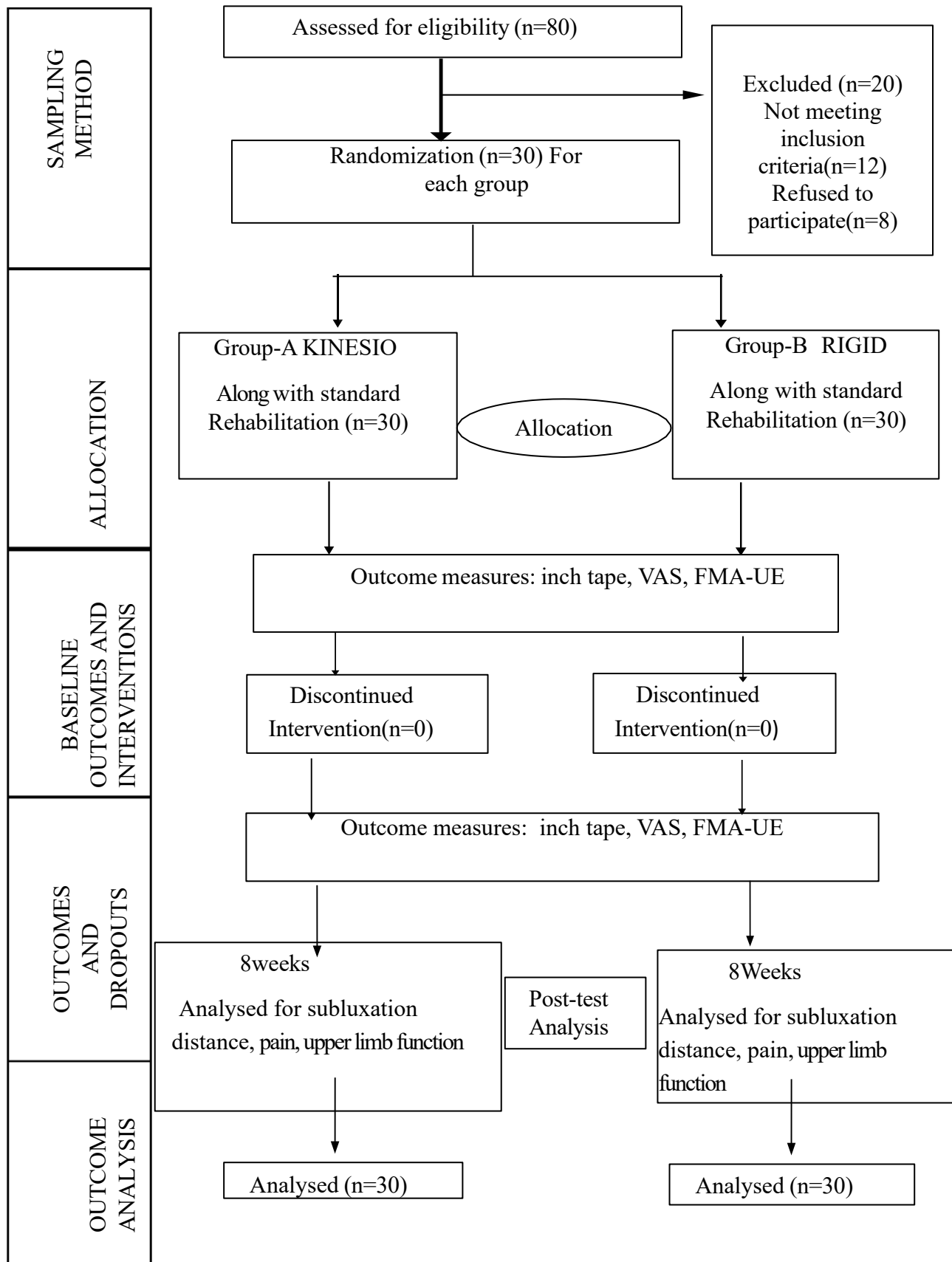


FIG 11: Participant performing shoulder Abduction with Rigid tape while therapist applying resistance



FIG 12: Participant performing shoulder Adduction with Rigid tape while therapist applying resistance

FLOW CHART



STATISTICAL ANALYSIS

All statistical analysis was done using SPSS version 21.0 and Microsoft Excel 2007. Descriptive statistical data was presented in the form of mean $\pm$ standard deviation and mean differences. Percentages were also calculated and presented.

Inter groups: A paired Student “t” test was performed to assess the statistical difference within each group for Inch tape measurement of shoulder subluxation, Visual Analog Scale (VAS) for pain, and Fugl-Meyer Assessment for Upper Extremity (FMA-UE) from pre-test to post-test values in post-stroke subjects.

Intra groups: An independent Student “t” test was performed to assess the statistical difference in mean values between the Kinesio taping group and the Rigid taping group for Inch tape, VAS, and FMA-UE outcomes. For all statistical analysis, $p < 0.05$ was considered statistically significant.

RESULTS

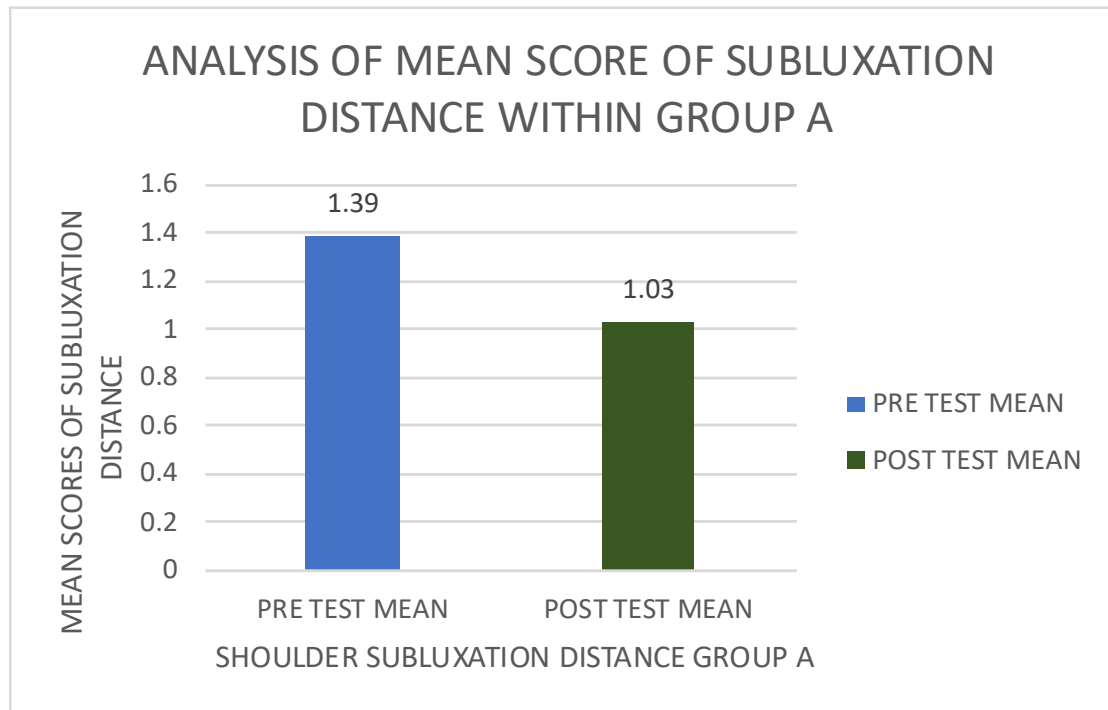
This research aimed to investigate the comparative effectiveness of Kinesio taping versus Rigid taping, each administered alongside a standard rehabilitation protocol, in addressing shoulder subluxation among post-stroke individuals. The study design was illustrated using a CONSORT flow diagram, which outlined the procedural steps including participant screening, randomization, intervention, and subsequent analysis.

Out of 80 individuals assessed for eligibility, 60 participants met the inclusion criteria and were enrolled in the trial. Following baseline evaluations, subjects were randomly assigned to two intervention groups. Group A received Kinesio taping, while Group B underwent Rigid taping, both in conjunction with conventional rehabilitation. Each group comprised 30 participants who completed the intervention phase. Statistical analysis revealed a significant difference in outcomes between the two groups, indicating the efficacy of the respective taping methods.

ANALYSIS OF MEAN SCORE OF SHOULDER SUBLUXATION DISTANCE WITHIN GROUP A.

GROUP A		MEAN	SD	P VALUE	INFERENCE
SHOULDER SUBLUXATIONN DISTANCE	PRE TEST	1.39	0.23	0.00	Highly significant
	POST TEST	1.03	0.17		

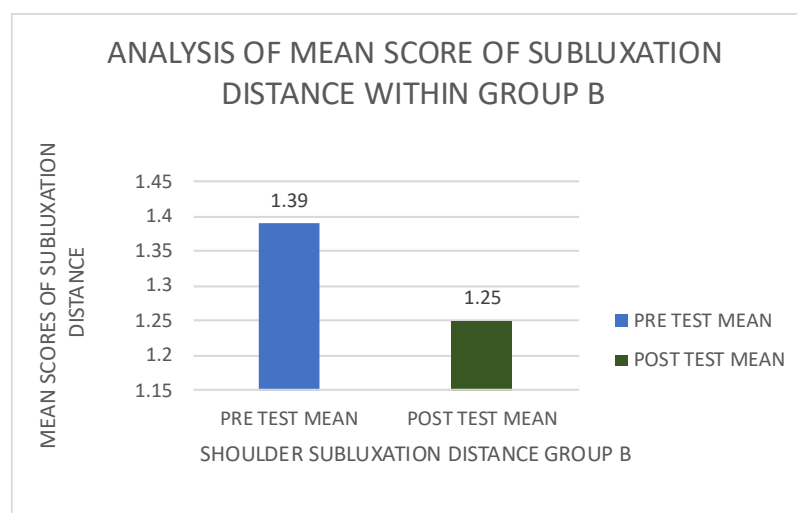
TABLE-1

**GRAPH-1**

RESULTS: The above table and graph shows mean of shoulder subluxation distance changes from pre-test to post-test values with in Group-A were found to be statistically highly significant($p < 0.005$).

ANALYSIS OF MEAN SCORE OF SHOULDER SUBLUXATION DISTANCE WITHIN GROUP B

GROUP B		MEAN	SD	P VALUE	INFERENCE
SHOULDER SUBLUXATIONN DISTANCE	PRE TEST	1.39	0.28	0.00	Highly significant
	POST TEST	1.25	0.25		

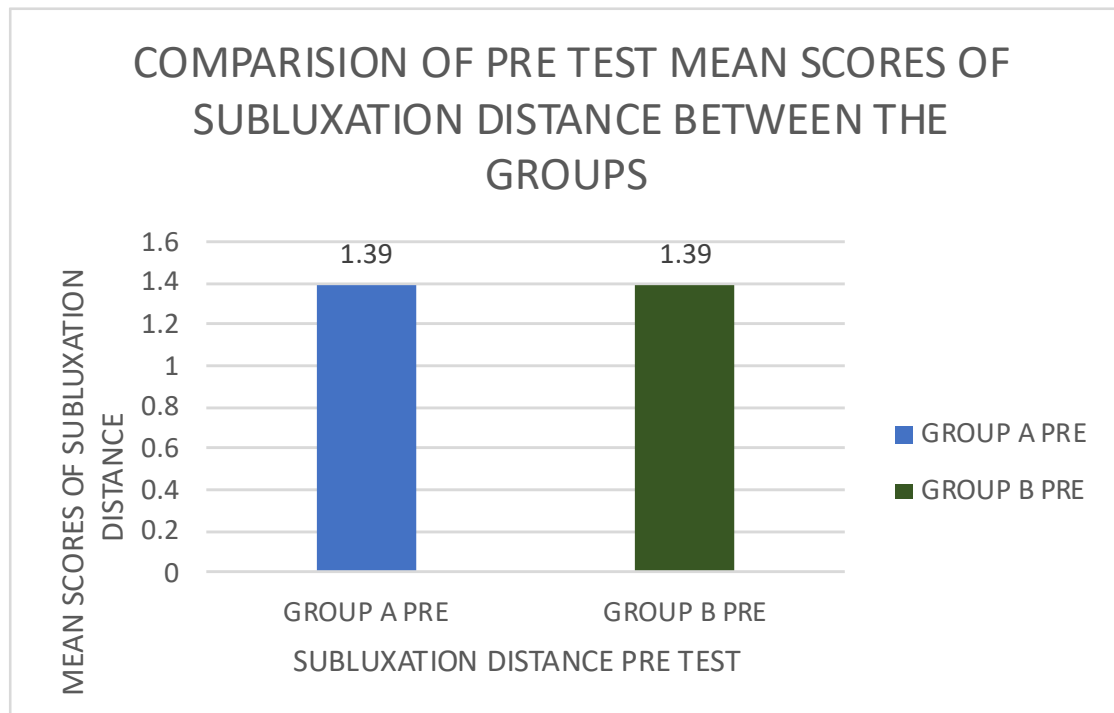
TABLE-2**GRAPH-2**

RESULTS:The above table and graph shows mean of shoulder subluxation distance changes from pre-test to post-test values with in Group-B were found to be statistically highly significant($p<0.005$).

COMPARISION OF MEAN SCORES OF SHOUDER SUBLUXATION DISTANCE IN BETWEEN THE GROUPS (PRE-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
SHOULDER SUBLUXATIONN DISTANCE	GROUP A	1.39	0.23	0.9604	Not significant
	GROUP B	1.39	0.28		

TABLE-3



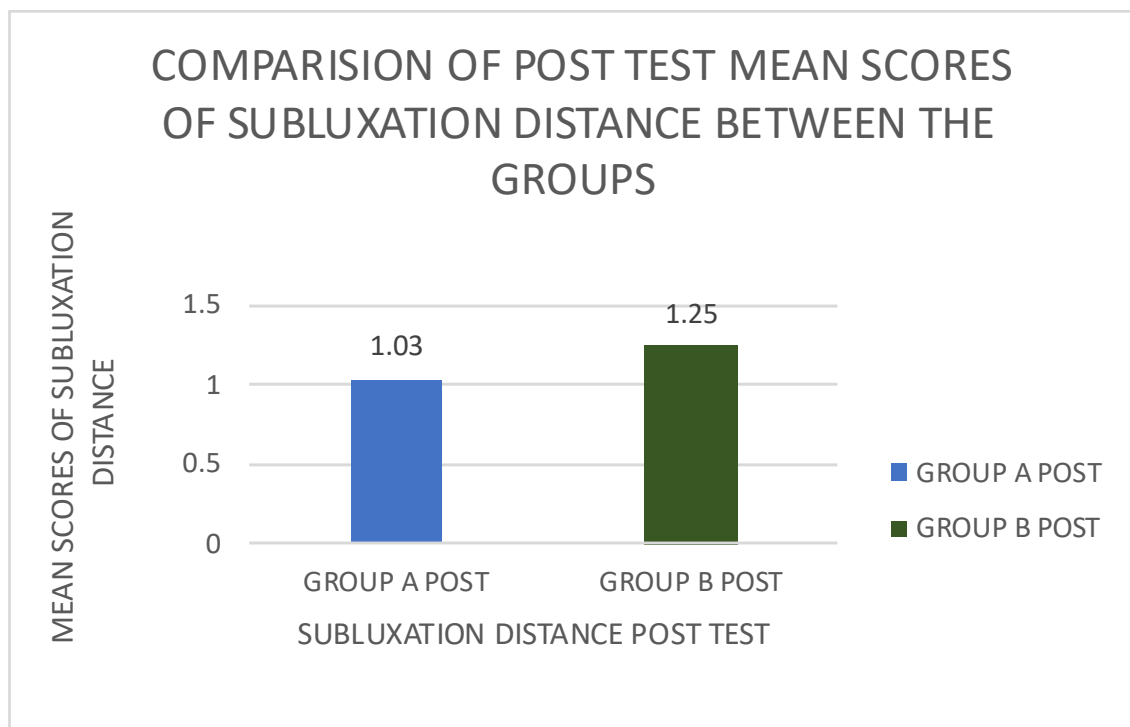
GRAPH-3

RESULTS:The above table and graph shows the base line measurement of shoulder subluxation distance in between the groups .shoulder subluxation mean score in Group-A is 1.393333333 and GROUP -B is 1.39 which were found to be statistically not significant.

COMPARISON OF MEAN SCORES OF SHOULDER SUBLUXATION DISTANCE IN BETWEEN THE GROUPS (POST-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
SHOULDER SUBLUXATION DISTANCE	GROUP A	1.03	0.17	<0.05	Highly significant
	GROUP B	1.25	0.25		

TABLE-4



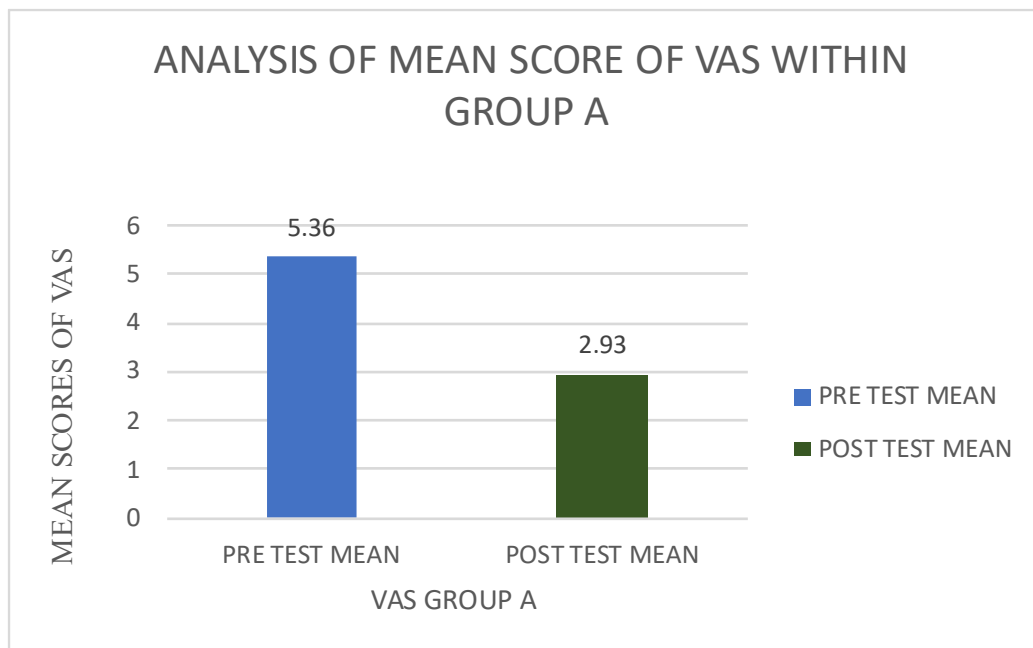
GRAPH-4

RESULTS: The above table and graph shows the mean score of shoulder subluxation distance changes in between the groups. Shoulder subluxation mean score in Group-A is 1.03333331 and Group-B is 1.25 which were found to be statistically highly significant ($p < 0.005$).

ANALYSIS OF MEAN SCORE OF VAS WITHIN GROUP A.

GROUP A		MEAN	SD	P VALUE	INFERENCE
VAS	PRE TEST	5.36	0.92	0.00	Highly significant
	POST TEST	2.83	0.69		

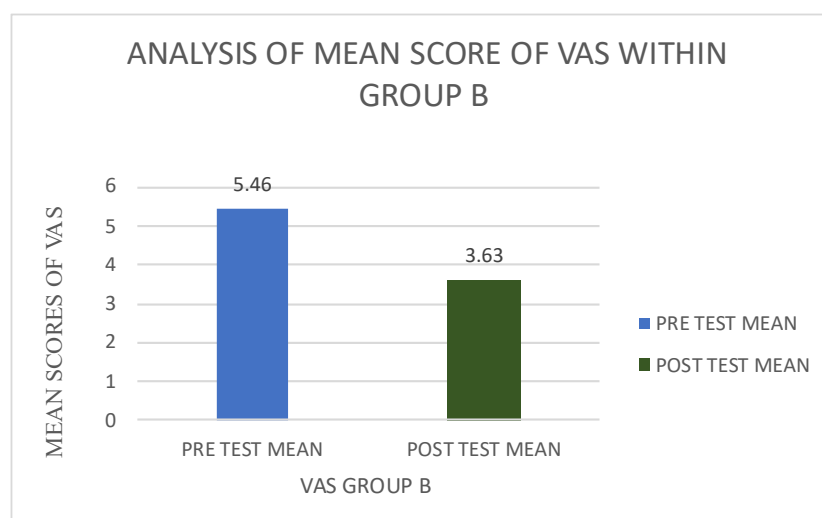
TABLE-5

**GRAPH-5**

RESULTS: The above table and graph shows mean of VAS changes from pre-test to post-test values with in Group-A were found to be statistically highly significant($p < 0.005$).

ANALYSIS OF MEAN SCORE OF VAS WITHIN GROUP B

GROUP B		MEAN	SD	P VALUE	INFERENCE
VAS	PRE TEST	5.46	1.04	0.00	Highly significant
	POST TEST	3.63	0.96		

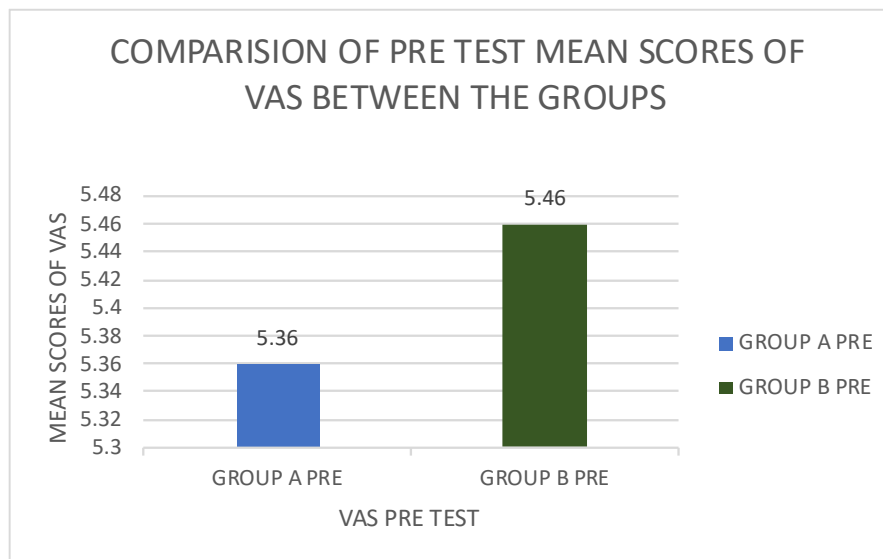
TABLE-6**GRAPH-6**

RESULTS:The above table and graph shows mean of VAS changes from pre-test to post-test values with in Group-B were found to be statistically highly significant($p<0.005$).

COMPARISION OF MEAN SCORES OF VAS IN BETWEEN THE GROUPS (PRE-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
VAS	GROUP A	5.36	0.92	0.6960	Not significant
	GROUP B	5.46	1.04		

TABLE-7



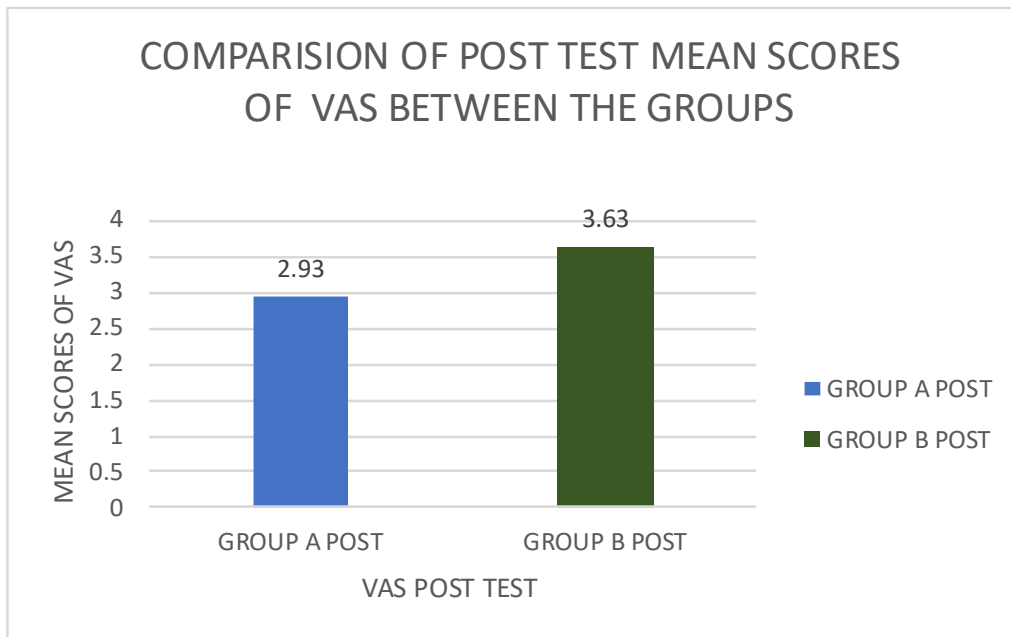
GRAPH-7

RESULTS:The above table and graph shows the base line measurement of VAS in between the groups .VAS score in Group-A is 5.366666667 and GROUP -B is 5.466666667 which were found to be statistically not significant.

COMPARISION OF MEAN SCORES OF VAS IN BETWEEN THE GROUPS (POST-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
VAS	GROUP A	2.83	0.69	<0.05	Highly significant
	GROUP B	3.63	0.96		

TABLE-8

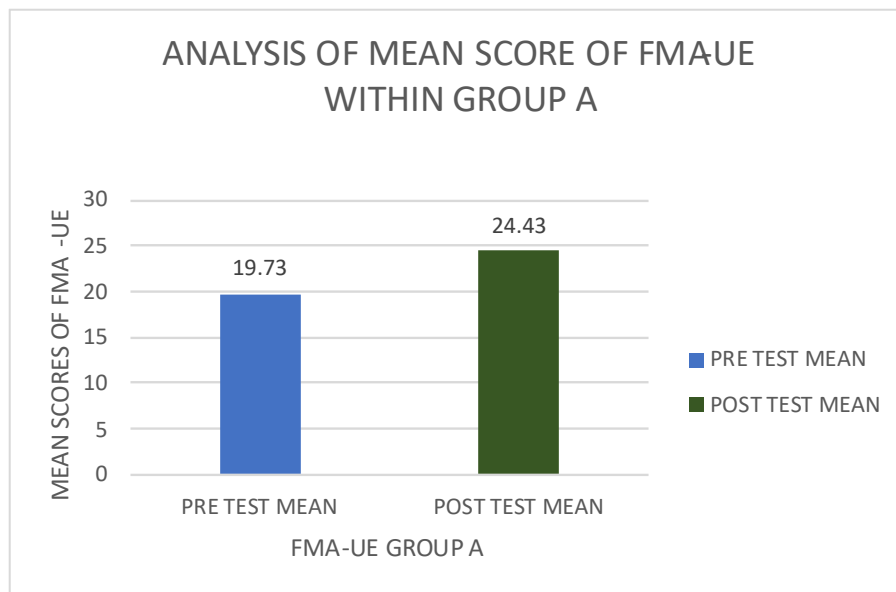
**GRAPH-8**

RESULTS:The above table and graph shows the mean score of VAS changes in between the groups .VAS mean score in Group-A is 3.66666667 and Group -B is 3.66666667 which were found to be statistically highly significant($p < 0.005$).

ANALYSIS OF MEAN SCORE OF FUGL MEYER UPPER EXTREMITY SCORE WITHIN GROUP A.

GROUP A		MEAN	SD	P VALUE	INFERENCE
FMA-UE	PRE TEST	19.73	1.28	0.00	Highly significant
	POST TEST	24.43	0.85		

TABLE-9

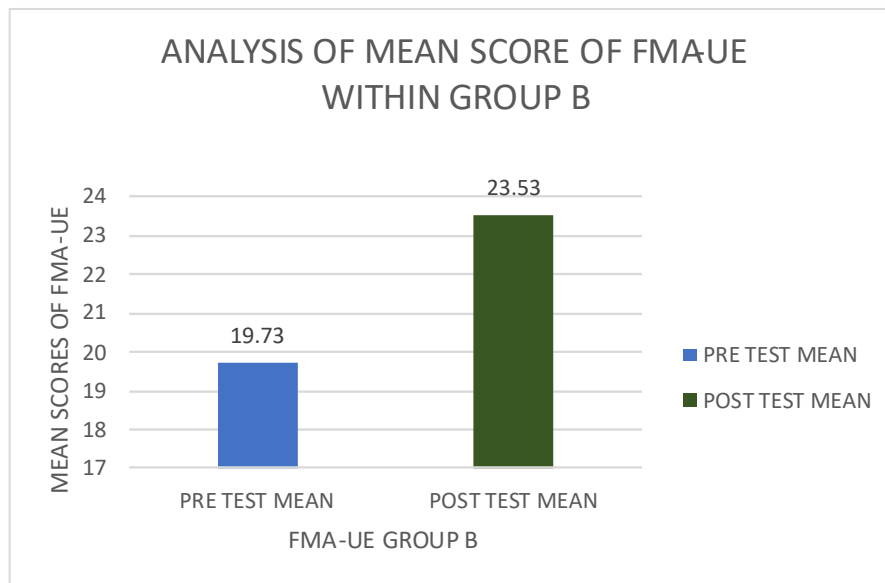
**GRAPH-9**

RESULTS:The above table and graph shows mean of FMA-UE changes from pre-test to post-test values with in Group-A were found to be statistically highly significant($p<0.005$).

ANALYSIS OF MEAN SCORE OF FUGL MEYER UPPER EXTREMITY SCORE WITHIN GROUP B.

GROUP B		MEAN	SD	P VALUE	INFERENCE
FMA-UE	PRE TEST	19.73	1.22	0.00	Highly significant
	POST TEST	23.53	1.04		

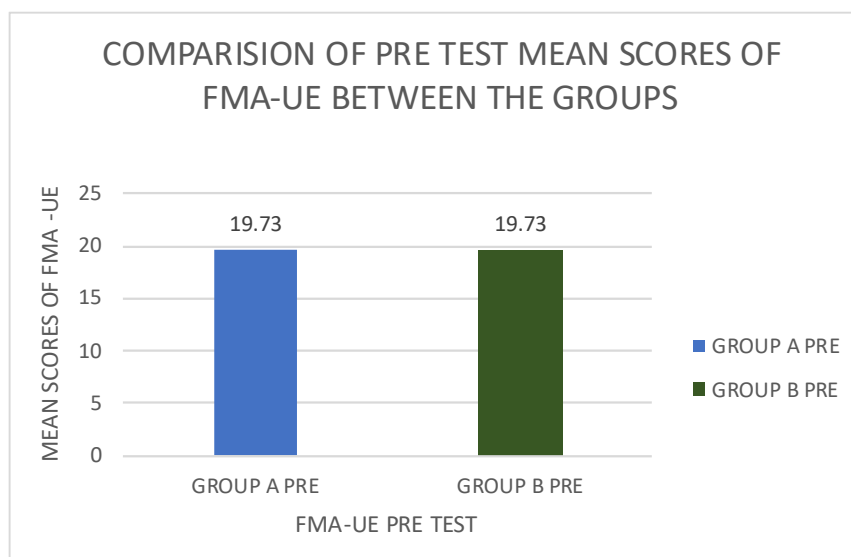
TABLE -10

**GRAPH-10**

RESULTS:The above table and graph shows mean of FMA-UE changes from pre-test to post-test values with in Group-B were found to be statistically highly significant($p < 0.005$).

COMPARISION OF MEAN SCORES OF FMA-UE IN BETWEEN THE GROUPS (PRE-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
FMA-UE	GROUP A	19.73	1.28	1.00	Not significant
	GROUP B	19.73	1.22		

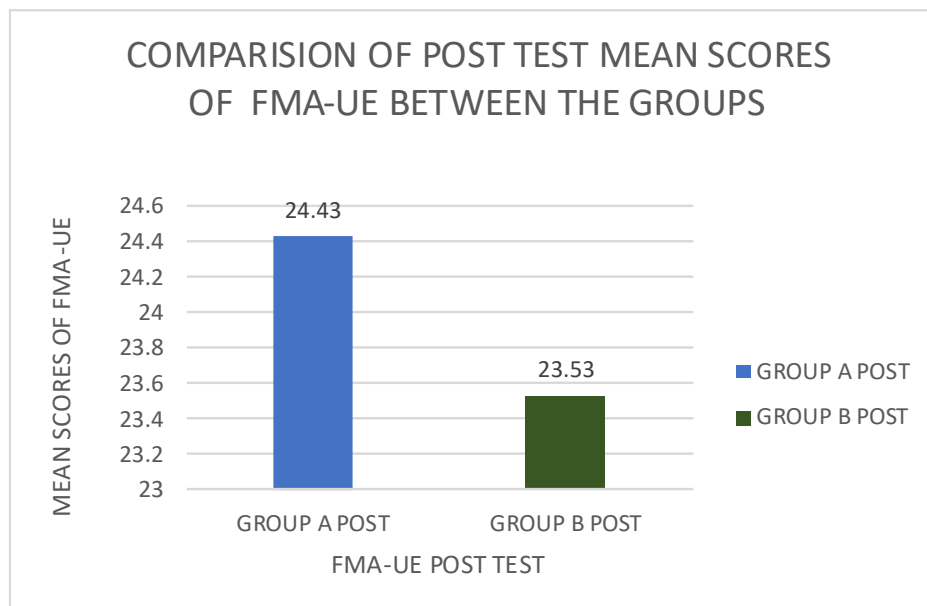
TABLE-11**GRAPH-11**

RESULTS:The above table and graph shows the base line measurement of FMA-UE in between the groups .FMA-UE score in Group-A is 19.73333333and GROUP -B is 19.73333333which were found to be statistically not significant.

COMPARISION OF MEAN SCORES OF FMA-UE IN BETWEEN THE GROUPS (POST-TEST)

GROUPS		MEAN	SD	P VALUE	INFERENCE
FMA-UE	GROUP A	24.43	0.85	<0.005	Highly significant
	GROUP B	23.53	1.04		

TABLE-12



GRAPH-12

RESULTS:The above table and graph shows the base line measurement of FMA-UE in between the groups .FMA-UE score in Group-A is 24.03333333and GROUP -B is 23.93333333which were found to be statistically significant.

DISCUSSION

The aim of the study was to investigate the comparative effectiveness of Kinesio taping and rigid taping in managing shoulder subluxation among post-stroke patients, with outcome measures including inch tape, VAS, and FMA-UE. Our findings suggest that Kinesio taping was more effective than rigid taping in improving shoulder alignment, reducing pain, and enhancing upper limb motor function.

This research corresponds with earlier work by Kim et al. (2017), who examined how elastic taping combined with standard rehabilitation therapy influenced shoulder pain and upper limb function in subacute stroke patients experiencing shoulder subluxation.

Their study revealed that supplementing conventional rehabilitation with elastic taping led to notable improvements in both pain levels and motor function. These findings imply that incorporating elastic taping methods could potentially boost the effectiveness of traditional rehabilitation approaches for post-stroke shoulder subluxation.²⁶

In Group A (Kinesio taping combined with standard rehabilitation) demonstrated statistically significant improvements in shoulder subluxation (measured by inch tape), pain levels (VAS), and upper extremity motor function (FMUE) ($P < 0.001$).

A previous study by Balala et al assessed the effectiveness of Kinesio taping therapy in managing hemiplegic shoulder pain and enhancing functional ability in stroke patients. Their findings indicated that Kinesio taping significantly reduced shoulder pain and improved functional mobility, aligning with the results observed in the present study.²⁷

Wang et al states that Kinesio taping exerts a mechanical lifting effect on the skin, which reduces tissue pressure and enhances interstitial fluid flow. This physiological change alleviates local oedema and inflammation around the shoulder joint, thereby decreasing pain and improving the range of motion. The tape's elastic properties also provide proprioceptive feedback, which can enhance muscle activation and coordination, contributing to the stabilization of the glenohumeral joint and reduction in subluxation.²⁸

Yim et al. highlighted that applying Kinesio tape to the shoulder stimulates skin-based sensory receptors, which enhances neural input to the central nervous system. This amplified sensory signaling may support better motor coordination and muscle engagement in the affected region. As a result, patients can experience improved shoulder joint stability and a reduction in subluxation.

Their study also reported notable gains in shoulder mobility, pain relief, and upper limb function, indicating that Kinesio taping can serve as a valuable complement to standard rehabilitation protocols for stroke patients with shoulder complications.²⁹

Tan et al observed that Kinesio taping enhances lymphatic and blood circulation around the shoulder joint, which can reduce muscle spasticity and improve tissue oxygenation. This improved circulation may aid in the normalization of muscle tone and enhance the effectiveness of rehabilitation exercises.

The study found significant reductions in shoulder pain and improvements in upper limb function, indicating that Kinesio taping can be a beneficial addition to standard rehabilitation protocols for stroke patients with shoulder subluxation.³⁰

In Group B (Rigid taping combined with the standard rehabilitation program), there was statistically significant improvement in shoulder subluxation measured by inch tape, in pain measured by VAS, and in upper extremity motor function by FMUE ($P < 0.001$). Rigid taping may contribute mechanical alignment of the humeral head, limit excessive downward displacement and providing proprioceptive feedback that helps patients better activate stabilizing shoulder muscles.

Komal Dalvi & Anjali Puntambekar demonstrated that rigid taping significantly improved scapular re-alignment, reduced pain and increased active shoulder flexion and abduction in subjects with shoulder dysfunction. These findings are consistent with those in the present study, suggesting that rigid taping, when added to standard rehabilitation, can enhance shoulder alignment, reduce pain, and improve motor function in post-stroke shoulder subluxation.³¹

According to Hayner KA et al application of the Rigid taping in post-stroke subjects supports the humeral head within the glenoid cavity by producing an upward and lateral force vector, which mechanically stabilizes the shoulder joint and reduces subluxation. The study also observed improvements in upper limb positioning and pain reduction, suggesting that rigid taping offers both proprioceptive and mechanical benefits in hemiplegic shoulders.³² Comley-White N et al reported that shoulder strapping using non-elastic tape provides immediate mechanical alignment and minimizes inferior translation of the humeral head in stroke-related subluxation.

The consistent external support increases proprioceptive feedback, improving postural control of the affected shoulder and facilitating more symmetrical movement patterns during rehabilitation.³³

According to Hanger HC et al the rigid strapping of the shoulder in acute stroke patients can effectively prevent the onset or progression of glenohumeral subluxation. The external tape reinforcement assists in maintaining humeral head alignment within the glenoid fossa, thereby minimizing shoulder pain and improving functional arm use during early rehabilitation.³¹ Peters SB and Lee GP observed that non-elastic shoulder taping enhances proprioceptive awareness of the affected upper limb, improving voluntary muscle activation and spatial orientation during functional reaching activities.

The external tension provided by the tape helps patients maintain improved shoulder alignment even after tape removal, indicating both mechanical and neuromuscular benefits.³⁴

The study findings indicated that after 8 weeks of intervention, Kinesio taping combined with standard rehabilitation showed statistically more significant improvement in Inch tape, Visual Analogue Scale (V, and Fugl-Meyer Upper Extremity when compared to Rigid taping with standard rehabilitation on shoulder subluxation, pain, and upper limb motor function. This study concludes that Kinesio taping is a useful adjunct in post stroke subjects.

LIMITATIONS

- Due to small sample size in this study results could not be generalized to large group of population
- No blinding of evaluators of outcomes was done
- There is no follow up in this study to evaluate the sustained effectiveness of the intervention over time

RECOMMENDATIONS FOR FUTURE RESEARCH

- Future Research could benefit from employing a more rigorous randomization technique and considering a large sample size to enhance the robustness of the results
- Efforts to minimize potential bias through blinding or objective outcome measures could enhance the validity of the results
- The study may benefit from long term follow-up assessments to evaluate the effectiveness of intervention over time

CONCLUSION

The present study concludes both Kinesio taping along with standard rehabilitation and Rigid taping along with standard rehabilitation showed significant improvement in shoulder subluxation, pain, and upper extremity motor function in post stroke subjects. However, Kinesio taping along with standard rehabilitation was more effective when compared to Rigid taping along with standard rehabilitation. Hence, this treatment intervention may be incorporated in post stroke subjects.

SUMMARY

TITLE: KINESIO TAPING VERSUS RIGID TAPING ON SHOULDER SUBLUXATION AND UPPER LIMB RECOVERY IN POST STROKE SUBJECTS

PURPOSE: The aim of the study is to assess the effect of Kinesio taping versus Rigid taping on shoulder subluxation and upper limb recovery in post stroke subjects and to compare them.

METHODS: Quasi experimental study design. 60 subjects having a clinical diagnosis of stroke were allocated into two groups by using convenience sampling method. In Group A (n=30) subjects were treated with Kinesio tape with standard rehabilitation program, whereas in Group B (n=30) subjects were treated with rigid tape along with standard rehabilitation program. Participants were given interventions for five times a week for 8 weeks. The inch tape, VAS, FMUE were used to assess the intervention effectiveness.

RESULTS: Independent “t” test was used to compare the mean significance difference between continuous variables. Paired “t” test was used to assess the statistical significance difference between pre and post test scores. Statistical analysis of this data revealed that both groups significantly improved in parameters when compared within groups, but when compared between the groups, Kinesio tape improved better than Rigid tape.

CONCLUSION: The present study concludes both Kinesio tape and Rigid tape showed improvement in Subluxation distance, pain and upper limb function in poststroke subjects. However Kinesio taping along with standard rehabilitation program was more effective than Rigid taping along with standard rehabilitation program. Hence treatment intervention may be incorporated in management of post stroke.

KEY WORDS: Post stroke, Kinesio tape, rigid tape, inch tape, VAS, FMUE.

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