KINESIO TAPING - WHAT HAVE WE LEARNED IN 50 YEARS?: A REVIEW OF EXISTING SYSTEMATIC REVIEWS

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Abstract: *This study aimed to use data from existing systematic reviews to understand the effects of kinesio taping in various conditions. Kinesio taping has been used by clinicians for treating a broad spectrum of dysfunctions, despite limited evidence validating its efficacy. This review aims to explore the potential impact of kinesio taping on pain, disability, range of motion, and other relevant outcomes, as well as the underlying mechanisms. The PubMed, PEDro, and Google Scholar databases were searched using a search string that was designed according to the aims and goals of the study. A total of 42 systematic reviews were included in this study. While certain favourable outcomes were observed, the available evidence does not support the widespread use of kinesio taping. The lack of quality and reliability of the evidence highlights the need for further high-quality, placebo-controlled studies on the effectiveness of kinesio taping.*

Keywords: *kinesio taping, disability, therapy, rehabilitation, kinesiology*

INTRODUCTION

Kinesio taping (KT) was developed by Japanese chiropractor Kenzo Kase in 1973. It has evolved along with the development of elastic tapes, which are designed to closely mimic epidermal properties. This technique gained widespread recognition during the 2008 Summer Olympics in Beijing, where 58 participating countries allegedly received a combined donation of 50,000 rolls of KT tape. More than a decade ago, it was reported that the technique was being utilised by over 150,000 healthcare professionals across various fields (Drouin et al., 2013; Parker-Pope, 2008), and the current figures may be even higher. The key attributes of KT tapes is their elasticity, stretching up to 140% of their original length and ensuring unhindered movement of targeted joints or muscles. KT tapes can be applied in various widths, shapes, and patterns, which, in theory, can influence the desired outcome of their application.

KT therapy results in physiological benefits such as reducing pain through stimulation of the nervous system, supporting weak muscles to facilitate proper muscle function, providing support for lymphatic drainage, and aiding in relaxing muscle spasms in order to achieve joint correction (Kalron & Bar-Sela, 2013). While the exact mechanisms of action are still unknown, there are a handful of theories related to KT. Kalron & Bar-Sela (2013) proposed that the KT tape generates convolutions under the skin, which increases the subcutaneous space and in turn, promotes the flow of blood and lymphatic fluid. Pain reduction may be attributed to information stimulation in the afferent sensory neurons: according to the gate control theory, it reduces the amount of nociceptive information, thus providing a pain relief (Williams et al., 2012). The authors also provided an alternative theory and proposed that pain alleviation occurs as a result of the tapes being lifted off the skin, thus relieving the mechanical pressure on subcutaneous nociceptors (Williams et al., 2012).

The primary objective of the present systematic literature review was to meticulously analyse and synthesise the available scientific evidence from existing systematic reviews on the effectiveness of kinesio taping. This involved assessing its impact on various clinical outcomes, including pain relief, improvement in disability, enhancement of range of motion, and other pertinent health-related parameters. By doing so, this study aimed to provide a broad overview of the current literature on kinesio taping that can offer valuable insights for clinicians and researchers, as well as guide future research projects.

METHODS

For the purpose of our systematic literature review, relevant articles were sourced between December 2022 and December 2023 using the electronic database PubMed. With the help of the Boolean operator (OR), we constructed the following search query: "kinesio taping" [tiab] OR kinesiotaping [tiab]. In order to further refine our search results, we applied filters for "meta-analysis" and "systematic literature review". In addition, we searched the PEDro database using the search terms "kinesiotaping" and "kinesio tape", and Google Scholar using the search terms ''kinesio taping'' OR kinesiotaping AND ''meta-analysis''. We included all relevant articles identified during the review process in the reference lists.

The following inclusion criteria were used to identify scientific articles for our systematic review: all systematic literature reviews with a meta-analysis that included an experimental group with KT therapy and were written and published in English. We excluded articles in which authors did not perform a meta-analysis, randomised controlled trials (RCTs), inaccessible articles, and articles that were published in languages other than English. We also excluded articles that examined different techniques or modalities on given dysfunctions, as well as articles that were not thematically related to our search query.

RESULTS

Study selection

A total of 372 articles were identified via database searches, of which 252 were excluded based on their titles and abstracts. We then reviewed the remaining full texts and excluded another 78 articles. A thorough review of an article by Deng et al. (2021) showed several discrepancies such as missing or mismarked meta-analyses. In hopes for an explanation, we reached out to the authors, but the lack of a response forced us to exclude their study from the final results. We compiled a list of 42 articles that met the inclusion criteria and included them in our meta-analysis. The study selection process is shown in Figure 1 using a PRISMA flow diagram (Page et al., 2021).

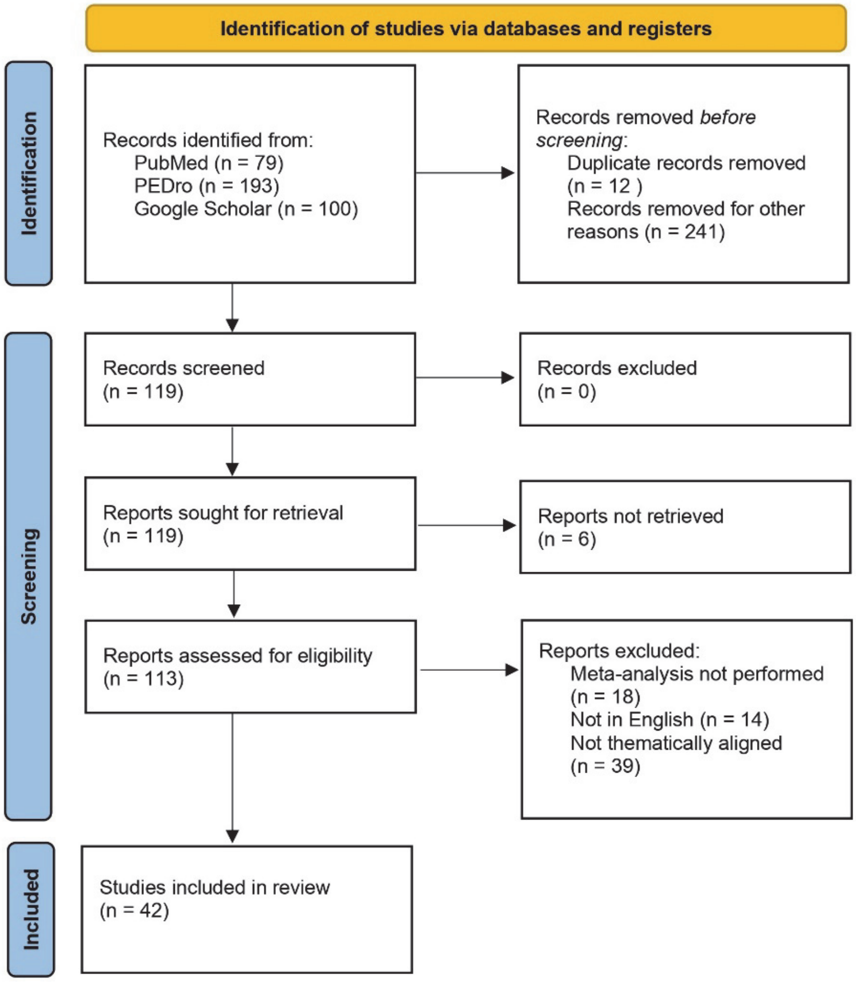

Figure 1. *PRISMA flow diagram depicting the study selection process*

Reviews on kinesio taping for nonspecific dysfunctions

Of the included articles, six investigated the efficacy of KT therapy in various nonspecific dysfunctions. Ramírez-Vélez et al. (2019) and Tran et al. (2021) assessed KT therapy as a treatment for musculoskeletal conditions, Montalvo et al. (2014) studied its effects on pain in individuals with musculoskeletal injuries, Williams et al. (2012) examined its efficacy as a therapy and prevention strategy for sport-related injuries, while Zhang et al. (2019) evaluated KT therapy in the treatment of myofascial pain syndrome, and Lim & Tay (2015) explored KT therapy as an option for musculoskeletal pain and disability persisting for over four weeks. All of these articles provided data mainly from RCTs, except Montalvo et al. (2014), which included both clinical trials and crossover design studies. Sample sizes ranged from 282 (Williams et al., 2012) to 2670 (Tran et al., 2021) participants.

The above-mentioned studies included compared control groups (CGs) with experimental groups (EGs) of participants who received KT therapy either as a standalone or a supplementary treatment. These varied across articles - Williams et al. (2012) included groups receiving KT tape without stretch, placebo KT therapy, or no treatment at all, while Ramírez-Vélez et al. (2019) compared only EGs with KT therapy and CGs with placebo therapy. Lim & Tay (2015), Montalvo et al. (2014), Tran et al. (2021), and Zhang et al. (2019) compared EGs receiving standalone or complementary KT therapy with CGs receiving either placebo KT therapy, regular intervention, alternative therapeutic modalities, or no intervention.

These studies also compared reported levels of pain and range of motion in both groups of participants, with the exception of Montalvo et al. (2014) where the main focus was pain. Additionally, several researchers evaluated the impact of KT therapy on various other outcome measures: Tran et al. (2021) investigated its effects on proprioception, static, and dynamic balance; Williams et al. (2012) analysed its influence on proprioception, muscle strength, and activity; Ramírez-Vélez et al. (2019) examined its impact on disability, perceived treatment effect, movement ability, and muscle strength; and Zhang et al. (2019) reported on muscle strength, disability, and pain threshold.

We observed that the findings of these articles were inconsistent. Tran et al. (2021) reported statistically important differences (SIDs) favouring the positive effects of short-term and long-term KT therapy on pain and disability compared to other complementary treatment modalities. Conversely, Williams et al. (2012) concluded that KT therapy could have a small effect on muscle strength and activity, but they found no evidence supporting its efficacy in reducing pain, improving proprioception, or enhancing muscle activity. Similar results were obtained by Ramírez-Vélez et al. (2019) and Montalvo et al. (2014); these studies did not find any solid evidence supporting the use of KT therapy. Compared to minimal intervention, Lim & Tay (2015) found SIDs in pain reduction favouring KT therapy. When compared to alternative treatment modalities, Zhang et al. (2019) determined that KT therapy had a statistically significant impact on range of motion and pain level. Details and results from the above-mentioned articles are summarised in Appendix 1.

Reviews on kinesio taping for upper limb dysfunctions

Six of the articles included evaluated the efficacy of KT therapy in the treatment of upper limb dysfunctions. Celik et al. (2020), Ghozy et al. (2020), and Gianola et al. (2021) incorporated RCTs encompassing various shoulder dysfunctions, Araya-Quintanilla et al. (2022) focused specifically on shoulder impingement syndrome, while Zhong et al. (2020) studied treatment of lateral epicondylitis, and Tomás-Escolar et al. (2023) focused their efforts on examining KT therapy as a therapeutic tool in the conservative treatment of carpal tunnel syndrome. The above-mentioned studies included between five (Zhong et al., 2020) and 23 RCTs (Gianola et al., 2021), with a combined sample of 168 (Zhong et al., 2020) to 1054 participants (Gianola et al., 2021). The authors of these studies assessed the impact of KT therapy on pain, range of motion, and function. Additionally, Gianola et al. (2021) investigated potential side effects, quality of life, and patient-perceived treatment effects. Tomás-Escolar et al. (2023) examined the effects of KT on pain, function and symptoms, muscle strength, and other neurophysiological outcomes. In addition to pain and grip strength measures, Zhong et al. (2020) calculated the Modified Mayo performance index and the DASH score of study participants and addressed the possibility of adverse side effects.

Gianola et al. (2021) compared the effectiveness of standalone KT therapy to placebo KT therapy, as well as other non-invasive treatment options, and found that there were no significant differences between the groups with respect to pain, active range of motion, and function. However, when comparing the impact of KT therapy versus other therapies with respect to quality of life, there was low quality evidence supporting the use of KT therapy. Three articles addressing shoulder pathologies compared EGs who received KT therapy either as a standalone or an adjunct treatment method to CGs who received placebo treatment, physical exercise, passive treatments, medications, or other forms of therapy. Ghozy et al. (2020) found that pain and disability were only improved when comparing EGs receiving exercise and adjunct KT therapy to CGs. Araya-Quintanilla et al. (2022) and Celik et al. (2020) did not find any compelling evidence supporting the use of KT therapy for treating shoulder pathologies. Tomás-Escolar et al. (2023) compared EGs who received KT therapy with or without other treatments and CGs who received sham taping, no treatment, or other forms of treatment and showed weak effects sizes and moderate evidence supporting the use of KT therapy in the conservative treatment of carpal tunnel syndrome. Evidence supporting the effectiveness of KT therapy was also discovered by Zhong et al. (2020), who reported statistically significant differences in all outcome measures comparing KT therapy to either placebo KT therapy or physiotherapy. Furthermore, no adverse effects were reported. Details and results of the articles included are summarised in Appendix 2.

Reviews on kinesio taping for lower limb dysfunctions

Lower limb pathologies and dysfunctions were the subject of interest of nine included articles. Of those, three articles focused on the impact of KT therapy on ankle performance (Biz et al., 2022; Nunes et al., 2021; Y. Wang et al., 2018) and four others investigated the efficacy of KT therapy as a treatment for pain and disability in individuals with knee osteoarthritis (Lu et al., 2018; Mao et al., 2021; Wu et al., 2022; Ye et al., 2020). Elrosasy et al. (2023) studied the effects of KT on patients after ACL reconstruction, while Luo & Li (2021) researched KT therapy as a treatment modality in patients with chronic knee pain. These systematic reviews included between five (Elrosasy et al., 2023; Lu et al., 2018) and 44 RCTs (Nunes et al., 2021), encompassing a total of 126 (Elrosasy et al., 2023) to 2684 participants (Nunes et al., 2021). Except for Biz et al. (2022), who also included a case study and a cross-sectional study, all other studies focused exclusively on RCTs.

In order to examine the effect of KT therapy on ankle functional performance, Wang et al. (2018) compared EGs who received KT therapy to CGs who received other forms of tape treatment, such as placebo KT therapy, KT therapy without stretch, or bandaging. The authors examined effects on vertical jump height, functional properties, postural control, balance, and range of motion. With the aim of understanding if KT therapy can be used as a treatment option for athletes with chronic ankle instability, Biz et al. (2022) analysed gait parameters, agility, muscle activation, and other outcome measures. Nunes et al. (2021) conducted a systematic review and meta-analysis to investigate the effects of KT therapy on ankle performance and function in individuals with and without ankle injuries. Participants in the EGs received either standalone or complementary KT therapy, while participants in the CGs received usual physical therapy, placebo KT therapy, or no treatment at all. The authors examined effects on balance, jump performance, range of motion, proprioception, and muscle strength.

Biz et al. (2022) found statistically significant improvements in some gait parameters, reduced range of motion of inversion and eversion, decreased activation of the peroneus longus muscle, and reduced lateral deviation of the body during movement. Wang et al. (2018) also reported positive results (i.e., SIDs) with respect to balance when comparing participants who received KT therapy to those who received placebo KT and KT therapy without stretch. They also found that bandaging and placebo KT therapy had a significant negative impact on vertical jump height, which was not the case for KT therapy. Nunes et al. (2021) did not find any evidence to support the use of KT therapy.

In all six systematic reviews that focused on the knee joint, there were EGs and CGs, but the interventions of the groups differed between reviews. Wu et al. (2022) included EGs who received KT therapy, as well as those who received a combination of KT therapy and exercise and they compared them to CGs that received exercise in order to monitor pain and function. The EGs included in the review by Mao et al. (2021) received either standalone or complementary KT therapy, while the CGs received usual physical therapy or usual physical therapy combined with placebo KT therapy. The authors monitored pain, muscle strength, function, and range of motion. All of the aforementioned outcome measures were assessed by Ye et al. (2020) as a comparison between standalone or complementary KT therapy and placebo KT therapy, no intervention, or other intervention. The review by Lu et al. (2018) differed in that the authors included only EGs with standalone KT therapy and compared them to CGs that received only placebo KT therapy. The authors monitored pain both at rest and during walking, function, range of motion, and muscle strength. Elrosasy et al. (2023) compared KT therapy to either placebo KT therapy or regular physiotherapeutic intervention in order to measure the effect on pain, knee flexion, and extension strength in patients after ACL reconstruction surgery. Luo & Li (2021) compared KT therapy with or without exercise to placebo KT therapy, no intervention, or other forms of intervention.

The meta-analysis by Wu et al. (2022) found that the combination of KT therapy and exercise achieved statistically significant reductions in pain compared to exercise alone. Mao et al. (2021) also reported positive results and showed a statistically significant positive effect of KT therapy and KT therapy with usual physical therapy on pain and isometric muscle strength. Lu et al. (2018) reported significant positive effects of KT therapy on pain, function, and range of motion in the knee joint. Similar results were mentioned in Ye et al. (2020) who reported statistically significant improvements in the KT therapy group in all outcome measures, except hamstring muscle strength. Luo & Li (2021) noticed short-term statistically significant improvements of pain, which did not translate into long-term improvements. In addition, they reported statistically significant improvements in the group who received KT therapy in combination with exercise, compared to those who did exercise alone. Considering the treatment of ACL reconstruction patients, Elrosasy et al. (2023) discovered statistically significant differences in knee flexion strength in favour of the control group, but not in knee extension strength or pain reduction. Details and results of included articles are summarised in Appendix 3.

Reviews on kinesio taping for lower back pain

Of the studies included, seven examined the effects of KT therapy in individuals with lower back pain (LBP). While six articles focused on the impact of KT therapy on chronic LBP (Li et al., 2019; Lin et al., 2020; Luz Júnior et al., 2019; Sheng et al., 2019; Sun & Lou, 2021), one study - Xue et al. (2021) – focused exclusively on pregnancy-related LBP. These articles were published between 2019 (Li et al., 2019; Luz Júnior et al., 2019; Sheng et al., 2019) and 2023 (Pan et al., 2023), and they included between 444 (Xue et al., 2021) and 785 participants (S. Lin et al., 2020). All seven articles included RCTs with both EGs and CGs. Participants in the EGs received either standalone KT therapy or a KT treatment integrated with additional physiotherapy, while those in the CGs received standalone KT therapy, KT therapy combined with additional physiotherapy, alternative treatment options, or no treatment at all. Pain and disability were assessed as primary outcome measures. Additionally, Pan et al. (2023) assessed the effect of KT on trunk flexion range of motion and change in status. Luz Júnior et al. (2019) found evidence suggesting that KT therapy is not superior to other therapy options. Li et al. (2019) did not observe any SIDs between placebo KT therapy and regular KT therapy in pain reduction, but they did find SIDs favouring regular KT therapy with respect to improving disability. Conversely, Lin et al. (2020), Sheng et al. (2019), Sun & Lou (2021), and Xue et al. (2021) demonstrated that, compared to their corresponding CGs, the EGs in all four studies achieved SIDs in both pain and disability outcomes favouring the EGs. Pan et al. (2023) found immediate and short-term positive effects on reducing pain intensity in favour of EG group, but did not find any positive effects on other outcome measures and intermediate pain intensity. Details and results of included articles are summarised in Appendix 4.

Reviews on kinesio taping effects on movement and mechanical properties

Using data collected from six (Lai et al., 2019) to 37 RCTs (Yam et al., 2019), Karabicak et al. (2022), Lai et al. (2019), J. Lin et al. (2021), and Yam et al. (2019) examined the effect of KT therapy on mechanical properties and movement.

Two articles examined the effects of KT on movement capabilities of individuals with or without musculoskeletal dysfunctions (Karabicak et al., 2022; Yam et al., 2019), Lai et al. (2019) compared

KT therapy to stretching exercises on the length of the pectoralis minor, while J. Lin et al. (2021) explored KT therapy as a treatment option for delayed muscle soreness. Lai et al. (2019) compared EGs receiving KT therapy or stretching exercises to CGs receiving regular treatment, which did not include any taping applications and stretching or strengthening exercises. The authors found statistically significant improvements in the length of the pectoralis minor in favour of KT therapy, compared to the CGs who did not receive any intervention. The EG group in the systematic review by Karabicak et al., (2022) who received standalone KT treatment were compared to those who received placebo KT therapy or bandaging. The outcome measures assessed were muscle strength and activation, active range of motion, and degree of pain. The authors concluded that there was insufficient evidence supporting long-term use of KT therapy. The effects of KT therapy on movement and mechanical properties in individuals with or without musculoskeletal dysfunctions were assessed by Yam et al. (2019). The authors compared EGs who received standalone KT therapy to CGs who received placebo KT therapy, active treatment, or no treatment at all. The outcome measures used were muscle strength and functional movement ability. With the help of a meta-analysis, the authors found statistically significant muscle strength improvements in participants with chronic musculoskeletal dysfunctions and muscle weakness in favour of KT therapy compared to minimal treatment. Lin et al., (2021) compared KT therapy to either placebo KT therapy or no intervention and found statistically significant improvements of self-reported muscle soreness 48 and 72 hours after exercise, but not 24 hours post exercise. Muscle strength showed significant improvement only at the 72 hour follow-up, meanwhile serum creatine kinase levels did not differ between the groups at any point. Details and results of included articles are summarised in Appendix 5.

Reviews on kinesio taping used in the treatment of neurological dysfunctions

Six of the articles included assessed the use of KT therapy to treat neurological dysfunctions. Four articles focused on post-stroke dysfunctions: Tan et al. (2022) and Wang et al. (2022) investigated the treatment of hemiplegic pain and shoulder joint function, M. Wang et al. (2019) studied lower limb function, and Hu et al. (2019) examined the effectiveness of KT for balance function. Hassan et al. (2020) evaluated the efficacy of KT in treating children with brachial plexus injuries, while Unger et al. (2018) assessed the measure of gross motor function in children with cerebral palsy. These reviews included data from five studies with a total of 115 participants (Hassan et al., 2020) to as many as 22 studies with a total of 1331 participants (Hu et al., 2019).

Based on the comparison between EGs receiving standalone KT therapy and CGs receiving placebo KT therapy or other physiotherapeutic treatments, Tan et al. (2022) examined the effects on pain, range of motion, shoulder subluxation, spasticity, and upper extremity function. Wang et al. (2022) compared the effectiveness of KT therapy received by EGs to regular treatment received by CGs. They used outcome measures such as upper extremity function, pain, spasticity, general disability, and passive range of motion. The authors found that KT therapy was significantly more effective in improving pain and shoulder subluxation. Tan et al. (2022) also found SIDs in spasticity and range of shoulder abduction in the EGs.

Wang et al. (2019) compared EGs who received standalone KT therapy or KT therapy in combination with other treatments to CGs who received KT therapy or other forms of treatment. The outcome measures included spasticity, lower limb movement abilities, everyday activities, balance, and gait parameters. The authors found that KT therapy had positive effects on spasticity, movement abilities, balance, gait parameters, and everyday activities. Hu et al. (2019) compared EGs who received standalone KT therapy or KT therapy in combination with regular treatment to CGs who received placebo KT therapy, regular treatment, or no treatment at all. The authors examined the effects of KT therapy on balance and lower limb function and they concluded that KT therapy was more effective than regular treatment options in improving balance, lower limb function, and gait parameters.

Hassan et al. (2020) assessed scapular stabilisation and investigated the effects of KT therapy in children with brachial plexus injury. The authors found no convincing evidence to support or refute the use of KT therapy. Unger et al. (2018) compared the use of KT therapy with physiotherapeutic interventions to standalone physiotherapeutic treatments and found significant improvements in gross motor function measures in seated postion in favour of the EGs. Details and results of included articles are summarised in Appendix 6.

Reviews on kinesio taping used in the treatment of lymphedema and swelling

We included four literature reviews in which authors examined effects on either lymphedema or swelling. Two articles (Firoozi et al., 2022; Y. Wang et al., 2021) focused on the discomfort and swelling in patients after a mandibular third molar surgery, while the other two (Gatt et al., 2017; Kasawara et al., 2018) examined lymphedema after breast cancer surgery. In these reviews, the authors included between five studies with a total of 203 participants (Gatt et al., 2017) and nine studies with a total of 444 participants (Firoozi et al., 2022).

Firoozi et al. (2022) and Wang et al. (2021) compared EGs who received KT therapy or KT therapy in combination with pharmaceutical therapy to CGs who received no intervention, pharmaceutical therapy, or placebo KT therapy. The outcome measures used were pain, trismus score, and swelling. The authors of both studies found that KT therapy in EG was significantly more effective in all outcome measures than the CG.

Kasawara et al. (2018) compared the effectiveness of KT therapy in combination with other treatments (elevation, bandaging, compression bandages, skin care, exercise, manual lymph drainage) to a CG who received either skin care, placebo KT therapy, KT tapes applied in the opposite direction, bandaging, or no treatment at all. The authors found that KT therapy resulted in a significant reduction in limb circumference, but the difference was not statistically significant when compared to other forms of treatment. In addition to limb circumference, Gatt et al. (2017) assessed outcomes such as side effects, subjective feelings, lymphedema-related symptoms, and participants' quality of life. The authors compared the effectiveness of KT therapy with or without regular treatment to a CG who received either regular treatment, bandaging, or compression garments and found no significant differences between the groups in any of the outcome measures. Details and results of included articles are summarised in Appendix 7.

DISCUSSION

As far as we know, the current study is one of the first umbrella reviews focusing on KT therapy, despite its 50-year history. We used a meta-analysis to examine the results of 33 systematic reviews encompassing studies conducted in multiple countries and laboratories. The articles included were grouped into seven categories based on the pathologies being treated. Due to the overlapping symptoms associated with many pathologies, we analysed the effects of KT on specific symptoms (e.g., pain), rather than comparing the impact of the treatments on the underlying pathologies themselves.

Pain

Pain is a debilitating symptom of various diseases and dysfunctions that can disappear on its own or when treated. Persisting pain can develop into chronic pain, which is considered a disease on its own and represents one of the most common reasons for seeking medical help (Dahlhamer et al., 2018; Mills et al., 2019). This is supported by the large number of studies included in our review that evaluated pain as an outcome measure. We included 30 relevant articles and summarised their details and findings in Appendix 8.

A total of 14 articles reported statistically significant differences in pain reduction, 8 articles reported both statistically significant and non-significant results, and the remaining 8 articles did not observe any significant differences. Upon closer examination of the significant results, we found that several articles (Lin et al., 2021; Luo & Li, 2021; Mao et al., 2021; Pan et al., 2023; Sheng et al., 2019; Tan et al., 2022; Tomás-Escolar et al., 2023; Wang et al., 2021; Xue et al., 2021; Ye et al., 2020; Zhong et al., 2020) included both placebo- and non-placebo-controlled studies in their meta-analyses. Additionally, four articles did not include any placebo-controlled studies (Firoozi et al., 2022; Sun & Lou, 2021; Y. Wang et al., 2022; Wu et al., 2022). Therefore, we cannot attribute these positive effects solely to KT therapy: this result is further supported by 14 meta-analyses that compared KT therapy exclusively to placebo KT therapy. Among these meta-analyses, 8 studies reported no statistically significant improvements (Celik et al., 2020; Ghozy et al., 2020; Lin et al., 2020; Luz Júnior et al., 2019; Pan et al., 2023; Ramírez-Vélez et al., 2019; Williams et al., 2012), while the remaining 6 articles (Gianola et al., 2021; Lin et al., 2020; Lu et al., 2018; Pan et al., 2023) found statistically significant improvements, but these were not considered clinically meaningful.

Portney (2020) highlighted the significance of minimal clinical important difference (MCID), which represents the smallest change in an observed variable that a patient considers meaningful. We compared the statistically significant results of the included articles to previously established MCIDs for certain conditions (Bijur et al., 2003; Bleakley et al., 2012; Gianola et al., 2021; Kelly, 2001; López-de-Uralde-Villanueva et al., 2023; Martin et al., 2013; Michener et al., 2011; Ogollah et al., 2019; Ostelo & De Vet, 2005; Tashjian et al., 2009; Tubach et al., 2005) and found that only Giannola et al. (2021), Xue et al. (2021), and Luo & Li (2021) exceeded the suggested MCID values. Giannola et al. (2021) and Luo & Li (2021) achieved the MCID in a meta-analysis comparing KT therapy in combination with physical exercise to exercise alone, while Xue et al. (2021) achieved the MCID in a meta-analysis comparing standalone and complementary KT therapy to placebo KT therapy and other forms of treatment. Despite our efforts of identify the MCID values from similar studies, we must treat these values solely as guidelines. This is because MCID can vary from study to study based on the differences in study populations and designs (Portney, 2020).

In their review, Araya-Quintanilla et al. (2022) proposed that the observed positive effects could be the result of the taping sensation, a placebo effect, or the Hawthorne effect. The latter suggests that participants are aware of being observed and create a placebo effect based on a belief. In order to achieve favourable results, many practitioners exploit the placebo effect. Simmonds (2000) warns against this since the use of the placebo effect can be unreliable and elicit contrasting effects in different individuals. Furthermore, exploitation of the placebo effect can present additional ethical and moral dilemmas.

Disability

Disability is a multifaceted, continually evolving, and contested concept that refers to the impact of various medical conditions or impairments on an individual's wellbeing (O'Young et al., 2019). Several outcome measures were used by the authors of the 28 included articles to study the effects of KT on disability. Details and results of articles are summarised in Appendix 9. Findings on disability were closely related to pain intensity: researchers who reported statistically significant reductions in pain intensity also reported statistically significant improvements in disability, and vice versa. One exception was Li et al. (2019), where the authors reported SIDs in disability, but not in pain intensity. This correlation between pain and disability may be due to the tools used to assess disability, such as the Oswestry Disability Index, which relies on subjective patient reports of how pain affects their abilities. Additionally, these results could be attributed to the placebo effect, the Hawthorne effect, or patient inaccuracy in assessing pain intensity.

Among the studies that reported SIDs, two articles did not include placebo KT therapy groups, three articles included different interventions for EGs and CGs, and only two articles compared KT and placebo KT therapy. No SIDs were reported in four additional meta-analyses that exclusively compared KT therapy to placebo KT therapy. Although some studies reported SIDs, it is not clear whether these improvements were clinically meaningful. This is because we could only compare three of the results to MCID values suggested by Maughan & Lewis (2010). MCID values were not available for the remaining results of the above-mentioned meta-analyses.

Another variable that may affect an individual's (dis)ability is function. This variable was assessed as an outcome measure in 11 meta-analyses by the authors of eight articles. Gianola et al. (2021) found statistically significant improvements in two meta-analyses - when comparing KT therapy to placebo KT therapy and when comparing KT therapy to other forms of treatment. However, even though the results of the latter comparison surpassed the suggested MCID values, the authors concluded that due to the low certainty of the evidence, it is not clear whether KT therapy improves the function of patients with rotator cuff dysfunctions. Celik et al. (2020) also studied function of patients with shoulder pathologies. In a comparison between EGs who received KT therapy combined with exercise versus CGs who received exercise alone, authors found SIDs in favour of the EG. When comparing KT therapy to placebo KT therapy, Celik et al. (2020) did not find any statistically significant improvements. Wang et al. (2021) reported SIDs when comparing KT therapy and usual care after stroke. Similarly, statistically important improvements in the function of patients with carpal tunnel syndrome were noted by Tomás-Escolar et al. (2023). In their meta-analyses, the aforementioned authors compared EGs who received standalone or complementary KT therapy with CGs who received placebo KT therapy with or without additional interventions, other forms of therapy, or no therapy at all. Once again, these results cannot be attributed to KT therapy alone. Even though the results were statistically significant, they did not surpass the MCID values suggested by López-de-Uralde-Villanueva et al. (2023). Even though statistically significant improvements in function were noted by Ye et al. (2020), the clinical value of the results is questionable as there was no proper placebo CG. In the remaining meta-analyses summarized in Appendix 9 that assessed function, the authors did not find any statistically significant improvements.

Other disability outcome measures were used by the authors of ten included studies that assessed the effect of KT therapy on patients' wellbeing after knee osteoarthritis, stroke, and mandibular third molar surgery. The effect of KT therapy on functional parameters of patients with knee osteoarthritis is not known, since Lu et al. (2018) and Wu et al. (2022) arrived to contradicting conclusions. In the treatment of post-stroke patients, Wang et al. (2019) noted positive effects of KT therapy on spasticity, balance, function, and degree of impairment. When comparing reported results to established MCID values, we discovered that MCID values were surpassed when measuring function with the Timed Up and Go Test, balance with the Berg Balance Scale, as well as degree of impairment after 12 weeks with Fugl-Meyer assessment scale. As there was no placebo group, the reliability of these results is questionable. This is supported by Hu et al. (2019) who reported statistically and clinically significant improvements in balance when comparing the KT therapy group to the usual care group, but not when comparing KT therapy groups to placebo KT therapy groups. Additionally, Wang et al. (2019) did not find any SIDs when comparing balance scores between KT therapy groups and placebo KT therapy groups. Wang et al. (2021) and Firoozi et al. (2022) noted that KT therapy was effective in improving trismus scores in patients after a mandibular third molar surgery. The authors of both studies compared standalone or complimentary KT therapy with pharmaceutical therapy alone. However, the reliability of these results is limited due to a lack of proper placebo control and MCID values.

Mechanical properties and movement abilities

Current evidence does not support the use of KT therapy to improve range of motion; statistically significant improvements were observed only in four of the studies included (Biz et al., 2022; Tan et al., 2022; Ye et al., 2020; Zhang et al., 2019). The details and findings are summarised in Appendix 10.

Zhang et al. (2019) discovered SIDs in a comparison between short-term KT therapy and other forms of treatment in people with myofascial pain syndrome, Biz et al. (2022) reported SIDs in range of motion of eversion and inversion in patients with chronic ankle instability, while Tan et al. (2022) noted SIDs in post-stroke patients. However, Zhang et al. (2019) did not observe long-term differences, and Biz et al. (2022) did not observe significant improvements in other ankle movements. The authors of the remaining 17 meta-analyses did not find any statistically significant improvements, but Gianola et al. (2021) found statistically significant differences in favour of the CG that did not match the suggested MCID values.

One of the main limitations of the included articles is the lack of proper CGs: only Celik et al. (2020) and Wang et al. (2018) compared KT therapy and placebo KT therapy. In their meta-analyses, Araya-Quintanilla et al. (2022), Gianola et al. (2021), Mao et al. (2021), Tan et al. (2022), Ye et al. (2020) and Zhang et al. (2019) compared EGs receiving KT therapy to CGs receiving various treatments (with or without placebo KT therapy), meanwhile Biz et al. (2022) did not include CGs at all. Due to the substantial heterogeneity of the results and the low to moderate quality of evidence, we cannot attribute any positive or negative effects to KT therapy exclusively.

Another common outcome measure assessed was muscle strength: this variable was observed in 29 meta-analyses included in 11 articles summarized in Appendix 10. SIDs were observed in 13 of all meta-analyses. Nunes et al. (2021) reported SIDs in several lower limb muscle strength outcome measures in participants with musculoskeletal dysfunctions, muscle fatigue, and those who had undergone orthopaedic surgeries, as well as in healthy individuals. Increased isokinetic muscle strength was observed in Mao et al. (2021), where the authors added that the reported result could be a consequence of pain reduction. This theory is opposed by the findings of Lu et al. (2018), who reported statistically significant pain reduction at rest and when walking, but did not report any significant difference in muscle strength. Similar results were reported in Lin et al. (2021) who found significant pain reduction after 48 hours, but did not note any significant differences in muscle strength or serum CK levels at the 48-hour follow-up. Tomás-Escolar et al. (2023) found SIDs in finger, but not in hand strength. Additionally, they observed SIDs in neurophysiological symptoms – they reported SIDs in favour of EGs in distal motor and sensory latency, as well as SIDs in favour of CGs in sensory conduction. However, both the negative and positive effects cannot be attributed solely to KT therapy since the authors compared both placebo and non-placebo controlled studies in the same meta-analyses. Yam et al. (2019) proposed a mechanism of action by which KT therapy would affect muscle strength. The authors suggested that KT therapy could enhance muscle spindle reflex and thus increase the excitability of motor units, which would explain the differences in results when the taping was performed on different muscles. Muscle activation was assessed Karabicak et al. (2022), who did not find any SIDs.

Shoulder subluxation was observed by Tan et al. (2022) and Wang et al. (2022), who also noted SIDs. As stated by Kase et al. (2003), this could be due to the joint alignment effect of KT therapies. Hassan et al. (2020) reported statistically significant improvements of shoulder blade stabilisation during internal rotation in children with brachial plexus injury, but they did not see significant improvements in any other movements. The authors added that there is currently not enough evidence to support the use of KT therapy in children with brachial plexus injury.

Despite seeing certain statistically significant improvements, the use of KT therapy in clinical applications is still questionable. MCID values were reported solely by Gianola et al. (2021), leaving the MCID values for other outcome measures unknown. The quality of the included studies was often low and the heterogeneity of the performed meta-analyses was high, which consequently caused very low to moderate quality of evidence. These factors call for careful interpretation of the results of previously published meta-analyses.

Lymphedema and swelling

Up to 21% of breast cancer survivors develop lymphedema following surgical breast cancer treatment, which typically affects the arms and can lead to altered appearance, reduced function, mobility, and quality of life (Merchant & Chen, 2015).

Gatt et al. (2017) and Kasawara et al. (2018) investigated the efficacy of KT therapy as a lymphedema treatment option, but found no SIDs in EGs and CGs. On the contrary, Firoozi et al. (2022) and Wang et al. (2021), reported SIDs when comparing the effects of complementary KT therapy on swelling after mandibular third molar surgery. Firoozi et al. (2022) reported statistically significant improvements in swelling 48 hours post-surgery, but not 7-days post-surgery, while Wang et al. (2021) observed statistically significant differences favouring KT therapy in both short- and long-term observations. The details and findings of included studies are summarised in Appendix 11.

The discrepancies between the results obtained in the lymphedema and swelling studies could be attributed to the underlying physiological mechanisms of fluid or lymph retention. Lymphedema can arise from genetic abnormalities of the lymphatic system or as a consequence of breast cancer treatment, which often involves the removal of lymph nodes, leading to lymph fluid retention (Merchant & Chen, 2015). KT tape application is hypothesised to promote the drainage of lymphatic fluid and blood by lifting the skin, alleviating subcutaneous pressure, and facilitating muscle activation (Kase et al., 2003). We speculate that surgical breast cancer treatment could cause damage to lymphatic fluid vessels, which could explain the discrepancies in the results of the lymphedema and swelling treatments.

Due to the limited number of included studies focusing on these aspects, the results should be interpreted with caution. To determine the efficacy of KT therapy for lymphedema treatment, more high-quality studies are needed.

CONCLUSIONS AND CLINICAL CONSIDERATIONS

Despite the lack of unequivocal scientific evidence, KT therapy continues to be a prevalent choice for managing various conditions. Our extensive review reveals that while certain studies highlight positive outcomes, the collective evidence remains inconclusive regarding the definitive efficacy of KT. Notably, our review did not uncover any evidence of KT leading to negative impacts or deterioration of clinical indicators. In fact, in the context of progressive neurological diseases, the ability of KT to maintain patient condition - without deterioration - may itself be considered a form of success. This underscores the potential value of KT in physical therapy, where stabilising a patient's condition is often a significant achievement. Furthermore, the specific impact of KT on haemorrhage management, an area that could not be examined in detail in our review, merits attention. Anecdotal evidence and clinical observations suggest that KT may expedite the dispersion of haemorrhages beneath the application area within a few days -a notable effect that lacks a parallel in physical therapy or medicine. This unique aspect of KT therapy highlights its potential utility in specific therapeutic contexts and warrants further investigation.

While some of the observed benefits of KT could be attributed to the placebo effect, stemming from the patients' belief in the treatment, it is imperative to approach such interpretations with caution. The reliance on placebo effects involves ethical considerations, including informed consent and the potential for patient exploitation. Therefore, while acknowledging the placebo component, it is essential to continue exploring the therapeutic mechanisms and outcomes related to KT through more rigorous, well-designed RCTs. These studies should aim for larger sample sizes and include placebo controls to elucidate efficacy and therapeutic value of KT more clearly.

In conclusion, while the current evidence on the efficacy of KT is mixed and calls for cautious interpretation, it is clear that KT does not adversely affect patient outcomes and may offer benefits in maintaining conditions in certain pathologies. The potential of KT, especially in areas such as haemorrhage management, deserves further scientific exploration to fully understand its role and efficacy in physical therapy.

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APPENDIX 1: DETAILS OF THE STUDIES INCLUDED – NONSPECIFIC DYSFUNCTIONS

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Ramírez-Vélez et al., 2019	6	544	**EG:** KTT **CG:** PKTT	Pain (VAS) – at rest, at night, in motion Disability – ODI, RMDQ	NSID	Low quality
2	Lim and Tay, 2015	7	822	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	Pain Disability	**Pain:** KTT vs. minimal intervention: SID, SMD: - 0.76, $I^2 = 80\%$ KTT vs. other forms of treatment: NSID, $I^2 = 96\%$ **Disability:** KTT vs. minimal intervention: NSID, $I^2 = 66\%$ KTT vs. other forms of treatment: NSID, $I^2 = 29\%$	Not specified
3	Williams et al., 2012	10	282	**EG:** KTT **CG:** PKTT, no intervention	Pain (NPRS), Range of motion, Muscle strength, Proprioception	**Pain:** NSID **Range of motion:** no clear conclusion **Muscle strength:** no clear conclusion **Proprioception:** no clear conclusion	Not specified
4	Tran et al., 2021	36 (19 included in the meta-analysis)	2670	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, other forms of treatment	Pain (five days, 4-6 weeks) Disability (five days, 4-6 weeks)	**Pain:** Short term: SID, SMD: - 0.63, $I^2 = 61\%$ Long term: SID, SMD: - 0.76, $I^2 = 83$ **Disability:** Short term: SID, SMD: - 0.70, $I^2 = 84\%$ Long term: SID, SMD: - 0.59, $I^2 = 52\%$	Not specified
5	Zhang et al., 2019	20	959	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, PKTT + exercise, other forms of treatment	Pain, Range of motion, Muscle strength, Disability	**Pain** KTT vs. non-invasive methods short term: SID, MD = - 1.14 Long term: SID, MD = - 0.68 KTT vs. invasive methods: NSID **Range of motion:** KTT vs. other forms of treatment: Short term: SID, SMD = 0.26, $I^2 = 44\%$ Long term: NSID **Disability:** KTT vs. other forms of treatment: NSID **Muscle strength:** KTT vs. other forms of treatment: NSID	Low quality
6	Montalvo et al., 2014	13 (8 included in the meta-analysis)	515 (360 included in the meta-analysis)	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, PKTT + exercise, other forms of treatment	Pain	NSID, $I^2 = 49\%$	Not specified

fCG, control group; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; ODI, Oswestry disability index; PKTT, placebo kinesio taping therapy; RMDQ, Roland-Morris Disability Questionnaire; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 2: DETAILS OF THE STUDIES INCLUDED – UPPER LIMB PATHOLOGIES

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Ghozy et al., 2020	12	555	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, steroid therapy	Pain, Disability (SPADI or range of motion scale)	**Pain:** KTT vs. PKTT: NSID, $I^2 = 0\%$ KTT vs. steroid therapy: NSID, $I^2 = 0\%$ KTT + exercise vs. exercise: SID, SMD: - 0.5, $I^2 = 0\%$ **Disability:** KTT vs. PKTT: NSID KTT vs. steroid therapy: SID (shoulder extension), SMD: - 0.37, $I^2 = 46\%$, everything else: NSID KTT + exercise vs. exercise: Abduction: SID, SMD: 2.43 Flexion: SID, SMD: 2.6 External rotation: SID, SMD: 2.43	Low quality of some included studies
2	Gianola et al., 2021	23 (22 in the meta-analysis)	1054	**EG:** KTT, **CG:** PKTT, other forms of treatment	**Major outcome measures:** Overall pain (VAS, NPRS), Function (SPADI, etc.), Pain in motion (VAS, NPRS), Active range of motion in the shoulder **Minor outcome measures**: Other measures of pain (at night, at rest), Muscle strength, Other measurements of shoulder motion	**KTT vs. PKTT** Overall pain: NSID, $I^2 = 53\%$ Pain in motion: SID, MD: - 1.48, $I^2 = 0\%$ Pain at rest: NSID, $I^2 = 0\%$ Pain at night: SID, MD: - 1.49, $I^2 = 0\%$ Function: SID, MD: - 8.05, $I^2 = 87\%$ Active shoulder abduction: NSID Active shoulder flexion: SID in favour PKTT, MD: - 4.12, $I^2 = 0\%$ Active range of motion: internal and external rotation: NSID Muscle strength (flexion): SID, SMD: 0.66, $I^2 = 0\%$ Muscle strength (extension): SID, SMD: 0.60, $I^2 = 0\%$ Muscle strength (abduction): SID, SMD: 0.57, $I^2 = 0\%$ Muscle strength (adduction, internal and external rotation): NSID **KTT vs. other forms of treatment** Overall pain: SRZ, MD: - 0.44, $I^2 = 95\%$ Pain in motion: NSID, $I^2 = 48\%$ Pain at rest: NSID, $I^2 = 29\%$ Pain at night: SID, MD: - 0.57, $I^2 = 87\%$ Function: SID, MD: - 13.13, $I^2 = 89\%$ Active range of motion (abduction and flexion): NSID Quality of life: SID, MD: 18.70 Active range of motion (internal and external rotation): NSID	**KT vs. PKTT** **Pain**: very low quality **Function**: very low quality of evidence **Pain in motion:** very low quality of evidence **Active shoulder abduction:** very low quality of evidence **KTT vs. other forms of treatment** **Pain**: very Low quality **Function**: very low quality of evidence **Pain in motion:** very low quality of evidence **Quality of life:** low reliability of evidence **Active shoulder abduction:** very low quality of evidence

3	Araya-Quintanilla, 2022	16 (10 in the analysis)	860	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	Pain (VAS), Function (SPADI, WORC, CMS), Range of shoulder motion	**Pain:** Between 1 and 3 weeks: NSID, $I^2 = 79\%$ Between 3 and 6 weeks: NSID, $I^2 = 85\%$ **Function:** Between 1 and 3 weeks: NSID, $I^2 = 53\%$ **Range of motion:** Between 1 and 3 weeks: NSID, $I^2 = 95\%$	**Pain**: very low quality of evidence **Function:** moderate quality of evidence **Range of motion:** moderate quality of evidence
4	Celik et al., 2020	16 (14 in the meta-analysis)	680	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, other forms of treatment	Pain, Range of motion, Function	**Pain**: KTT vs. PKTT: NSID, $I^2 = 45\%$ KTT + exercise vs. exercise: NSID, $I^2 = 63\%$ KTT vs. passive treatment: NSID, $I^2 = 73\%$ **Range of motion:** KTT vs. PKTT: NSID, $I^2 = 73\%$ Function: KTT vs. PKTT: NSID, $I^2 = 85\%$ KTT + exercise vs. exercise: SID, MD: 0.41, $I^2 = 84\%$	Not specified
5	Tomás-Escolar et al., 2023	13	665	**EG:** KTT, KTT + other treatments **CG:** PKTT, no treatment, other forms of treatment, PKTT + other forms of treatment	Functionality and symptoms (BCTQ), Pain (NPRS, VAS), Muscle strength (isometric grip strength), Neurophysiological outcomes	**BCTQ** Function: SID, ES: - 0.211, $I^2 = 55\%$ Severity of symptoms: SID, ES: - 0.194, $I^2 = 74\%$ **Muscle strength** Hand strength: NSID, $I^2 = 0\%$ Finger strength: SID in favour of CG, ES: 0.253, $I^2 = 57\%$ **Pain** SID, ES: - 0.363, $I^2 = 91\%$ **Neurophysiological outcomes** Distal motor latency: SID, ES: - 0.167, $I^2 = 18\%$ Sensory conduction: SID in favour of CG, ES: 0.193, $I^2 = 93\%$ Distal sensory latency: SID, ES: - 0.748, $I^2 = 76\%$	Moderate quality of evidence

6	Zhong et al., 2020	5	168	**EG:** KTT **CG:** PKTT or physiotherapy	Pain (at rest, movement – VAS), Grip strength (one and three months), DASH score, Adverse effects. Modified Mayo performance index	**Pain** At rest: SID, WMD: - 0.458, $I^2 = 0\%$ At movement: SID, WMD: - 0.320, $I^2 = 0\%$ **Grip strength** One month: SID, WMD: - 1.631, $I^2 = 0\%$ Three months: SID, WMD: 1.873, $I^2 = 0\%$ **Modified Mayo performance index** SID, WMD: 4.229, $I^2 = 83\%$ **DASH score** SID, WMD: - 5.249, $I^2 = 53\%$ **Adverse effects** Skin irritation did not increase	Not specified

BCTQ, Boston Carpal Tunnel Questionnaire; CG, control group; CMS, Constant-Murley score; DASH, Disabilities of the arm, shoulder and hand score; EG, experimental group; ES, effect size; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; ODI, Oswestry disability index; PKTT, placebo kinesio taping therapy; RMDQ, Roland-Morris Disability Questionnaire; SID, statistically important differences in favour of EG; SMD, standardised mean difference; SPADI, Shoulder Pain and Disability Index; VAS, visual analogue pain scale; WMD, weighted mean difference, WORC, Western Ontario Rotator Cuff Index

APPENDIX 3: DETAILS OF THE STUDIES INCLUDED – LOWER LIMB PATHOLOGIES

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Lu et al., 2018	5	308	**EG:** KTT **CG:** PKTT	Pain while walking and at rest (VAS), WOMAC score, Range of knee flexion, Muscle strength	**Pain** At rest: SID, WMD: - 0.39, $I^2 = 0\%$ When walking: SID, WMD: - 0.42, $I^2 = 22\%$ **WOMAC score**: SID, WMD: - 5.0, $I^2 = 18\%$ **Muscle strength:** NSID, $I^2 = 0\%$	Low level of evidence
2	Mao et al., 2021	11	739	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	Pain (VAS, NPRS), Muscle strength (handheld dynamometer, isokinetic dynamometer), Function, Range of motion	**Pain** SID, SMD: - 0.42, $I^2 = 78\%$ **Muscle strength** Handheld dynamometer: NSID, $I^2 = 66\%$ Isokinetic dynamometer: SID, SMD: 0.72, $I^2 = 80\%$ **Function:** NSID, $I^2 = 89\%$ **Range of motion:** NSID, $I^2 = 74\%$	Not specified
3	Wu et al., 2022	17	642	**EG:** KTT **CG:** exercise, exercise + other forms of treatment	Pain (VAS), WOMAC score, Timed Up and Go Test	**Pain** After intervention: SID, MD: - 0.86, $I^2 = 88\%$ After a time interval: SID, MD: - 0.58, $I^2 = 86\%$ **WOMAC score:** NSID, $I^2 = 97\%$ **TUG**: NSID, $I^2 = 64\%$	Not specified
4	Wang et al., 2018	10	233	**EG:** KTT **CG:** PKTT, no intervention	Star Excursion Balance Test, Vertical jump height, Ankle range of motion	**Star Excursion Balance Test:** SID before and after intervention for both KTT and PKTT, SID in favour of KTT MD: 3.2, $I^2 = 5\%$ **Vertical jump height:** SID in favour of KTT, MD: 1.06, $I^2 = 15\%$ **Ankle range of motion:** NSID, $I^2 = 0\%$	Not specified
5	Biz et al., 2022	8	270	KTT	Gait parameters, Agility, Muscle activation, Dynamic balance	**Gait parameters** Stride length: SID, SMD: 2.27 Stride velocity: SID, SMD: 1.98 Heel to heel distance: SID, SMD: 1.92 **Range of motion:** inversion-eversion: SID, SMD: 0.52 Other movements: NSID **Agility**: NSID	Not specified
6	Nunes et al., 2021	84 (44 in the meta-analysis)	2684	**EG:** KTT **CG:** PKTT, no intervention, stretching, balance exercises, other forms of treatment	Balance, jump parameters, Range of motion, Proprioception, Muscle capacity, Electromyographic measures, Function	Out of 58 meta-analyses, seven reported benefits of KT therapy. Authors added that due to statistical errors, observed differences may be a result of chance alone and, potentially, do not indicate real effects.	54 meta-analyses: very low to low quality

7	Elrosasy et al., 2023	5	126	**EG:** KTT **CG:** PKTT, physiotherapy	Pain, Knee flexion and extension strength	**Flexion strength** SID in favour of CG, SMD: 0.44, $I^2 = 9\%$ **Extension strength** NSID **Pain** NSID	Not specified
8	Ye et al., 2020	11	490	**EG:** KTT, KTT + physiotherapy **CG:** PKTT, no intervention, physiotherapy	Pain (VAS, WOMAC, NPRS), Function (WOMAC and TUG), Range of motion, Muscle strength	**Pain** KTT vs. PKKT or no treatment: SID, SMD: - 0.76, $I^2 = 78\%$ KTT + physiotherapy vs. physiotherapy: SID, SMD: - 0.78, $I^2 = 16\%$ **Function** KTT vs. PKKT or no treatment: SID, SMD: - 0.39, $I^2 = 7\%$ KTT + physiotherapy vs. physiotherapy: SID, SMD: - 0.73, $I^2 = 37\%$ **Range of motion** KTT vs. PKKT or no treatment: SID, MD: 2.04, $I^2 = 39\%$ **Quadriceps muscle strength** KTT vs. PKKT or no treatment: SID, MD: 2.42, $I^2 = 0\%$ **Hamstring muscle strength** KTT vs. PKKT or no treatment: NSID, $I^2 = 0\%$	Current evidence is insufficient to draw conclusions
9	Luo & Li, 2021	8	416	**EG:** KTT, KTT + exercise **CG:** PKTT, no intervention, other intervention	Pain (VAS)	**Less than 4 weeks to follow up:** SID, MD: - 1.14, $I^2 = 49\%$ **Follow up after 6 weeks:** NSID, $I^2 = 0\%$ **KTT + exercise vs. exercise:** SID, MD: - 3.27, $I^2 = 0\%$	Evidence is limited

CG, control group; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; TUG, Timed Up and Go test; VAS, visual analogue pain scale; WMD, weighted mean difference, WORC, Western Ontario Rotator Cuff Index

APPENDIX 4: DETAILS OF THE STUDIES INCLUDED – LOW-BACK PAIN

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Luz Júnior et al., 2019	11	743	KTT vs. no intervention, KTT vs. PKTT, KTT + physiotherapy vs. physiotherapy	Pain (VAS, NPRS), Disability (ODI, RMDQ)	**Pain (measured around 4 weeks)** KTT vs. no intervention: NSID KTT vs. PKTT: NSID KTT + physiotherapy vs. physiotherapy: NSID **Disability (measured around 4 weeks)** KTT vs. PKTT: NSID KTT + physiotherapy vs. physiotherapy: NSID **Pain (measured around 12 weeks)** KTT vs. PKTT: NSID **Disability (measured around 12 weeks)** KTT vs. PKTT: NSID	Very low to low quality
2	Lin et al., 2020	11	785	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, no intervention, other forms of treatment	Pain (VAS, NPRS), Disability (ODI, RMDQ)	**Pain:** KTT vs. PKTT: SID, SMD: - 0.84, $I^2 = 84\%$ KTT vs. other forms of treatment: SID, SMD: - 0.73, $I^2 = 84\%$ KTT vs. no intervention: SID, SMD: - 0.74, $I^2 = 80\%$ **Disability:** KTT vs. PKTT: SID, SMD: - 0.56, $I^2 = 71\%$ KTT vs. other forms of treatment: SID, SMD: - 0.51, $I^2 = 80\%$ KTT vs. no intervention: SID, SMD: - 0.65, $I^2 = 85\%$	Low quality
3	Li et al., 2019	10	627	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	Pain (VAS, NPRS), Disability (ODI, RMDQ)	**Pain:** KTT vs. PKTT: NSID, $I^2 = 82\%$ KTT + physiotherapy vs. physiotherapy: NSID, $I^2 = 83\%$ **Disability:** KTT vs. PKTT: SID, $I^2 = 0\%$ KTT + physiotherapy vs. physiotherapy: NSID, $I^2 = 82\%$	Not specified
4	Xue et al., 2021	7	444	**EG:** KTT, KTT + other forms of treatment, KTT + paracetamol, KTT+ psycho-supportive therapy **CG:** PKTT, other forms of treatment, paracetamol, psycho-supportive therapy	Pain (VAS), Disability (RMDQ)	**Pain:** SID, MD: - 1.62, $I^2 = 77\%$ **Disability:** SID, MD: - 1.00, $I^2 = 80\%$	Not specified
5	Sun and Lou, 2021	16	676	**EG:** KTT + physiotherapy **CG:** physiotherapy	Pain (VAS, NPRS), Disability (ODI, RMDQ, ODPQ)	**Pain**: SID, SMD: 0.73, $I^2 = 78\%$ **Disability:** SID, SMD: 1.01, $I^2 = 91\%$	Low quality

6	Sheng et al., 2019	8	530	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, PKTT+ other forms of treatment	Pain (VAS), Disability (ODI)	**Pain:** SID, WMD: - 1.22, $I^2 = 91\%$ **Disability:** SID, WMD: - 7.11, $I^2 = 77\%$	Low quality
7	Pan et al., 2023	9	677	**EG:** KTT, physiotherapy + KT **CG:** PKTT, physiotherapy	Pain (VAS, NPRS), Disability (ODI, RMDQ), Trunk flexion range of motion (MTS, Fleximeter, MFFTF), Change in status (GPES)	**Immediately postintervention** **Pain** Overall: SID, SMD: - 0.47, $I^2 = 81\%$ Physiotherapy vs. physiotherapy + KTT: NSID, $I^2 = 0\%$ KTT vs. PKTT: NSID, $I^2 = 89\%$ **Disability** Overall: NSID, $I^2 = 29\%$ Physiotherapy vs. physiotherapy + KTT: NSID, $I^2 = 3\%$ KTT vs. PKTT: NSID, $I^2 = 52\%$ **Trunk flexion range of motion** Overall: NSID, $I^2 = 84\%$ KTT vs. PKTT: NSID, $I^2 = 86\%$ **Change in status:** Overall: NSID, $I^2 = 58\%$ **Short-term follow-up** **Pain** Overall: SID, SMD: -0.67, $I^2 = 88\%$ KTT vs. PKTT: SID, SMD: - 0.87, $I^2 = 90\%$ **Disability** Overall: NSID, $I^2 = 71\%$ KTT vs. PKTT: NSID, $I^2 = 78\%$ **Trunk flexion range of motion** Overall: NSID, $I^2 = 87\%$ **Change in status:** Overall: NSID, $I^2 = 0\%$ **Intermediate-term follow-up** **Pain** Overall: NSID, $I^2 = 0\%$ **Disability** Overall: NSID, $I^2 = 0\%$ KTT vs. PKTT: NSID, $I^2 = 86\%$ **Change in status:** Overall: NSID, $I^2 = 0$	Not specified

CG, control group; EG, experimental group; GPSE, Global Perceived Effect scale; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; MFTTF, Modified Fingertip to Floor Technique; MTS, Modified Schobert's test; NPRS, numeric pain rating scale; NSID, no statistically important differences; ODI, Oswestry disability index; PKTT, placebo kinesio taping therapy; RMDQ, Roland-Morris Disability Questionnaire; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference; WOMAC, Western Ontario and McMasters Universities Arthritis Index

APPENDIX 5: DETAILS OF THE STUDIES INCLUDED – MECHANICAL PROPERTIES

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Karabicak et al., 2022	10 (5 in the meta-analysis)	416	**EG:** KTT **CG:** PKTT, knee brace	Muscle strength (isokinetic dynamometer, handheld dynamometer), Muscle activation	**Muscle strength:** NSID, $I^2 = 65\%$ **Muscle activation:** NSID	Not specified
2	Yam et al., 2019	37	1850	**EG:** KTT, FKTT, IKTT, KTT + regular treatment **CG:** PKTT, regular treatment, no intervention	Muscle strength of lower extremity (healthy participants, participants with muscle fatigue, participants with chronic muscle-skeletal dysfunctions, participants after orthopaedic surgeries) Jumping test (healthy participants) Vertical jump (healthy participants, participants with muscle fatigue)	**Muscle strength of lower extremity** (participants with muscle fatigue) Short term KTT vs. minimal intervention: NSID, $I^2 = 65\%$ Long term KTT vs. minimal intervention (2 studies): SID, SMD = 0.61, I^2=0% **Muscle strength of lower extremity** Short term KTT vs. minimal intervention: NSID, $I^2 = 34\%$ Long term KTT vs. minimal intervention: SID, SMD: 0.25 $I^2 = 49\%$ **Muscle strength of lower extremity** (participants with chronic muscle-skeletal dysfunctions) KTT vs. minimal intervention (agonistic muscle, 4 studies): SID, SMD: 1.24, $I^2 = 77\%$ KTT vs. minimal intervention (antagonistic muscle, 2 studies): NSID, $I^2 = 74\%$ **Muscle strength of the lower extremity** (participants after orthopaedic surgeries) KTT vs. minimal intervention (2 studies): SID, SMD: 0.60, $I^2 = 0\%$ **Jumping test (KTT vs. minimal intervention)** Healthy participants (7 studies): NSID, $I^2 = 0\%$ **Vertical jump (KTT vs. minimal intervention)** Participants with muscle fatigue (2 studies): NSID, $I^2 = 0\%$ Healthy participants (2 studies): SID, SMD: 0.18, $I^2 = 0\%$	Not specified
3	Lai et al., 2019	6	263	**EG:** KTT **CG:** static stretching, regular treatment (without active treatments)	Length of m. Pectoralis Minor, index m. Pectoralis Minor	**Length of m. Pectoralis Minor** KTT vs. regular treatment: SID, MD: 1.15cm Stretching vs. regular treatment: NSID **Index m. Pectoralis Minor** KTT vs. regular treatment vs. stretching: SID in favour of the stretching group, MD: 1.40 KTT vs. regular treatment: NSID	Not specified

4	J. Lin et al. 2021	8	289	**EG:** KTT **CG:** PKTT, no intervention	Muscle soreness (VAS), Muscle strength (peak torque, maximal isometric muscle strength), Serum CK Level	**Muscle soreness** 24h post intervention: NSID 48h post intervention: SID, MD: - 0.67, $I^2 = 61\%$ 72h post intervention: SID, MD: - 0.81, $I^2 = 86\%$ **Muscle strength** 24h post intervention: NSID 48h post intervention: NSID 72h post intervention: SID, SMD: 0.35, $I^2 = 0\%$ **Serum CK levels** 24h post intervention: NSID 48h post intervention: NSID 72h post intervention: NSID	Not specified

CG, control group; EG, experimental group; FKTT. facilitating kinesio taping technique; I^2, heterogeneity; IKTT, inhibiting kinesio taping technique; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; ODI, Oswestry disability index; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 6: DETAILS OF THE STUDIES INCLUDED – NEUROLOGICAL DYSFUNCTIONS

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Tan et al., 2022	9	253	**EG:** KTT **CG:** PKTT, other forms of treatment	Pain, Range of motion, Shoulder joint subluxation, Function, modified Ashworth scale	**Pain** SID, MD: - 1.59, $I^2 = 92\%$ **Range of motion** SID, MD: 7.00, $I^2 = 93\%$ **Modified Ashworth scale** SID, MD: - 0.26, $I^2 = 82\%$ **Shoulder joint subluxation** SID, MD: - 0.42, $I^2 = 0\%$ **Function** NSID, $I^2 = 0\%$	Not specified
2	Y. Wang et al., 2022	12	535	**EG:** KTT **CG:** regular treatment	Pain, Range of motion, Shoulder joint subluxation, Function, Spasticity (Modified Ashworth scale), Disability, Passive range of motion	**Pain** SID, SMD: - 0.79, $I^2 = 82\%$ **Function:** SID in favour CG, SMD: 0.61, $I^2 = 80\%$ **Subluxation**: SID, SMD: - 0.50, $I^2 = 3\%$ **Spasticity:** NSID **Disability:** SID in favour CG, SMD: 0.35, $I^2 = 34\%$ **Passive range of flexion:** SID in favour CG, SMD: 0.63, $I^2 = 0\%$ **Passive range of abduction:** NSID	Not specified
3	Hu et al., 2019	22	1331	**EG:** regular treatment + KTT, KTT **CG:** regular treatment, regular treatment + PKTT, PKTT	Berg balance scale, Functional ambulation classification, Fugl-Meyer scale, Timed Up and Go Test, Modified Ashworth scale	**Berg balance scale** KTT vs. regular treatment: SID, MD: 4.46, $I^2 = 93\%$ KTT vs. PKTT: NSID, $I^2 = 62\%$ **Timed Up and Go Test** KTT vs. regular treatment: SID, MD: - 4.62, $I^2 = 19\%$ **Functional ambulation classification** KTT vs. regular treatment: SID, MD: 0.53, $I^2 = 40\%$ **Fugl-Meyer scale** KTT vs. regular treatment: SID, MD: 4.20, $I^2 = 84\%$ **Modified Ashworth scale** KTT vs. regular treatment: SID, MD: - 0.38, $I^2 = 31\%$	Not specified

4	M. Wang et al., 2019	14	783	**EG:** regular treatment + KTT, KTT **CG:** regular treatment, regular treatment + PKTT, PKTT, no intervention	Berg balance scale, Fugl-Meyer scale, Timed Up and Go Test, Modified Ashworth scale, 10-meter walking test	**Berg balance scale** KTT vs. PKTT: NSID, $I^2 = 0\%$ **Timed Up and Go Test** KTT vs. regular treatment: SID, MD: - 4.04, $I^2 = 0\%$ **Fugl-Meyer scale** KTT vs. regular treatment: After 4-week intervention: SID, MD: 4.41, $I^2 = 75\%$ After 8-week intervention: SID, MD: 3.00, $I^2 = 0\%$ After 12-week intervention: SID, MD: 8.26, $I^2 = 82\%$ **Modified Ashworth scale** KTT vs. regular treatment: SID, MD: - 0.32, $I^2 = 0\%$ **10-meter walking test** KTT vs. regular treatment: NSID, $I^2 = 90\%$	Not specified, quality of included studies is low to moderate
5	Hassan et al., 2020	5 (2 in the meta-analysis)	115 (54 in the meta-analysis)	**Intervention:** KTT	Scapular stabilization	**Scapular stabilization during internal rotation:** SID, SMD: - 0.87, $I^2 = 0\%$ **Scapular stabilization during other movements:** NSID	Not specified
6	Unger et al., 2018	5	158	**EG:** KTT + physiotherapy management **CG:** physiotherapy management	GMFMS	GMFMS KTT vs. no taping: SID, MD: 19.15, $I^2 = 95\%$	Moderate level of evidence

CG, control group; EG, experimental group; GMFMS, Gross Motor Function Measure - Sitting; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 7: DETAILS OF THE STUDIES INCLUDED – LYMPHEDEMA AND SWELLING

	Author, year	Number of studies included	Total number of participants	Intervention groups	Outcome measures	Results	Quality of results achieved
1	Kasawara et al., 2018	7 (6 in the meta-analysis)	303	**EG:** KTT + other forms of treatment **CG:** PKTT + other forms of treatment, other forms of treatment, no intervention	Extremity volume	NSID	Not specified, quality of included studies is low
2	Gatt et al., 2017	6 (5 in the meta-analysis)	203	**EG:** KTT **CG:** compression garments	Extremity volume	**Extremity volume** KTT vs. compression garments**:** NSID, $I^2 = 90\%$	Not specified
3	Firoozi et al., 2022	9	444	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment	Pain, Trismus score, Swelling	**Pain** After 24h: SID, MD: - 1.51, $I^2 = 0\%$ After 48h: SID, MD: - 1.99, $I^2 = 53\%$ After 72h: SID, MD: - 1.4, $I^2 = 81\%$ After 7 days: NSID **Swelling** After 48h: SID, SMD: - 1.25, $I^2 = 89\%$ After 7 days: NSID **Trismus score** After 48h: SID, MD: 5.84, $I^2 = 67\%$ After 72h: SID, MD: 4.59, $I^2 = 0\%$ After 7 days: SID, MD: 3.24, $I^2 = 0\%$	Very low to high reliability of evidence
4	Y. Wang et al., 2021	8	419	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment, PKTT + pharmaceutical treatment	Pain, Trismus score, Swelling	**Pain** Short term: SID, MD: - 2.0, $I^2 = 72\%$ Long term: SID, MD: - 1.18, $I^2 = 98\%$ **Trismus score** Short term: SID, MD: - 5.03, $I^2 = 0\%$ Long term: SID, MD: - 3.42, $I^2 = 60\%$ **Swelling** Short term: SID, MD: - 1.34, $I^2 = 88\%$ Long term: SID, MD: - 0.31, $I^2 = 47\%$	Not specified

CG, control group; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 8: DETAILS OF THE STUDIES INCLUDED– PAIN

	Author	Year	Area of focus	Intervention	Results	Minimal clinically important difference
1	Zhang et al.	2019	Myofascial pain syndrome	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, PKTT + exercise, other forms of treatment	**KTT vs. Non-invasive methods** Short term: SID, MD: - 1.14 Long term: SID, MD: - 0.68 **KT vs. invasive methods:** NSID	NO MCID: - 1.4 (Bijur et al., 2003)
2	Tran et al.	2021	Musculoskeletal dysfunctions	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, other forms of treatment	Short term: SID, SMD: - 0.63, $I^2 = 61\%$ Long term: SID, SMD: - 0.76, $I^2 = 83\%$	NO MCID: - 1.4 (Bijur et al., 2003)
3	Tan et al.	2022	Post-stroke upper extremity pain	**EG:** KTT **CG:** PKTT, other forms of treatment	SID, MD: - 1.59, $I^2 = 92\%$	NO MCID: - 2.17 (Michener et al., 2011)
4	Y. Wang et al.	2022	Post-stroke upper extremity pain	**EG:** KTT **CG:** regular treatment	SID, SMD: - 0.79, $I^2 = 82\%$	NO MCID: - 2.17 (Michener et al., 2011)
5	Lu et al.	2018	Knee osteoarthrosis	**EG:** KTT **CG:** PKTT	Pain at rest: SID, WMD: - 0.394, $I^2 = 0\%$ Pain when walking: SID, WMD: - 0.429, $I^2 = 22\%$	NO MCID: - 1.99 (Tubach et al., 2005)
6	Mao et al.	2021	Knee osteoarthrosis	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	SID for KTT groups: SMD: - 0.42, $I^2 = 78\%$	NO MCID: - 1.99 (Tubach et al., 2005)
7	Wu et al.	2022	Knee osteoarthrosis	**EG:** KTT **CG:** exercise, exercise + other forms of treatment	Short term: SID, MD: - 0.86, $I^2 = 88\%$ Long term: SID, MD: - 0.58, $I^2 = 86\%$	NO MCID: - 1.99 (Tubach et al., 2005)
8	Firoozi et al.	2022	Mandibular third molar surgery	**EG:** KTT + pharmaceutical treatment **CG:** pharmaceutical treatment	After 24h: SID, MD: - 1.51, $I^2 = 0\%$ After 48h: SID, MD: - 1.99, $I^2 = 53\%$ After 72h: SID, MD: - 1.4, $I^2 = 81\%$ After 7 days: NSID	NO MCID: - 2.5 (Martin et al., 2013)
9	Y. Wang et al.	2022	Mandibular third molar surgery	**EG:** KTT + pharmaceutical treatment **CG:** pharmaceutical treatment, PKTT + pharmaceutical treatment	Short term: SID, MD: - 2.0, $I^2 = 72\%$ Long term: SID, MD: - 1.18, $I^2 = 98\%$	NO MCID: - 2.5 (Martin et al., 2013)
10	Lim and Tay	2015	Chronic musculoskeletal pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	KTT vs. minimal intervention: SID, SMD: - 0.76, $I^2 = 80\%$ KTT vs. other forms of treatment: NSID, $I^2 = 96\%$	NO MCID: - 1.2 (Kelly, 2001)
11	Ghozy et al.	2020	Shoulder pain	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, steroid therapy	KTT vs. PKTT: NSID, $I^2 = 0\%$ KTT vs. steroid therapy: NSID, $I^2 = 0\%$ KTT + exercise vs. exercise: SID, SMD: - 0.5, $I^2 = 0\%$	NO MCID: - 1.4 (Tashjian et al., 2009)

12	Gianola et al.	2021	Rotator cuff dysfunctions	**EG:** KTT, **CG:** PKTT, other forms of treatment	KTT vs. PKTT (overall pain): NSID, $I^2 = 53\%$ KTT vs. PKTT (pain in motion): SID, MD: - 1.48, $I^2 = 0\%$ KTT vs. PKTT (pain at rest): NSID, $I^2 = 0\%$ KTT vs. PKTT (pain at night): SID, MD: - 1.49, $I^2 = 0\%$ KTT vs. other forms of treatment (overall pain): SRZ, MD: - 0.44, $I^2 = 95\%$ KTT vs. other forms of treatment (pain in motion): NSID, $I^2 = 48\%$ KTT vs. other forms of treatment (pain at rest): NSID, $I^2 = 29\%$ KTT vs. other forms of treatment (Pain at night): SID, MD: - 0.57, $I^2 = 87\%$	KTT vs. PKTT (pain in motion): NO MCID: - 1.5 (Gianola et al., 2021) KTT vs. PKTT (pain at night): YES MCID: - 1.4 (Tashjian et al., 2009) KTT vs. other forms of treatment (overall pain): NO MCID: - 1.5 (Gianola et al., 2021) KTT vs. other forms of treatment (pain at night): NO MCID: -1.4 (Tashjian et al., 2009)
13	Ramírez-Vélez et al.	2019	Musculoskeletal dysfunctions	**EG:** KTT **CG:** PKTT	NSID, $I^2 = 92\%$	/
14	Williams et al.	2012	Sport related injuries	**EG:** KTT **CG:** PKTT, no intervention	NSID	/
15	Araya-Quintanilla	2022	Subacromial Pain Syndrome	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	NSID, $I^2 = 79\%$	/
16	Celik et al.	2020	Shoulder dysfunctions	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, other forms of treatment	KTT vs. PKTT: NSID, $I^2 = 45\%$ KTT + exercise vs. exercise: NSID, $I^2 = 63\%$ KTT vs. passive treatment: NSID, $I^2 = 73\%$	/
17	Luz Júnior et al.	2019	Nonspecific low-back pain	KTT vs. no intervention, KTT vs. PKTT, KTT + physiotherapy vs. physiotherapy	**Measured around 4 weeks post intervention** KTT vs. no intervention: NSID KTT vs. PKTT: NSID **Measured around 12 weeks post intervention** KTT vs. PKTT: NSID	/
18	Lin et al.	2020	Nonspecific low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, no intervention, other forms of treatment	KTT vs. PKTT: SID, SMD: - 0.84, $I^2 = 84\%$ KTT vs. other forms of treatment: SID, SMD: - 0.73, $I^2 = 84\%$ KTT vs. no intervention: SID, SMD - 0.74, $I^2 = 80\%$	NO MCID: - 2.0 (Ostelo & De Vet, 2005)
19	Li et al.	2019	Chronic low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	KTT vs. PKTT: NSID, $I^2 = 82\%$ KTT + physiotherapy vs. physiotherapy: NSID, $I^2 = 83\%$	/

20	Xue et al.	2021	Pregnancy related low-back pain	**EG:** KTT, KTT + other forms of treatment, KTT + paracetamol, KTT+ psycho-supportive therapy **CG:** PKTT, other forms of treatment, paracetamol, psycho-supportive therapy	SID, MD: - 1.62, $I^2 = 77\%$	YES MCID: - 1.3 (Ogollah et al., 2019)
21	Sun and Lou	2021	Chronic low-back pain	**EG:** KTT + physiotherapy **CG:** physiotherapy	SID, SMD: 0.73, $I^2 = 78\%$	NO MCID: 2.0 (Ostelo & De Vet, 2005)
22	Sheng et al.	2019	Nonspecific low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, PKTT+ other forms of treatment	SID, WMD: - 1.22, $I^2 = 91\%$	NO MCID: - 2.0 (Ostelo & De Vet, 2005)
23	Pan et al.	2023	Chronic low-back pain	**EG:** KTT, physiotherapy + KTT **CG:** PKTT, physiotherapy	**Immediately postintervention** **Pain** Overall: SID, SMD: - 0.47, $I^2 = 81\%$ Physiotherapy vs. physiotherapy + KTT: NSID, $I^2 = 0\%$ KTT vs. PKTT: NSID, $I^2 = 89\%$ **Change in status:** Overall: NSID, $I^2 = 58\%$ **Short-term follow-up** **Pain** Overall: SID, SMD: - 0.67, $I^2 = 88\%$ KTT vs. PKTT: SID, SMD - 0.87, $I^2 = 90\%$ **Change in status:** Overall: NSID, $I^2 = 0\%$ **Intermediate-term follow-up** **Pain** Overall: NSID, $I^2 = 0\%$ **Change in status:** Overall: NSID, $I^2 = 0$	NO MCID: - 2.0 (Ostelo & De Vet, 2005)
24	Tomás-Escolar et al.	2023	Carpal tunnel syndrome	**EG:** KTT, KTT + other treatments **CG:** PKTT, no treatment, other forms of treatment, PKTT + other forms of treatment	**Pain** SID, ES: - 0.363, $I^2 = 91\%$	MCID value not available
25	J. Lin et al.)	2021	Effect on delayed onset muscle soreness	**EG:** KTT **CG:** PKTT, no intervention	**Muscle soreness** 24h post intervention: NSID 48h post intervention: SID, MD: - 0.67, $I^2 = 61\%$ 72h post intervention: SID, MD: - 0.81, $I^2 = 86\%$	YES MCID: 13-22% muscle soreness reduction (Bleakley et al., 2012)
26	Elrosasy et al.	2023	Effect on anterior cruciate ligament reconstruction	**EG:** KTT **CG:** PKTT, physiotherapy	**Pain** NSID, $I^2 = 75\%$	/
27	Zhong et al,	2020	Management of lateral epicondylitis	**EG:** KTT **CG:** PKTT or physiotherapy	**Pain** At rest: SID, WMD: - 0.458, $I^2 = 0\%$ At movement: SID, WMD: - 0.320, $I^2 = 0\%$	MCID value not available

28	Ye et al.	2020	Knee osteoarthrosis	**EG:** KTT, KTT + physiotherapy **CG:** PKTT, no intervention, physiotherapy	**Pain** KTT vs. PKKT or no treatment: SID, SMD: - 0.76, $I^2 = 78\%$ KTT + physiotherapy vs. physiotherapy: SID, SMD: - 0.78, $I^2 = 16\%$	NO MCID: - 1.99 (Tubach et al., 2005)
29	Luo & Li	2021	Chronic knee pain	**EG:** KTT, KTT + exercise **CG:** PKTT, no intervention, other intervention	**Less than 4 weeks to follow up:** SID, MD: - 1.14, $I^2 = 49\%$ **Follow up after 6 weeks:** NSID, $I^2 = 0\%$ **KTT + exercise vs. exercise:** SID, MD: - 3.27, $I^2 = 0\%$	**4 weeks:** NO MCID: - 1.99 (Tubach et al., 2005) **KTT + exercise** YES MCID: - 1.99 (Tubach et al., 2005)
30	Montalvo et al.	2014	Effect on pain in individuals with musculoskeletal injuries	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, PKTT + exercise, other forms of treatment	NSID, $I^2 = 49\%$	/

CG, control group; DASH, Disability of Arm, Shoulder and Hand index; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MCID, Minimal clinically important difference; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 9: DETAILS OF THE STUDIES INCLUDED – DISABILITY

	Author	Year	Area of focus	Intervention	Results	Minimal clinically important difference
1	Ramírez-Vélez et al.,	2019	Musculoskeletal dysfunctions	**EG:** KTT **CG:** PKTT	**Disability**: NSID	/
2	Lim and Tay	2015	Chronic musculoskeletal pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	**Disability:** KTT vs. minimal intervention: NSID, $I^2 = 66\%$ KTT vs. other forms of treatment: NSID, $I^2 = 29\%$	/
3	Tran et al.	2021	Musculoskeletal dysfunctions	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, other forms of treatment	**Disability:** Short term: SID, SMD: - 0.70, $I^2 = 84\%$ Long term: SID, SMD: - 0.59, $I^2 = 52\%$	MCID value not available
4	Zhang et al.	2019	Myofascial pain syndrome	**EG:** KTT, KTT + other forms of treatment **CG:** no intervention, PKTT, PKTT + exercise, other forms of treatment	**Disability:** KTT vs. other forms of treatment: NSID	MCID value not available
5	Ghozy et al.	2020	Shoulder pain	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, steroid therapy	**Disability:** KTT vs. PKTT: NSID	MCID value not available
6	Gianola et al.	2021	Rotator cuff dysfunctions	**EG:** KTT, **CG:** PKTT, other forms of treatment	**KTT vs. PKTT** Function: SID, MD: - 8.05, $I^2 = 87\%$ **KTT vs. other forms of treatment** Function: SID, MD: - 13.13, $I^2 = 89\%$ Quality of life: SID, MD: 18.70	KT vs. PKTT: NO MCID: - 10.2 KTT vs. other forms of treatment: YES Function: MCID: - 13.0 Quality of life: MCID: 10% (Gianola et al., 2021)
7	Araya-Quintanilla	2022	Subacromial Pain Syndrome	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	**Function:** between 1 and 3 weeks NSID, $I^2 = 53\%$	/
8	Celik et al.	2022	Shoulder dysfunctions	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, other forms of treatment	**Function:** KTT vs. PKTT: NSID, $I^2 = 85\%$ KTT + exercise vs. exercise: SID, MD: 0.41, $I^2 = 84\%$	MCID value not available
9	Lu et al.	2018	Knee osteoarthrosis	**EG:** KTT **CG:** PKTT	**WOMAC score:** SID, WMD: - 5.0, $I^2 = 18\%$	NO MCID: - 12.5 (Salehi et al., 2023)
10	Mao et al.	2021	Knee osteoarthrosis	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	**Function:** NSID, $I^2 = 89\%$	MCID value not available
11	Wu et al.	2022	Knee osteoarthrosis	**EG:** KTT **CG:** exercise, exercise + other forms of treatment	**WOMAC score**: NSID, $I^2 = 97\%$ **Timed Up and Go Test:** NSID, $I^2 = 64\%$	/

12	Luz Júnior et al.	2019	Nonspecific low-back pain	KTT vs. no intervention, KTT vs. PKTT, KTT + physiotherapy vs. physiotherapy	**Disability** (measured around 4 weeks) KTT vs. PKTT: NSID KTT + physiotherapy vs. physiotherapy: NSID **Disability** (measured around 12 weeks) KTT vs. PKTT: NSID	/
13	Lin et al.	2020	Nonspecific low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, no intervention, other forms of treatment	**Disability:** KTT vs. PKTT: SID, SMD: - 0.56, $I^2 = 71\%$ KTT vs. other forms of treatment: SID, SMD: - 0.51, $I^2 = 80\%$ KTT vs. no intervention: SID, SMD: - 0.65, $I^2 = 85\%$	MCID value not available
14	Li et al.	2019	Chronic low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	**Disability:** KTT vs. PKTT (ODI: 2 studies): SID, MD: 3.95, $I^2 = 0\%$ KTT vs. PKTT (RMDQ): SID, MD: 0.91, $I^2 = 0\%$ KTT + physiotherapy vs. physiotherapy: NSID, $I^2 = 82\%$	ODI: NO, MCID: 17.0 (Maughan & Lewis, 2010) RMDQ: NO, MCID: 5.0 (Maughan & Lewis, 2010)
15	Xue et al.	2021	Pregnancy related low-back pain	**EG:** KTT, KTT + other forms of treatment, KTT + paracetamol, KTT+ psycho-supportive therapy **CG:** PKTT, other forms of treatment, paracetamol, psycho-supportive therapy	**Disability:** SID, MD: -1.00, $I^2 = 80\%$	MCID value not available
16	Sun and Lou	2021	Chronic low-back pain	**EG:** KTT + physiotherapy **CG:** physiotherapy	**Disability**: SID, SMD: 1.01, $I^2 = 91\%$	MCID value not available
17	Sheng et al.	2019	Nonspecific low-back pain	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, PKTT+ other forms of treatment	**Disability:** SID, WMD: - 7.11, $I^2 = 77\%$	NO, MCID: 17.0 (Maughan & Lewis, 2010)
18	Tan et al.	2022	Post-stroke upper extremity pain	**EG:** KTT **CG:** PKTT, other forms of treatment	**Modified Ashworth scale** SID, MD: - 0.26, $I^2 = 82\%$ **Function** NSID, $I^2 = 0\%$	NO MCID: - 1.0 (CDTHA, 2018)
19	Y. Wang et al.	2022	Upper extremity function after stroke	**EG:** KTT **CG:** regular treatment	**Function:** SID, SMD: 0.61, $I^2 = 80\%$ **Disability**: SID, SMD: 0.35, $I^2 = 34\%$	MCID value not available

20	Hu et al.	2019	Balance after stroke	**EG:** regular treatment + KTT, KTT **CG:** regular treatment, regular treatment + PKTT, PKTT	**Berg balance scale** KTT vs. regular treatment: SID, MD: 4.46, $I^2 = 93\%$ KTT vs. PKTT: NSID, $I^2 = 62\%$ **Timed Up and Go Test** KTT vs. regular treatment: SID, MD: - 4.62, $I^2 = 19\%$ **Functional ambulation classification** KTT vs. regular treatment: SID, MD: 0.53, $I^2 = 40\%$ **Fugl-Meyer scale** KTT vs. regular treatment: SID, MD: 4.20, $I^2 = 84\%$ **Modified Ashworth scale** KTT vs. regular treatment: SID, MD: - 0.38; $I^2 = 31\%$	**Berg balance scale:** YES MCID: 4.0 (Tamura et al., 2022) **Timed Up and Go Test:** YES MCID: 3.4 (Nikaido et al., 2018) **Functional ambulation classification:** MCID value not available **Fugl-Meyer scale:** NO, MCID: 6.0 (Pandian et al., 2016) **Modified Ashworth scale:** NO MCID: - 1.0 (CDTHA, 2018)
21	M. Wang et al.	2019	Lower extremity rehabilitation after stroke	**EG:** regular treatment + KTT, KTT **CG:** regular treatment, regular treatment + PKTT, PKTT, no intervention	**Berg balance scale** KTT vs. PKTT: NSID, $I^2 = 0\%$ **Timed Up and Go Test** KTT vs. regular treatment: SID, MD: - 4.04, $I^2 = 0\%$ **Fugl-Meyer scale** KTT vs. regular treatment: After 4-week intervention: SID, MD: 4.41, $I^2 = 75\%$ After 8-week intervention: SID, MD: 3.00, $I^2 = 0\%$ After 12-week intervention: SID, MD: 8.26, $I^2 = 82\%$ **Modified Ashworth scale** KTT vs. regular treatment: SID, MD: - 0.32; $I^2 = 0\%$ **10-meter walking test** KTT vs. regular treatment: NSID, $I^2 = 90\%$	**Timed Up and Go Test:** YES MCID: 3.4 (Nikaido et al., 2018) **Fugl-Meyer scale:** After 4 and 8 weeks: NO, MCID: 6.0 (Pandian et al., 2016) After 12 weeks: YES, MCID: 6.0 (Pandian et al., 2016) **Modified Ashworth scale:** NO MCID: - 1.0 (CDTHA, 2018)
22	Y. Wang et al.	2022	Mandibular third molar surgery	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment, PKTT + pharmaceutical treatment	**Trismus score** Short term: SID, MD: - 5.03, $I^2 = 0\%$ Long term: SID, MD: - 3.42, $I^2 = 60\%$	MCID value not available
23	Firoozi et al.	2022	Mandibular third molar surgery	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment	**Trismus score** After 48h: SID, MD: 5.84, $I^2 = 67\%$ After 72h: SID, MD: 4,59, $I^2 = 0\%$ After 7 days: SID, MD: 3,24, $I^2 = 0\%$	MCID value not available
24	Pan et al.	2023	Chronic low-back pain	**EG:** KTT, physiotherapy + KT **CG:** PKTT, physiotherapy	**Immediately postintervention** Overall: NSID, $I^2 = 29\%$ Physiotherapy vs. physiotherapy + KTT: NSID, $I^2 = 3\%$ KTT vs. PKTT: NSID, $I^2 = 52\%$ **Short-term follow-up** Overall: NSID, $I^2 = 71\%$ KTT vs. PKTT: NSID, $I^2 = 78\%$ **Intermediate-term follow-up** Overall: NSID, $I^2 = 0\%$ KTT vs. PKTT: NSID, $I^2 = 86\%$	/

25	Tomás-Escolar et al.	2023	Carpal tunnel syndrome	**EG:** KTT, KTT + other treatments **CG:** PKTT, no treatment, other forms of treatment, PKTT + other forms of treatment	**BCTQ** Function: SID, ES: - 0.211, $I^2 = 55\%$ Severity of symptoms: SID, ES: - 0.194, $I^2 = 74\%$	Function: NO, MCID: 0.23 (López-de-Uralde-Villanueva et al., 2023) Severity: NO, MCID: 0.64 (López-de-Uralde-Villanueva et al., 2023)
26	Unger et al.	2018	Improving gross motor function in children with cerebral palsy	**EG:** KTT + physiotherapy management **CG:** physiotherapeutic management	GMFMS KTT vs. no taping: SID, MD: 19.15, $I^2 = 95\%$	MCID value not available
27	Zhong et al.	2020	Management of lateral epicondylitis	**EG:** KTT **CG:** PKTT or physiotherapy	**Grip strength** One month: SID, WMD: 1.631, $I^2 = 0\%$ Three months: SID, WMD: 1.873, $I^2 = 0\%$ **Modified Mayo performance index** SID, WMD: 4.229, $I^2 = 83\%$ **DASH score** SID, WMD: - 5.249, $I^2 = 53\%$ **Adverse effects** Skin irritation did not increase	MCID values not available
28	Ye et al.	2020	Knee osteoarthrosis	**EG:** KTT, KTT + physiotherapy **CG:** PKTT, no intervention, physiotherapy	**Function** KTT vs. PKKT or no treatment: SID, SMD: - 0.39, $I^2 = 7\%$ KTT + physiotherapy vs. physiotherapy: SID, SMD: - 0.73, $I^2 = 37\%$	MCID value not available

BCTQ, Boston Carpal Tunnel Questionnaire; CG, control group; EG, experimental group; ES, effect size; GMFMS, Gross Motor Function Measure – Sitting; I^2, heterogeneity; KTT, kinesio taping therapy; MD, mean difference; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; WMD, weighted mean difference

APPENDIX 10: DETAILS OF THE STUDIES INCLUDED – MECHANICAL PROPERTIES

	Author	Year	Area of focus	Intervention	Results	Minimal clinically important difference
1	Williams et al.	2012	Sport related injuries	EG: KTT CG: PKTT, no intervention	**Muscle strength:** no clear conclusion **Proprioception:** no clear conclusion	/
2	Zhang et al.	2019	Myofascial pain syndrome	EG: KTT, KTT + other forms of treatment CG: no intervention, PKTT, PKTT + exercise, other forms of treatment	**Range of motion:** KTT vs. other forms of treatment: Short term: SID, SMD: 0.26, $I^2 = 44\%$ Long term: NSID **Muscle strength** KTT vs. other forms of treatment: NSID	MCID value not available
3	Gianola et al.	2021	Rotator cuff dysfunctions	**EG:** KTT, **CG:** PKTT, other forms of treatment	**Painless active range of shoulder motion**: Abduction: NSID Flexion: SID in favour of PKTT, MD: - 4.12, $I^2 = 0\%$) Internal and external rotation: NSID **Shoulder joint muscle strength:** Flexion: SID, SMD: 0.66, $I^2 = 0\%$ Extension: SID, SMD: 0.60, $I^2 = 0\%$ Abduction: SID, SM: 0.57, $I^2 = 0\%$ Adduction, internal and external rotation: NSID **Active range of shoulder motion (with or without pain)**: Abduction and flexion: NSID Internal and external rotation: NSID	Painless active range of shoulder motion: NO, MCID: 10% (Gianola et al., 2021)
4	Araya-Quintanilla	2022	Subacromial Pain Syndrome	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, exercise, other forms of treatment	**Range of motion:** between 1 and 3 weeks: NSID, $I^2 = 95\%$	/
5	Celik et al.	2022	Shoulder dysfunctions	**EG:** KTT, KTT + exercise **CG:** PKTT, exercise, other forms of treatment	**Range of motion:** KTT vs. PKTT: NSID, $I^2 = 73\%$	/
6	Lu et al.	2018	Knee osteoarthrosis	**EG:** KTT **CG:** PKTT	**Muscle strength:** NSID, $I^2 = 0\%$	/
7	Mao et al.	2021	Knee osteoarthrosis	**EG:** KTT, KTT + other forms of treatment **CG:** PKTT, other forms of treatment	**Muscle strength** Handheld dynamometer: NSID, $I^2 = 66\%$ Isokinetic dynamometer: SID, SMD: 0,72, $I^2 = 80\%$ **Range of motion:** NSID, $I^2 = 74\%$	MCID value not available
8	Wang et al.	2018	Ankle function	**EG:** KTT **CG:** PKTT, no intervention	**Star Excursion Balance Test:** SID before and after intervention for both KTT and PKTT Between groups after intervention: SID in favour of KTT, MD: 3.2, $I^2 = 5\%$ **Vertical jump height:** SID in favour of KTT, MD: 1.06, $I^2 = 15\%$ **Ankle range of motion:** NSID, $I^2 = 0\%$	MCID value not available

9	Biz et al.	2022	Chronic ankle instability in athletes	KTT	**Gait parameters** Stride length: SID, SMD: 2.27 Stride speed: SID, SMD: 1.98 Heel to heel distance: SID, SMD: 1.92 **Range of motion:** inversion-eversion: SID, SMD: 0.52 Other ankle movements: NSID **Agility**: NSID	MCID value not available
10	Nunes et al.	2021	Ankle function	**EG:** KTT **CG:** PKTT, no intervention, stretching, balance exercise, other forms of treatment	Out of 58 meta-analyses, seven showed benefits of KT therapy. Authors added that due to statistical errors, observed differences may be a result of chance alone and, potentially, do not indicate real effects.	/
11	Karabicak et al.	2022	Lower limb musculoskeletal injuries	**EG:** KTT **CG:** PKTT, knee brace	**Muscle strength:** NSID, $I^2 = 65\%$ **Muscle activation:** NSID	/
12	Yam et al.	2019	Lower limb muscle strength	**EG:** KTT, FKTT, IKTT, KTT + regular treatment **CG:** PKTT, regular treatment, no intervention	**Lower extremity muscle strength** (participants with muscle fatigue) Short term KTT vs. minimal intervention: NSID, $I^2 = 65\%$ Long term KTT vs. minimal intervention (2 studies): SID, SMD: 0.61, $I^2 = 0\%$ **Lower extremity muscle strength** (healthy participants) Short term KTT vs. minimal intervention: NSID, $I^2 = 34\%$ Long term KTT vs. minimal intervention: SID, SMD: 0.25, $I^2 = 49\%$ **Lower extremity muscle strength** (participants with chronic musculoskeletal dysfunctions) KTT vs. minimal intervention (agonistic muscle, 4 studies): SID, SMD: 1.24, $I^2 = 77\%$ KTT vs. minimal intervention (antagonistic muscle, 2 studies): NSID, $I^2 = 74\%$ **Lower extremity muscle strength** (participants after orthopaedic surgery) KTT vs. minimal intervention (2 studies): SID, SMD: 0.60, $I^2 = 0\%$ **Jumping test (KTT vs minimal intervention)** Healthy participants (7 studies): NSID, $I^2 = 0\%$ **Vertical jump test (KTT vs minimal intervention)** Participants with chronic muscle fatigue (2 studies): NSID, $I^2 = 0\%$ Healthy participants (2 studies): SID, SMD: 0.18, $I^2 = 0\%$	MCID value not available

13	Lai et al.	2019	Length of Pectoralis minor	**EG:** KTT **CG:** static stretching, regular treatment (without active treatments)	**Length of m. Pectoralis Minor** KTT vs regular treatment: SID, MD: 1.15cm Stretching vs. regular treatment: NSID **Index m. Pectoralis Minor** KTT vs. regular treatment vs. stretching: SID in favour of stretching group MD: 1,40 KTT vs. regular treatment: NSID	MCID value not available
14	Tan et al.	2022	Post-stroke upper extremity pain	**EG:** KTT **CG:** PKTT, other forms of treatment	**Range of motion** SID, MD: 7.00, $I^2 = 93\%$ **Shoulder subluxation** SID, MD: - 0.42, $I^2 = 0\%$	MCID value not available
15	Y. Wang et al.	2022	Post-stroke upper extremity pain	**EG:** KTT **CG:** regular treatment	**Subluxation**: SID, SMD: - 0.50, $I^2 = 3\%$ **Passive range of shoulder flexion:** SID in favour of CG, SMD: 0.63, $I^2 = 0\%$ **Passive range of shoulder abduction:** NSID	MCID value not available
16	Hassan et al.	2020	Brachial plexus injury	**EG:** KTT + physiotherapy **CG:** physiotherapy	**Scapular stabilization during internal rotation**: SID, SMD: - 0.87, $I^2 = 0\%$ **Scapular stabilization during other movements:** NSID	MCID value not available
17	Pan et al.	2023	Chronic low-back pain	**EG:** KTT, physiotherapy + KT **CG:** PKTT, physiotherapy	**Immediately postintervention** **Trunk flexion range of motion** Overall: NSID, $I^2 = 84\%$ KTT vs. PKTT: NSID, $I^2 = 86\%$ **Short-term follow-up** **Trunk flexion range of motion** Overall: NSID, $I^2 = 87\%$	/
18	Tomás-Escolar et al.	2023	Carpal tunnel syndrome	**EG:** KTT, KTT + other treatments **CG:** PKTT, no treatment, other forms of treatment, PKTT + other forms of treatment	**Muscle strength** Hand strength: NSID, $I^2 = 0\%$ Finger strength: SID in favour of CG, ES: 0.253, $I^2 = 57\%$ **Neurophysiological outcomes** Distal motor latency: SID, ES: - 0.167, $I^2 = 18\%$ Sensory conduction: SID in favour of CG, ES: 0.193, $I^2 = 93\%$ Distal sensory latency: SID, ES: - 0.748, $I^2 = 76\%$	MCID value not available

19	J. Lin et al.	2021	Effect on delayed onset muscle soreness	**EG:** KTT **CG:** PKTT, no intervention	Muscle strength 24h post intervention: NSID 48h post intervention: NSID 72h post intervention: SID, SMD: 0.35, $I^2 = 0\%$ **Serum CK levels** 24h post intervention: NSID 48h post intervention: NSID 72h post intervention: NSID	MCID value not available
20	Elrosasy et al., 2023	2023	Effect on anterior cruciate ligament reconstruction	**EG:** KTT **CG:** PKTT, physiotherapy	**Flexion strength** SID in favour of CG, SMD: 0.44, $I^2 = 9\%$ **Extension strength** NSID	MCID value not available
21	Ye et al.	2020	Knee osteoarthrosis	**EG:** KTT, KTT + physiotherapy **CG:** PKTT, no intervention, physiotherapy	**Range of motion** KTT vs. PKKT or no treatment: SID, MD: 2.04, $I^2 = 39\%$ **Quadriceps muscle strength** KTT vs. PKKT or no treatment: SID, MD: 2.42, $I^2 = 0\%$ **Hamstring muscle strength** KTT vs. PKKT or no treatment: NSID, $I^2 = 0\%$	MCID values not available

CG, control group; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MCID, Minimal clinically important difference; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference

APPENDIX 11: DETAILS OF THE STUDIES INCLUDED – LYMPHEDEMA AND SWELLING

	Author	Year	Area of focus	Intervention	Results	Minimal clinically important difference
1	Kasawara et al.	2018	Breast cancer related lymphedema	**EG:** KTT + other forms of treatment **CG:** PKTT + other forms of treatment, other forms of treatment, no intervention	**Extremity volume** NSID	/
2	Gatt et al.	2017	Breast cancer related lymphedema	**EG:** KTT **CG:** compression garments	**Extremity volume** KTT vs. compression garments**:** NSID, $I^2 = 90\%$	/
3	Firoozi et al.	2022	Mandibular third molar surgery	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment	**Swelling** After 48h: SID, SMD: - 1.25, $I^2 = 89\%$ After 7 days: NSID	MCID value not available
4	Y. Wang et al.	2022	Mandibular third molar surgery	**EG**: KTT + pharmaceutical treatment **CG**: pharmaceutical treatment, PKTT + pharmaceutical treatment	**Swelling** Short term: SID, MD: - 1.34, $I^2 = 88\%$ Long term: SID, MD: - 0.31, $I^2 = 47\%$	MCID value not available

CG, control group; EG, experimental group; I^2, heterogeneity; KTT, kinesio taping therapy; MCID, Minimal clinically important difference; MD, mean difference; NPRS, numeric pain rating scale; NSID, no statistically important differences; PKTT, placebo kinesio taping therapy; SID, statistically important differences in favour of EG; SMD, standardised mean difference; VAS, visual analogue pain scale; WMD, weighted mean difference