# Evaluating the effects of the Jing Method of Clinical Massage on Chronic Non-Specific Shoulder Pain in Professional Drivers

**Lauren Starkey**

A dissertation submitted in partial fulfilment of the requirements of Jing Advanced Massage Training for the Professional Diploma in Advanced Clinical Massage and Sports Massage

**March 2025**

**Total word count: 4364**

*"I certify that this work has not been accepted in substance for any degree and is not concurrently being submitted for any degree other than that of the Diploma in Advanced Clinical Massage and Sports Massage being studied at Jing Advanced Massage Training. I also declare that this work is the result of my own investigations except where otherwise identified by references and that I have not plagiarised the work of others".*

***Mrs Lauren Starkey:*** 

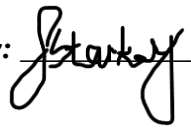
**Date: 5 March 2025**

## ACKNOWLEDGEMENTS

Thank you for the loving support of my husband Gareth (who often refers to me as a professional student) and my wonderful kids, Lexi and Ethan.

To my loved ones who past during the time of this study and who always believed in me, I carry you in my heart.

And to my fellow Jingers who have been with me through this journey, you are truly my tribe.

***Mrs Lauren Starkey:*** 

**Date: 5 March 2025**

**CREATIVITY PAGE**

# ABSTRACT

## OBJECTIVE

The purpose of this study is to assess the effects of the Jing Method of Advanced Clinical Massage in professional drivers with chronic shoulder pain.

## METHOD

Three Participants from different driving occupations with non-specific chronic shoulder pain completed the study. They recorded their pain and disability using the shoulder and disability index (SPADI) once a week for 12 weeks, and once more at 16 weeks from the start of the study. Week 1-6 was a control period, where only SPADI was used. From week 7-12, the participants received a multimodal treatment intervention using the Jing Method Shoulder Girdle Protocol.

## RESULTS

The results showed a reduction in pain and disability, with an overall reduction of 38% from base line to the end of the intervention.

## CONCLUSION

This study suggests that the Jing Method of Advanced Clinical Massage was beneficial in treating chronic shoulder pain in professional drivers. Further studies would benefit from a larger and more specific scale of participants and a questionnaire to record the psychosocial elements the participants experience each week.

# TABLE OF CONTENTS

# ABBREVIATIONS

CP-Chronic Pain

CSP-Chronic Shoulder Pain

GP-General Practitioner

JMACM-Jing Method of Advanced Clinical Massage

MFR-Myofascial Release

MSD-Musculoskeletal Disorder

MSK-Musculoskeletal

MTrP-Myofascial Trigger Point

NSSP-Non- Specific Shoulder Pain

PROM- Patient Reported Outcome Measurement

ROM-Range of Motion

TCM-Traditional Chinese Medicine

# LITERATURE REVIEW

## INTRODUCTION

Globally, there is a high prevalence of musculoskeletal (MSK) pain in professional drivers (such as bus drivers, truck drivers and taxi drivers), with musculoskeletal pain of the shoulder affecting around 39.2% of the population (Joseph et al., 2020).

Bovenzi (2014) found that working with hands above the shoulder, lifting loads and exposure to whole body vibrations over time, was significantly related to the outcome of neck and shoulder pain in professional drivers. It was also highlighted by Bovenzi (2014) that psychological distress and unfavourable psychosocial work environment could also be a contributing factor, concluding, that the pain had a multifactorial origin.

Current strategies for managing shoulder pain, according to the Irish healthcare services, include self-management, GP advice, medications, injections, exercise, physiotherapy and surgery (HSE., 2021). There are considerable risks with some of these interventions (opioid medications, corticosteroid injection and invasive surgeries in particular), and all of those have shown little efficacy for people experiencing chronic pain (Busse et al., 2017; Jonas et al., 2019; Stone et al., 2021).

These, however, are only biomedical approaches and don't consider the multifactorial origin of pain (Rocca and Anjum, 2020). This approach to pain remains oversimplified and healthcare practitioners need to incorporate other factors, such as emotional and social aspects, into their treatment plans for their patients (Bendelow, 2013).

The biopsychosocial approach addresses this by involving the "*complex interactions between structural, physical, psychological, social, lifestyle and comorbid factors*" (Caneiro et al., 2020).

There is growing evidence that suggests that complementary therapies, such as massage therapy, are an effective alternative to manage chronic muscular skeletal pain (Cho et al., 2021; Bauer et al., 2016). Chronic pain (CP) has been defined as pain that lasts over 3-6 months or for longer than the expected recovery time (NCCIH., 2023).

In a study on the effects of massage therapy in the treatment of CP, Desroches (2024:27) concluded: *"It is clear that there is no single approach in the treatment of chronic pain, but that touch-based therapies such as massage can and should play a role in a flexible and multimodal treatment plan".* The study also stated that further research should focus on multimodal approaches that highlight therapeutic alliance and patient education, whilst also including touch-based therapies and active movement.

The purpose of this study is to assess the effects of the Jing method of Advanced Clinical Massage in professional drivers with Chronic Shoulder Pain (CSP).

The Jing method takes a multimodal approach: combining different touch therapy modalities, building therapeutic alliance, education and self-care. It is based on the biopsychosocial model of pain and modern neuroscience, combining biological, psychological and social components, (Fairweather and Mari., 2015, pp. 3-6) and these are all components of why professional drivers are experiencing pain (Bovenzi., 2014).

## PREVELANCE OF MUSCULOSKELETAL PAIN IN PROFESSIONAL DRIVERS

Driving a vehicle as one's primary occupation has been found to come with certain risks, one of which is developing MSK issues and a prevalence for a variety of types of pain (Serrano-Fernandez et al., 2019).

One study addressed that it is not the job of driving itself that is the problem, but that maintaining the same posture for a prolonged time, whilst driving for long periods, can have an adverse effect on the body. This is due to the fact that a stable driving posture requires that the neck, shoulder and arm muscles need to maintain static muscular tension over a continuous period, which can result in localized muscle fatigue, aches and pain (Maduagwa et al., 2021).

Other risk factors that could contribute are prolonged sitting, seat comfort and design long working hours (especially without rest or in heavy traffic congestion), long term exposure to whole body vibrations, repetitive or jerky movements, poor quality roads, increased job demands, sedentary lifestyles and mental load and stress (Basantes et al., 2017; Pickard et al., 2022).

Joseph et al (2020) suggests that the prevalence of MSK pain in professional drivers ranges between 43.1% and 93 %, with lower back pain being the most frequently reported condition, followed by neck, shoulder, knee, hip, wrist, ankle and elbow.

De Kok (2019) summarised that Musculoskeletal disorders (MSD) are reported to be the most prevalent work-related health problem in the EU, with stress, anxiety and depression coming second. The report also found that psychosocial factors play a big role in how acute MSDs form into chronic conditions, therefore psychosocial risk factors need to be considered during early intervention and not just addressing the physical symptoms.

Interestingly, when it comes to professional drivers, bus drivers have been found to be one of the top 3 occupations to have the highest prevalence of work-related musculoskeletal disorders, twice as high as administrative staff (Sheth, Pagdhune and Viramgami, 2013).

## SHOULDER PAIN IN PROFESSIONAL DRIVERS

As previously stated, musculoskeletal pain related to the shoulder is one of the frequent complaints by professional drivers (Joseph et al., 2020).

Pickard (2022) suggests that factors such as steering wheel tightness, awkward seating postures, incorrect or poor seat dimensions and seats without upper back support could increase the load on the cervical spine and upper back, which could lead to developing shoulder pain.

Similarly, Chen et al (2022) suggests that stress and uncomfortable seats may contribute to neck, shoulder, and lower back discomfort and recommends that drivers regularly stretch between trips to reduce neck and shoulder discomfort.

Therefore, it is important that professional drivers have ways of preventing, treating or reducing the prevalence of shoulder pain (Serrano-Fernández et al., 2019).

## CURRENT INTERVENTIONS FOR SHOULDER PAIN

Shoulder pain is the third most common MSK complaint that general practitioners encounter, with 1% of adults consulting their GPs with new shoulder pain complaints each year. (Leahy and Conway, 2018; Kauta et al., 2021).

When it comes to workplace interventions for shoulder pain, a meta-analysis by Picon et al (2021) found that exercise interventions in workers with shoulder pain above a 3 (on a scale of 0-10 points) had a beneficial effect at reducing pain intensity. On the other hand, ergonomic interventions seem to have low quality evidence on reducing the prevalence of shoulder pain (Lowry et al., 2017).

Walker-Bone and Van Der Windt (2021) reviewed and found that few interventions (such as medical or surgical) that treated a presumed shoulder pain pathology had any lasting benefits and actually for the most cases the best approach would be de-medicalisation, self-management support, re-establishing movement and identifying limiting beliefs and risk factors that could lead to disability and chronic pain. However, more research into these approaches is required.

## MASSAGE THERAPY AS AN INTERVENTION

Evidence suggests that massage therapy is an effective treatment in improving shoulder pain, especially in the short term (Yuen, 2017). However, there is limited evidence to support its effectiveness in the long term and there are questions regarding whether massage therapy has any considerable advantage over any active therapies (Kong et al., 2013; van den Dolder et al., 2015). Nevertheless, there is evidence to support the benefits of massage therapy for pain management, especially when compared to having no treatment at all (Crawford et al., 2016; Bervoets et al., 2015).

Liu et al's (2024) systematic review on rotator cuff injury did find, that the combination of exercise with manual therapy was more effective at reducing shoulder pain and improving shoulder joint function than just exercise intervention alone.

Similarly, Liza (2023) found a 4.27% reduction in pain in 20 participants suffering from prolonged shoulder pain, concluding that integrating massage therapy into a rehabilitation program can help to ease pain and improve shoulder function.

## JING METHOD OF ADVANCED CLINICAL MASSAGE

Lebert et al (2022) establishes that in order to improve chronic pain treatment outcomes, massage therapists should take on a person-centred, biopsychosocial approach, empowering their clients with shared decision making, whilst maintaining evidence-based practices.

The Jing Method™ of Advanced clinical massage (JMACM) does this by applying a multi-modal approach to manual therapy, combining the best Eastern and Western modalities, developed over centuries of bodywork. It is a partnership between the client and the practitioner, where a 6-session individualised treatment plan is tailored according to the client goals. It is a holistic approach that is based on the biopsychosocial model of pain and modern neuroscience (Fairweather and Mari., 2015, pp. 3-6). This is achieved by a personalised consultation, informed listening, empowerment of the patient and building a therapeutic alliance.

The hands-on techniques are also varied and adapted to the patient's given presentation at each session. The method used is summarised by the mnemonic HFMAST, and the following evidence supports the use of this method as it pertains to chronic MSK/shoulder pain:

H: HEAT

According to a 2024 survey on the importances of heat therapy in the treatment of pain, 86.5% of experts recommend heat therapy as a valid therapeutic, non-pharmacological choice, due to its positive effects on MSK pain and that they are more likely to use it and recommend it (as a self-management tool) to patients with chronic MSK pain (Hotfiel et al., 2024).

F: FASCIA

Li et al (2024) state that "myofascial release therapy (MFR) is an effective manual soft tissue technique that facilitates the stretching of fascia constrained by muscle hyperactivity".

There have been randomized controlled trials demonstrating the efficacy of MFR for the shoulder: Dash et al (2020) investigated the immediate effects of MFR on ROM and pain levels in patients with shoulder impingement syndrome, displaying immediate improvements in all the outcomes, especially in reduction of pain intensity.

M: MUSCLES

Both Travell and Simons (1983) and Shah (2015) describe Myofascial Trigger Points (MTrP) as "a discrete, hyperirritable nodule in a taut band of skeletal muscle which is palpable and tender during physical examination".

Research done by Bron (2011) showed that treatment on MTrPs (manual compression) in the shoulder muscles helped reduce the symptoms and improve the functionality of the shoulder in patients with chronic shoulder pain compared to the control group that didn't receive treatment. Similarly, Zeng et al (2024) suggests that trigger point manual therapy is effective at reducing pain and improving functionality of the shoulder in the short term (3 days to 12 weeks) but should also include other components such as exercise therapy and education.

A: ACUPRESSURE:

"Acupressure, one of the Traditional Chinese Medicine (TCM) approaches, is a non-invasive manual approach that involves manipulation of the skin and soft tissues with primarily the fingertips instead of needles on acupoints, but it is less well studied than acupuncture." (Adams et al., 2017). However, there is evidence that it can assist in pain relief (Chen and Wang, 2014; Makvandi et al., 2020). TCM is employed by Jing therapists to use as another lens by which to review the client's symptoms holistically and how the psychosocial interact with the biomechanics (Fairweather and Mari., 2015).

S: STRETCHING

The Jing Method™ includes the use of a variety of stretching types during a treatment such as: Static, Proprioceptive Neuromuscular Facilitation and Active Isolated Stretching and advocates for these stretches to be added to a person's a self-care routine in order to obtain the best outcome.

Choi et al (2024) showed that the combination of manual therapy and static or dynamic stretching improved the pain levels and range of motion in patients with adhesive capsulitis, with dynamic stretches having a slightly better result with internal and external rotation of the shoulder joint.

T: TEACHING:

Educating and empowering clients about their pain and teaching them self-management exercises and strategies have been shown to be an essential component in the client's treatment journey (Acker et al., 2023; Hestmann et al., 2023; Kerns et al., 2022).

For shoulder pain specifically, Santello et al's (2020) study found that an implementation of a home exercise program (including self-stretching, joint mobility and strengthening exercises),

taught and recommended by a physiotherapist, improved the shoulder function and reduced pain and medication intake in the participants with chronic shoulder pain over the course of two months.

Lee (2014) showed that after a 4-week self-stretching intervention, bus drivers who were experiencing neck and shoulder pain had a significant reduction in their work-related symptoms and pain.

## EVIDENCE SUPPORTING THE JMACM

In recent years there have been a number of small-scale studies done using the JMACM to treat shoulder pain (Donate, 2023; Harte, 2023; Murdoch, 2023; Chung, 2018; Harwood, 2018; Mistry, 2016). All of the studies showed positive improvements in both pain reduction and disability. Harwood's (2018) study resulted in an overall reduction of pain and disability by 22.3% and Murdoch's (2023) study by 54%. These studies made use of the same Jing protocol and design model, and the results of these studies supported the use of the JMACM to treat shoulder pain.

This study hopes to build upon the above research by also using the same design model, but by narrowing it to just professional drivers.

# METHOD

This study was done in Ireland due to it being the location of the researcher and the fact that it is estimated that 13% to 36% of the Irish population are currently affected by chronic pain and at present there is no national strategy to manage it (Purcell et al., 2021).

Ethical approval was received for the following study from Jing Advanced Massage Training in April 2024 (Appendix 1).

The goal of this study is to investigate the effect of the Jing Method on pain levels of professional drivers experiencing chronic non-specific shoulder pain (NSSP).

Research was conducted via Google Scholar, PubMed, ScienceDirect and through the institution's research library and online.

A within subject design was used for this study, due to it being a good option for small sample groups, it is statistically powerful, and it removes the effects of individual differences on the outcomes of the research.

Recruitment for participants was done via social media, emailing relevant companies and client referrals. Four participants showed interest and met the criteria, 3 male, 1 female. They were invited for an in-person meeting after an initial phone call and receiving an emailed participant letter, where the study was explained, and they signed the consent form (Appendix 4).

Four participants completed the control phase, 3 participants carried on to the intervention phase. One dropped out due to lack of interest.

Therefore, there were 3 professional drivers who completed the study, 3 males: 2 bus drivers and a delivery driver. To be included in the study participants had to meet the following

inclusion criteria: to have a profession as a driver and have been in that profession for longer than a year. Be over eighteen years old and have non-specific shoulder pain lasting longer than three months. Also, to be able to understand and converse in English.

The Shoulder Pain and Disability Index (SPADI) questionnaire (Appendix 2) was used as the preferred Patient Reported Outcome Measurement (PROM) tool due to it being recommended for shoulder stiffness and shoulder pain of unspecified origin (Padua et al.,2021).

Participants completed the SPADI questionnaire weekly via a JotForm online form for 6 weeks (week 1-6) prior to intervention phase, this was in order to provide a benchmark of their level of pain and disability.

The following 6-week(week 7-12) intervention phase offered participants weekly 70min sessions. Each session included a 60 min hands on treatment and a 10 min self-care follow up. The first session (week 7) however was a total of 90 min, due to a 20min verbal consultation added to the 70 min. This was to go over the online consultation form that they completed via JotForm prior to this session. The Jing Method shoulder girdle protocol was used (Appendix 3), which incorporated heat, myofascial release, trigger point therapy, static acupressure and stretches.

The participants were given 3 self-care exercises to complete 3 times per week, between their treatment sessions. These involved self-massage, stretches and self-acupressure points. Three exercises were demonstrated and given at week 7 and these were change to 3 different exercises at week 10 as an advancement to the previous self-care exercises. Each week, after the hands-on session, these exercises were assessed to show compliance. Participants continued to complete the SPADI questionnaire, 5 days post treatment, each week.

At week 16, another SPADI questionnaire was sent out and completed in order to gauge if there were any long-lasting benefits to the intervention phase of the study. During the four weeks between week 12 and week 16 the participants were encouraged to continue their self-care , however, this was not being monitored during that time, only self-reported.

## RESULTS

Three participants completed the entire 16-week study, this included a 6-week control phase (week1-6), a 6-week intervention phase (week 7-12) and then 4 weeks no intervention, but a follow-up questionnaire at week 16. The SPADI questionnaire was completed from weeks 1-12 and on week 16.

The first 2 graphs below represent the average results of the two main questions asked from the SPADI form and the average taken from the 3 participants over the course of the study. The last graph (figure 3) represents the combined SPADI score of both questions from the participants.

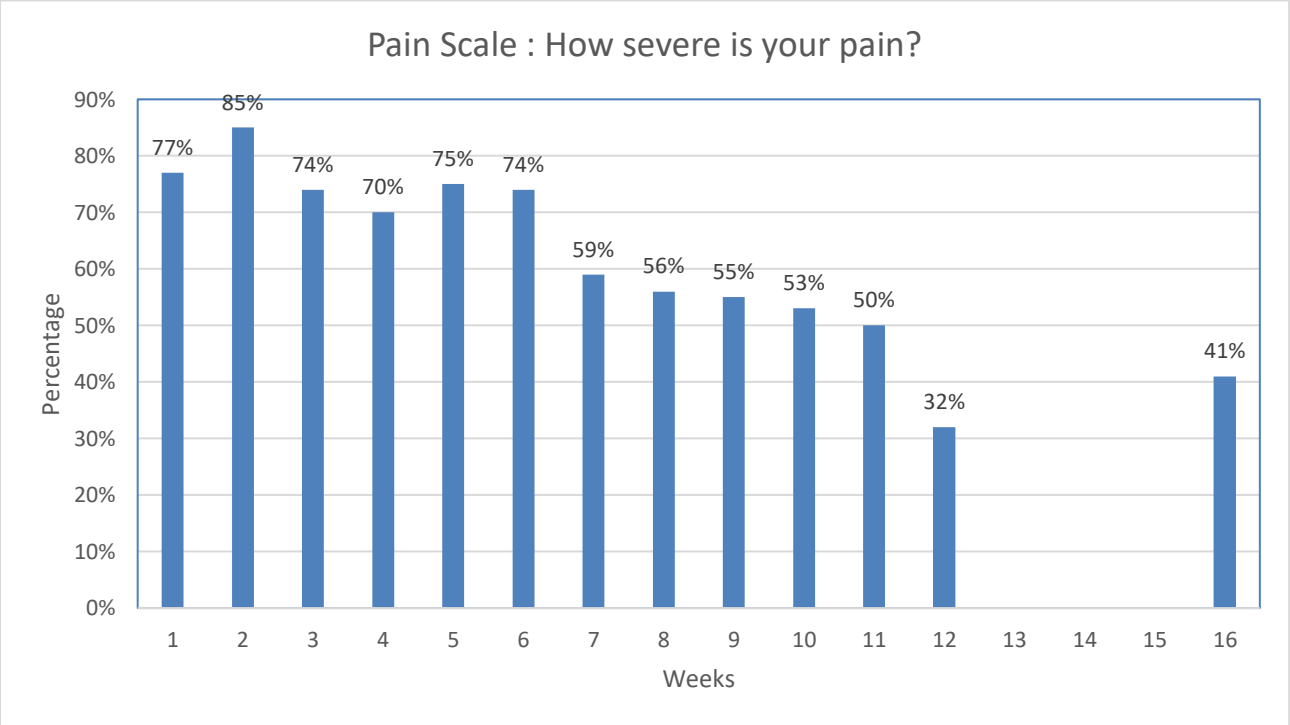



FIGURE 1 : Week 1-6 control, week 7-12 intervention, week 16 follow up.

The combined average of the control period (week 1-6) was 76%, this was the average pain of the 3 participants. As seen from the above graph, there was a reduction of pain each week of the intervention phase (week 7-12), with week 12 having the most reduction in pain of 32%

However, as can be seen on figure 1 graph, there was a slight increase in pain from the last intervention at week 12(32%) to week 16 (41%): 9% increase. There was no intervention from week 13-16.

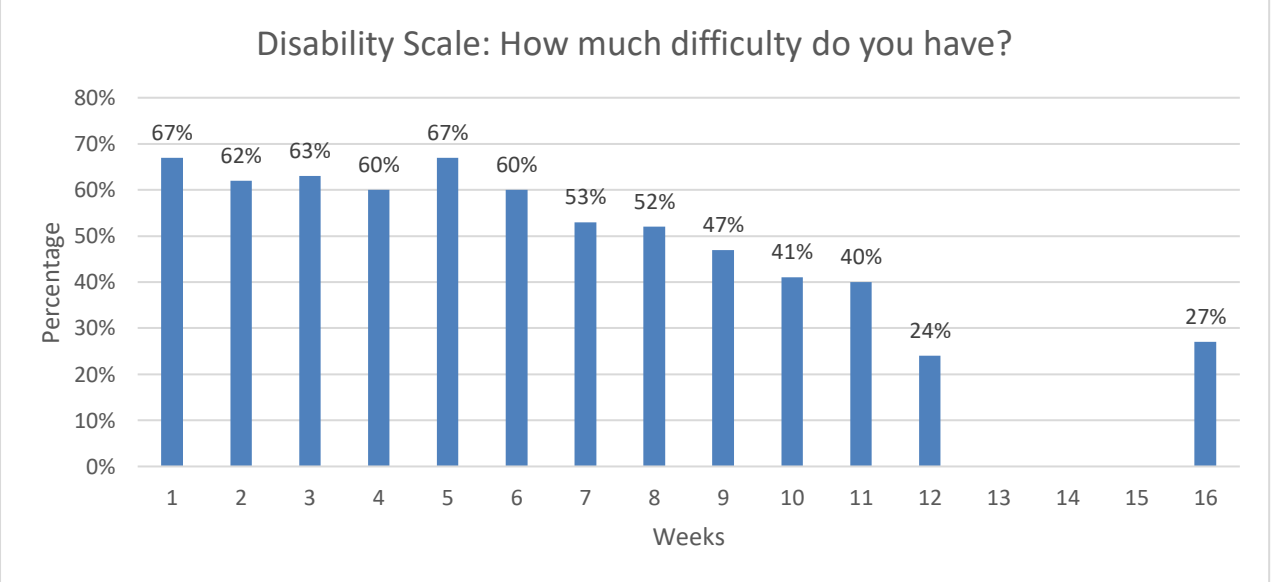



FIGURE 2: Week 1-6 control, week 7-12 intervention, week 16 follow up.

The combined average of the control period (week 1-6) was 63%, this was the average disability of the 3 participants. As seen from the above graph, there was a reduction of level of disability each week of the intervention phase (week 7-12), with week 12 having the most reduction of 24%

However, as can be seen on figure 1 graph, there was a slight increase in disability between the last intervention at week 12 (24%) to week 16 (27%): 3% increase. There was no intervention from week 13-16.

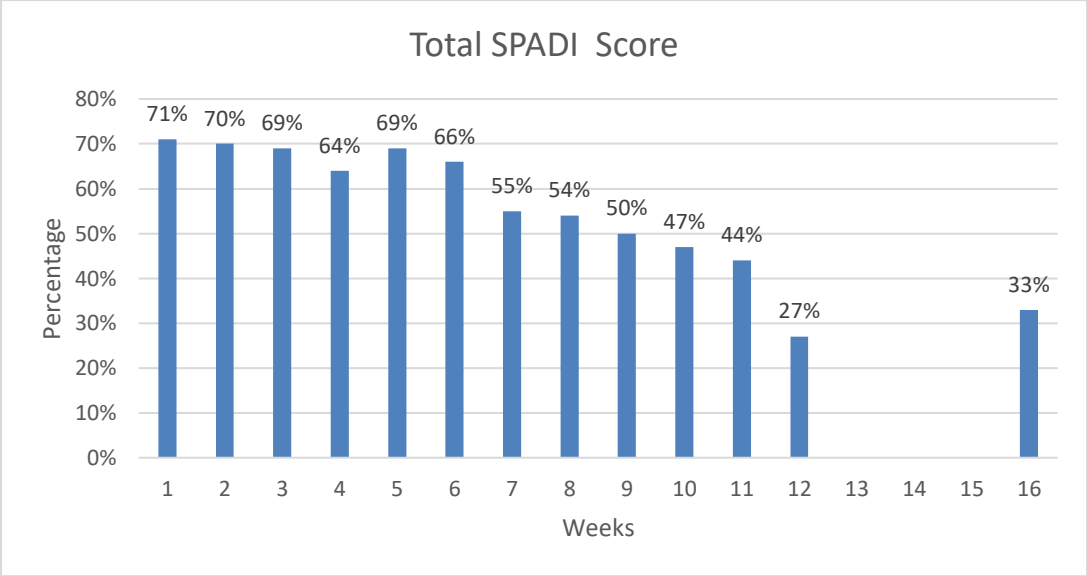



FIGURE 3: Week 1-6 control, week 7-12 intervention, week 16 follow up.

The above graph shows the total SPADI score, which combines the total pain scores and the total disability score of the participants each week. Starting from week1 at 71% and ending the study at week 16 at 33%. This shows an overall reduction of 38%.

# DISCUSSION

This study showed that the Jing method had a positive effect in treating chronic shoulder pain in professional drivers.

According to SPADI results, there was a reduction of pain and disability over the 12-week control and intervention phase. Participants started with a combined score of 71% at week 1, indicating severe issues, and ended with a moderate score of 27% at week 12, indicating an improvement in a short time (figure 3). The overall reduction between week 1 and week 12 was 38%. This supports previous studies with similar findings that used the Jing method (Harwood, 2018; Murdoch, 2023). Both of those studies used SPADI, Harwood's (2018) study resulted in an overall reduction of pain and disability by 22.3% and Murdoch's (2023) study by 54%.

Harwood's (2018) study however, only used a 4-week intervention phase, where the current study used a 6-week intervention. Harwood's study found the greatest improvement after week 3, whereas the current study, although it did also find great improvement after week 3, found that the greatest reduction of pain and disability occurred at the sixth treatment (week 12) where there was a reduction of pain by 18% (figure 1) and disability by 16% (figure 2) between week 11 and 12. This supports the 6-session approach by Mari and Fairweather (2015) and why a six-week intervention was utilised in this study.

As seen in Figure 1 and 2, during the control phase, there was little improvement in pain and disability. The only significant improvements occurred during the intervention phase, which supports Crawford et al (2016) and Bervoets et al (2015) findings, that massage therapy is beneficial in pain management especially when compared to no treatment at all.

There was a slight increase in pain (9%) and disability (3%) between the last intervention (week 12) and the final SPADI questionnaire 4 weeks later (week 16). No treatment

intervention was given between weeks 12 and 16, however, the participants were instructed to continue their self-care exercises during this time. They all self-reported at week 16 that they had been keeping up their self-care. The slight increase in pain and disability supports findings by Lui et al (2024), who found that the combination of exercise with manual therapy was more effective at reducing shoulder pain and improving function than just exercise intervention alone.

During consultation, the participants indicated that their job as a professional driver did have an impact on the severity and chronicity of their shoulder pain. Findings by Pickard (2022) and Chen et al (2022) suggest that factors such as uncomfortable seats, awkward postures and stress could lead to developing shoulder pain. The participants did find these to be a possible contributing factor when it came to their individual work conditions.

All of the participants had used medical interventions in the past to address their pain but had not found it effective in the long term, this supports finding by Walker-Bone and Van Der Windt (2021), who found that few medical or surgical interventions had any lasting benefits when it came to treating shoulder pain.

The intervention part of the study made use of the multi-modal approach that forms the Jing method. This included the application of heat, which the participants found incredibly beneficial , both during the treatment and when they use it in their self-care. This backs the findings of Hotfiel et al (2024). Their survey found that 86.5 % of experts recommend heat therapy as a valid therapeutic choice, due to its positive effects on patients with chronic MSK pain.

The use of Trigger Point Therapy was also included in the multi-modal approach of this study and the positive results achieved add to the findings of Zeng et al (2024).

Zeng et al (2024) suggested that trigger point manual therapy is effective at reducing pain and improving functionality of the shoulder in the short term (3 days to 12 weeks). The result of the current study supports this due to there being an overall decrease in pain and disability by 38%,  also over a 12-week period (Figure 3).

As part of the intervention, the participants were educated about their pain and given self-managements exercises, this supports the findings that these are essential components in a client's treatment journey (Acker et al., 2023; Hestmann et al., 2023; Kerns et al., 2022).

The positive effect of this multimodal approach as seen in the study supports the hypothesis of Fairweather and Mari. (2015, p.4) that the combined effects of a number of techniques is greater than each individual technique alone, that each *'enhances and reinforces the effects of the others.'*. It also supports finding by Desroches (2024), who concluded that further research should focus on multimodal approaches that highlight therapeutic alliance and patient education, whilst also including touch-based therapies and active movement, which this current study did.

## LIMITATIONS AND RECOMMENDATIONS

This was a small-scale study and only 3 participants completed the study. A larger number of participants may have produced different results; however, this study is building on from previous studies that use the Jing method for shoulder pain and that had similar results with small amount of participants (Murdoch, 2023; Harwood, 2018 and O Connell, 2024)

The study was conducted during the summer months, which is a busy time of year for drivers, this could be a factor of why, so few applied to take part in the study. An idea going forward could be to offer online self-care intervention, as a previous study by Watson-Bance (2021) found that using the Jing method remotely on non-specific shoulder pain proved to be 92.83% effective.

Only one measurement tool was used in the study (SPADI), which was limited to questions regarding pain and disability, focusing more on the physical aspects. However, effort was made to try build therapeutic alliance so that the participants felt heard and supported. There was no measurement tool used to ascertain any psychological or social effects that the study. Therefore, additional PROMS could be included in order to have a better understanding of the biopsychosocial effect of the JMACM.

# CONCLUSION

As has been evidenced, shoulder pain is a common musculoskeletal complaint experienced by professional drivers. This small study investigated the efficacy of The Jing Method of advanced clinical massage on chronic non-specific shoulder pain in professional drivers. Three participants completed the study, which included a 6-week control and a 6-week intervention (treatment) phase and resulted in the reduction of the participants' shoulder pain.

This study supports evidence that chronic shoulder pain likely has a multifactorial origin and that a multimodal approach, incorporating pain education, manual therapy and self-management techniques can be effective for treating chronic shoulder pain.

The positive outcomes of this study clearly show the benefit of Jing method of advanced clinical massage on reducing professional drivers' shoulder pain and improving their quality of life at work and overall well-being. An idea going forward would be to present these findings to the different professional driving unions and companies, in order to create awareness of alternative interventions for drivers who are experiencing pain and perhaps collaborate with them to create preventative and treatment programs.

Further studies would benefit from using a larger scale of participants, a more specific pathology and driving occupation and a PROM to record the psychosocial effects.

# BIBLIOGRAPHY

Acker, R., Swain, N., Perry, M., Wassinger, C. and Sole, G. (2023)'Thinking about pain in a different way: Patient perspectives of a neuroscience-informed physiotherapy programme for rotator cuff-related shoulder pain', Musculoskeletal Science and Practice, Vol.63,102691, ISSN 2468-7812, https://doi.org/10.1016/j.msksp.2022.102691.

Adams, A. Eschman, J. and Ge, W. (2017) 'Acupressure for chronic low back pain: a single system study', J Phys Ther Sci, Vol.29(8), pp.1416-1420. doi: 10.1589/jpts.29.1416. Epub 2017 Aug 10. PMID: 28878474; PMCID: PMC5574337.

Basantes Vaca, V., Parra Ferié, C., Dihigo, J.G., Noumia Jo de Carvalho, J. and Martínez, Y. (2017)'Evaluation of occupational risks associated to biochemical indicators in professional drivers', Rev. Méd. Electrón, Vol.39(1), pp.33-42.

Bauer, B.A., Tilburt, J.C., Sood, A., Li, G.X. and Wang, S.H. (2016) 'Complementary and alternative medicine therapies for chronic pain', Chin J Integr Med, Vol.22(6), pp.403-11. doi: 10.1007/s11655-016-2258-y. Epub 2016 May 26. PMID: 27339090

Bendelow, G. (2013)' Chronic pain patients and the biomedical model of pain', Virtual Mentor, Vol.1;15(5), pp.455-9. doi: 10.1001/virtualmentor.2013.15.5.msoc1-1305. PMID: 23680569

Bervoets, D., Luijsterburg, P.A.J., Alessie, J.J.N., Buijs, M.J.and Verhagen, A.P. (2015) 'Massage therapy has short-term benefits for people with common musculoskeletal disorders compared to no treatment: a systematic review', Journal of Physiotherapy, Vol.61(3), pp.106-116.

Bovenzi, M. (2015) 'A prospective cohort study of neck and shoulder pain in professional drivers', Ergonomics, Vol.58(7), pp.1103-1116.

Bron, C., de Gast, A., Dommerholt, J., Stegenga, B., Wensing, M. and Oostendorp, R.A. (2011) 'Treatment of myofascial trigger points in patients with chronic shoulder pain: a randomized, controlled trial', BMC Med, Vol.24(9:8). doi: 10.1186/1741-7015-9-8. PMID: 21261971; PMCID: PMC3039607.

Busse, J.W., Craigie, S., Juurlink, D., Buckley, D.N., Wang, L. Couban, R.J et al. (2017) 'Guideline for opioid therapy and chronic noncancer pain', CMAJ, Vol.189(18), pp.659–666. doi: 10.1503/cmaj.170363.

Camargo, P.R., Alburquerque-Sendin, F., Avila, M.A., Haik, M.N., Vieira, A. and Salvini, T.F. (2015) 'Effects of stretching and strengthening exercises, with and without manual therapy, on scapular kinematics, function, and pain in individuals with shoulder impingement: a randomized controlled trial', J Orthop Sports Phys Ther, Vol.45(12), pp. 984–97.

Caneiro J.P., Bunzli, S. and O'Sullivan, P. (2021) 'Beliefs about the body and pain: the critical role in musculoskeletal pain management', Braz J Phys Ther, Vol. 25(1), pp.17-29. doi: 10.1016/j.bjpt.2020.06.003. Epub 2020 Jun 20. PMID: 32616375; PMCID: PMC7817871.

Chen, Y.L., Alexander, H. and Hu, Y.M. (2022) 'Self-Reported Musculoskeletal Disorder Symptoms among Bus Drivers in the Taipei Metropolitan Area', Int J Environ Res Public Health, Vol.9(17), pp.10596. doi: 10.3390/ijerph191710596. PMID: 36078314; PMCID: PMC9518195.

Chen, Y.W. and Wang, H.H. (2014) 'The effectiveness of acupressure on relieving pain: A systematic review', Pain Management Nursing, Vol. 15(2), pp. 539–550. doi: 10.1016/j.pmn.2012.12.005

Cho, M.H., Arya, A. and Fernandez, J.A. (2021) 'Complementary and Alternative Medicine's Effectiveness in Reducing High-Impact Chronic Pain and Opioid Consumption: A Case Report in the Veteran Population', Integr Med (Encinitas), Vol.20(2), pp.26-30. PMID: 34377091; PMCID: PMC8325491.

Choi, J.M., Cho, E.Y. and Lee, B.H. (2024) 'Effects of Dynamic Stretching Combined with Manual Therapy on Pain, ROM, Function, and Quality of Life of Adhesive Capsulitis', Healthcare, Vol.12(1), pp.45. https://www.mdpi.com/2227-9032/12/1/45

Chung, M. (2018) 'Effects of the Jing massage Shoulder Girdle Protocol in women with chronic shoulder pain', Dissertation. Jing Advanced Massage Training: Brighton.

Crawford, C., Boyd, C., Paat, CF., Price, A., Xenakis, L., Yang, E. and Zhang, W. (2016) 'Evidence for Massage Therapy (EMT) Working Group. The Impact of Massage Therapy on Function in Pain Populations-A Systematic Review and Meta-Analysis of Randomized Controlled Trials: Part I, Patients Experiencing Pain in the General Population', Pain Med, Vol.17(7), pp.1353-1375.

Dash, N.P. and Pradhan, D.K. (2020) 'Immediate effect of mobilization vs myofascial release on pain and range of motion in patients with shoulder impingement syndrome: a pilot randomized trial', Indian J Physiother Occup Ther, Vol.14(2), pp.112–7.

Desroches, C. (2024) ‘The role of massage in the treatment of chronic pain’, Dissertation. Jing Advanced Massage Training: Brighton.

Donate, L. (2023) ‘The Effects of the Jing Method of Clinical Massage on Rotator Cuff Pain in Strength Training Adults’, Dissertation. Jing Institute: Brighton

European Agency for Safety and Health at Work, de Kok, J., Vroonhof, P., Snijders, J. et al. (2019) 'Work -related musculoskeletal disorders: prevalence, costs and demographics in the EU', Publications Office.

Fairweather, R. and Mari, M.S. (2015) Massage Fusion.: The Jing method for the treatment of chronic pain, East Lothian, Scotland. Handspring Publishing Ltd, pp.3-6.

Harte, E. (2023) ‘To investigate the efficacy of the Jing Method of Advanced Clinical Massage on chronic non-specific shoulder pain. Dissertation’, Jing Institute: Brighton

Harwood, L. (2018) ‘The effectiveness of clinical massage therapy on perceived pain and disability in tennis players with chronic rotator cuff injuries’, Dissertation. Jing Institute: Brighton

Hestmann, R., Bratås, O.and Grønning, K. (2023) 'Chronic pain self-management interventions in primary care - does it make any difference? A qualitative study', BMC Health Serv Res, Vol.23(1), pp.537. doi: 10.1186/s12913-023-09548-8. PMID: 37226178; PMCID: PMC10210462.

Hotfiel, T., Fanlo-Mazas, P., Malo-Urries, M., Paulino, E., Sequeira de Medeiros, L., Blondett, M., Vetrano, M. and Freiwald, J. (2024) 'Importance of heat therapy in the treatment of pain in the daily clinical practice', J Bodyw Mov Ther, Vol. 38, pp.263-268. doi: 10.1016/j.jbmt.2024.01.015. Epub 2024 Jan 28. PMID: 38763568.

HSE. (2021) Shoulder Pain, [Online], Available: https://www2.hse.ie/conditions/shoulder-pain [accessed 7 June 2024]

Jonas, W.B., Crawford, C., Colloca, L., Kriston, L., Linde, K., Moseley, B. and Meissner, K. (2019) 'Are Invasive Procedures Effective for Chronic Pain? A Systematic Review', Pain

Med, Vol.20(7), pp.1281-1293. doi: 10.1093/pm/pny154. PMID: 30204920; PMCID: PMC6611529.

Joseph, L., Standen, M., Paungmali, A., Kuisma, R., Sitilertpisan, P. and Pirunsan, U. (2020) 'Prevalence of musculoskeletal pain among professional drivers: A systematic review', J Occup Health , Vol.62(1), e12150,https://academic.oup.com/joh/article/62/1/e12150/7249965

Kauta, N., De Vries, E., Du Plessis, J.P., Grey, B., Anley, C., Vrettos, B., Dachs, R. and Roche, S. (2021) 'Assessment and management of shoulder pain at primary care level', S Afr Fam Pract, Vol. 63 (1) e1-e4. doi: 10.4102/safp. v63i1.5279. PMID: 33764147; PMCID: PMC8378013.

Kerns, R.D., Burgess, D.J., Coleman, B.C., Cook, C.E., Farrokhi, S., Fritz, J.M., Goertz, C., Heapy, A., Lisi, A.J., Rhon, D.I. and Vining, R. (2022) 'Self-Management of Chronic Pain: Psychologically Guided Core Competencies for Providers', Pain Med, Vol.23(11), pp.1815-1819. doi: 10.1093/pm/pnac083. PMID: 35642906; PMCID: PMC9629397.

Kong, L.J., Zhan, H.S., Cheng, Y.W., Yuan, W.A., Chen, B. and Fang, M. (2013) 'Massage therapy for neck and shoulder pain: a systematic review and meta-analysis', Evid Based Complement Alternat Med, doi: 10.1155/2013/613279. Epub 2013 Feb 28. PMID: 23533504; PMCID: PMC3600270.

Leahy, C. and Conway, L.J. (2018) 'Managing Shoulder Pain in Primary Care', [Online], Available: http://www.irishhealthpro.com/articles/show/name/managing-shoulder-pain-in-primary-care [accessed 29 July 2024]

Lebert, R., Noy, M., Purves, E. and Tibbett, J. (2022) 'Massage Therapy: A Person-Centred Approach to Chronic Pain', Int J Ther Massage Bodywork, Vol.15(3), pp.27-34. doi: 10.3822/ijtmb. v15i3.713. PMID: 36061225; PMCID: PMC9401086.

Lee, J.H., Bo Gak, H. (2014) 'Effects of self-stretching on Pain and Musculoskeletal symptom of Bus Drivers', J Phys Ther Sci, Vol. 26(12), pp. 1911-1914.

Li, Y., Li, X., Song, H. et al. (2024) 'Health-related outcomes with supervised exercise and myofascial release versus only supervised exercise in subacromial pain syndrome: a randomized controlled single-blind study', BMC Sports Sci Med Rehabil, Vol.16, pp.171. https://bmcsportsscimedrehabil.biomedcentral.com/articles/10.1186/s13102-024-00960-z

Liu, S., Chen, L., Shi, Q., Fang, Y., Da, W., Xue, C., and Li, X. (2024)' Efficacy of manual therapy on shoulder pain and function in patients with rotator cuff injury: A systematic review and meta-analysis', Biomedical Reports, Vol.20 (89). https://www.spandidos-publications.com/10.3892/br.2024.1778

Lowry, V., Desjardins-Charbonneau, A., Roy, J.S., Dionne, C.E., Frémont, P., MacDermid, J.C. and Desmeules, F. (2017), 'Efficacy of workplace interventions for shoulder pain: A systematic review and meta-analysis', J Rehabil Med, Vol.49(7), pp.529-542. doi: 10.2340/16501977-2236. PMID: 28661548.

Maduagwu, S.M., Galadima, N.M., Umeonwuka, C.I., Ishaku, C.M., Akanbi, O.O., Jaiyeola, OA., Nwanne, CA. (2022) 'Work-related musculoskeletal disorders among occupational drivers in Mubi, Nigeria', Int J Occup Saf Ergon, Vol.28 (1), pp. 572-580.

Makvandi, S., Karimi, L. and Mahdavian, M. (2020) 'A systematic review and meta-analysis of the effect of acupressure on relieving the labor pain', Iranian Journal of Nursing and Midwifery Research, Vol.25(6), p.455. doi: 10.4103/ijnmr.ijnmr_257_19.

Mistry, D. (2016)'The Effectiveness of Clinical Massage Techniques on Chronic shoulder girdle pain in Women aged 35-50', Dissertation. Jing Institute: Brighton

Murdoch, S. (2023) ‘The Effects of the Jing Method Advanced Clinical Massage in Adults with Chronic Shoulder Pain’, Dissertation. Jing Institute: Brighton

Nag, P.K., Kumar, S. and Patel, S. (2012) ‘Professional Drivers’, Envis-Nioh Newsletter, Vol.7, pp.1-8.

NCCIH. (2023) ‘Chronic Pain: In Depth’, [online], Available at: https://www.nccih.gov/health/chronic-pain-what-you-need-to-know [ Accessed 28 May 2024].

O’Higgins, S. and Skelton, J. (2024) ‘Prevalence Impact and Cost of Chronic Pain (PRIME) in Ireland’, [Online], Available: https://www.universityofgalway.ie/centre-for-pain-research/research/#tab3 [accessed 29 July 2024]

Padue, R., De Girolamo, L., Grassie, A. and Cucci, D. (2021) 'Choosing patient-reported outcome measures for shoulder pathology', EFFORT Open Rev, Vol.6 (9), pp.779-787.

Pickard, O., Burton, P., Yamada, H., Scram, B., Canetti, E.F.D. and Orr, R. (2022) ' ‘Musculoskeletal disorders associated with occupational driving: a systematic review spanning 2006-2021', Int.J. Environ.Res. Public Health, Vol.19 ,6837

Picón, S.P.B., Batista, G.A., Pitangui, A.C.R. and de Araújo, R.C. (2021) 'Effects of Workplace-Based Intervention for Shoulder Pain: A Systematic Review and Meta-analysis', J Occup Rehabil, Vol.31(2), pp.243-262. doi: 10.1007/s10926-020-09927-6. Epub 2020 Oct 2. PMID: 33006720

Purcell, A., Channappa, K., Moore, D. and Harmon, D. (2022) 'A national survey of publicly funded chronic pain management services in Ireland', Irish Journal of Medical Science, Vol.191, pp. 1315-1323.

Rocca, E. and Anjum, R.L. (2020). 'Complexity, Reductionism and the Biomedical Model. In: Anjum, R.L., Copeland, S., Rocca, E. (eds) Rethinking Causality, Complexity and Evidence for the Unique Patient', Springer, Cham, pp.75-94.

Santello, G., Rossi, D.M., Martins, J., Libardoni, T.C. and de Oliveira, A.S. (2020) 'Effects on shoulder pain and disability of teaching patients with shoulder pain a home-based exercise program: a randomized controlled trial', Clin Rehabil,Vol.34(10), pp.1245-1255. doi: 10.1177/0269215520930790. Epub 2020 Jun 7. PMID: 32508129.

Saunders, B., Burton, C., Van der Windt, D. et al. (2023) 'Patients' and clinicians' perspectives towards primary care consultations for shoulder pain: qualitative findings from the Prognostic and Diagnostic Assessment of the Shoulder (PANDA-S) programme', BMC Musculoskelet Disord, Vol.24 (1).

Serrano-Fernández, M-J., Boada-Grau, J., Robert-Sentís, L. and Vigil-Colet, A. (2019) 'Predictive variables for musculoskeletal problems in professional drivers', Journal of Transport and Health, vol.14. ISSN 2214-1405, https://doi.org/10.1016/j.jth.2019.100576.

Shah, J.P., Thaker, N., Heimur, J., Aredo, J.V., Sikdar, S. and Gerber, L. (2015) 'Myofascial Trigger Points Then and Now: A Historical and Scientific Perspective', PM R, Vol.27(7), pp.746-761. doi: 10.1016/j.pmrj.2015.01.024. Epub 2015 Feb 24. PMID: 25724849; PMCID: PMC4508225.

Sheth, A., Pagdhune, A. and Viramgami, A. (2023) 'Prevalence of work-related musculoskeletal disorders (WRMSDs) and its association with modifiable risk factors in the metropolitan bus transit divers: A cross-sectional comparison', J Family Med Prim Care, Vol. 12(8), pp. 1673-1678.

Stone, S., Malanga, GA. and Capella, T. (2021) 'Corticosteroids: Review of the History, the Effectiveness, and Adverse Effects in the Treatment of Joint Pain', Pain Physician, Vol. 24(1), pp.233-246. PMID: 33492920

Travell and Simons' (2013) Myofascial Pain and Dysfunction: The Trigger Point Manual Edition 3 Lippincott Williams & Wilkins, US.

van den Dolder, P.A., Ferreira, P.H. and Refshauge, K.M. (2015) 'Effectiveness of Soft Tissue Massage for Nonspecific Shoulder Pain: Randomized Controlled Trial', Phys Ther, Vol.95(11), pp.1467-77. doi: 10.2522/ptj.20140350. Epub 2015 May 28. PMID: 26023217.

Walker-Bone, K. and van der Windt, D.A. (2021) 'Shoulder Pain — Where Are We Now?', Curr Treat Options in Rheum, Vol. 7, pp. 285–306.

Watson-Bance, A. (2021) 'A comparison of treating clients online with nonspecific shoulder pain using the Jing Method of Advanced Clinical Massage', Dissertation. Jing Institute: Brighton

Yeun, Y.R. (2017) 'Effectiveness of massage therapy for shoulder pain: a systematic review and meta-analysis', J Phys Ther Sci, Vol.29(5), pp.936-940. doi: 10.1589/jpts.29.936. Epub 2017 May 16. PMID: 28603376; PMCID: PMC5462703.

Zeng, D., Feng, R., Xia, Y., Hu, C. and Liu, Y. (2024) 'Effectiveness of trigger point manual therapy for rotator cuff related shoulder pain: a systematic review and meta-analysis', Disabil Rehabil, Vol.27, pp.1-17. doi: 10.1080/09638288.2024.2393797. Epub ahead of print. PMID: 39189423.

# APPENDICES

## Appendix 1: Ethics Form

| | CHECKLIST OF INSTRUCTIONS FOR STUDENTS | ✓ |
|---|---|---|
| 1 | Complete Section 1 to Section 13 | |
| 2 | Electronically sign and date | |
| 3 | Participation information form (see separate form) | |
| 4 | Participation consent form (see separate form) | |

**Jing BTEC Research Ethics Form**

**BTEC Level 6: Professional diploma in**

**Advanced Clinical and Sports Massage**

## Section 1: to be completed by student.

| | |
|---|---|
| Student's name: | Lauren Starkey |
| Student number: | PE31579 |
| BTEC Year-group: | 2023-2025 |
| Date of application: | 16/04/2024 |
| Student e-mail address: | laurenstarkey3@gmail.com |
| Title of research project: | Evaluating the effects of the Jing method of Clinical Massage on Chronic Non-Specific Shoulder Pain in Professional Drivers |

Section 2: Does your project involve any primary research using human subjects?
Please indicate as appropriate.

| | YES | NO |
|---|---|---|
| Does your project involve any primary research using human subjects? | × | |
| If yes, does it involve children under 16? | | × |
| If yes, does it involve children under 18? | | × |

| | | |
|---|---|---|
| Other vulnerable populations (i.e. mental illness, aged subjects)? | | × |
| Does your project involve NHS patients, NHS staff or Local Authority Service Providers? | | × |
| Are you planning to use deception? | | × |
| Are you collecting sensitive personal data such as sexuality, mental health data, etc.? | | × |
| Does your study involve paying participants or an alternative incentive to participate? | | × |
| Could the study put you or someone else at risk of injury? | | × |
| Does your project make use of a validated questionnaire? | × | |
| If yes, please specify the name of the validated questionnaire you are using and attach a copy here.<br><br>SPADI | | |

## Section 3: Research premises

| | |
|---|---|
| Where is your research being undertaken?<br><br>In my home clinic<br><br>Address:<br>7 Carraig an Duin<br>Milltown<br>Co. Kerry<br>Ireland<br>V93K0V2<br><br>Professional, Public and Products liability insurance through Balens Europe BV<br>AIT membership number: 20073096 | |
| If your research is being undertaken outside of your own premises, do you have written confirmation from the establishment involved? If yes, please provide evidence. | Not applicable |

## Section 4: Recruitment

| |
|---|
| How will you recruit subjects for this research study?<br><br>Using the local neighbourhood, in County Kerry, word of mouth via contacts (friends, family, etc.) and current clientele.<br>Posts on social media platforms (Facebook and Instagram), on my website and my google page.<br>Contacting the companies and asking them to distribute flyers to their drivers.<br>Contact the trade unions and ask them to send out the relevant information to their members. |

## Section 5 Outline your project procedure.

This is effectively a draft of your method, include information on when questionnaires will be used, what your intervention will involve, any stimuli used, etc.

| |
|---|
| The goal of this study is to investigate the effect of the Jing Method on pain levels of professional drivers experiencing chronic non-specific shoulder pain (NSSP).<br><br>**Design**: SPADI will be used for the entire study. Weeks 1-6 will be the control phase, no intervention. Followed by week 7-12 being the intervention period (SPADI questionnaire completed 6 days after each treatment). This will be followed by the completion of SPADI at week |

16, with the follow up questionnaire, four weeks after the last intervention to assess if any longer-term changes had been made.

A within subjects' design study of total of 16 weeks.
REASON:

- It would only require a small sample group.
- It is statistically powerful.
- It removes the effects of individual differences on the outcomes of the research.

Participant registration will be online/via telephone/in person to check suitability, discuss the study, send out participant letter and receive consent.

This will be followed by the control phase (week 1-6), after all participants have been recruited.
Hands on intervention (week 7-12) would be total of 70 min: hands on 60 min, 10 min self-care.
A Consultation will be performed in Session 1 of intervention phase; therefore, the total time of this session will be 90 min to include consultation.

Jing Method Shoulder Girdle Protocol being used as intervention.

- The treatment includes: the inclusion of Amma, heat, (hot stones and a heated blanket), Myofascial techniques, trigger point therapy and broad massage techniques, stretching, mobilizations and acupressure point massage. Treatments will be performed in a prone, side-lying and supine position.

Self-care exercises will be given as part of the Jing Method protocol, taken from the shoulder girdle protocol.

- 3 exercises will be given, which include 1 self-acupressure point treatment, 1 mobilisation exercise and 1 passive stretch.
- These are to be performed by the participant between sessions, 3 times per week.
- At week 7 of the study, these will be demonstrated, and participants are then to demonstrate back, to ascertain knowledge.
- During the following sessions these will be monitored to confirm compliance.
- At week 10 of the study, 3 new exercises will be given as a progression. These will be demonstrated, same as week one, at the end of the hands-on session.
- The 3 exercises are to be the same for each participant, to limit variables in the data.
- First 3-week exercises:
- **Acupressure point:** Co (LI) 14. 1 time, hold for 5 breaths. Done 3 times per week. Both arms
- **Mobilization Exercise**: Shoulder circles: 5 forward rolls, 5 backward rolls and repeat x2. Done 3 times per week.
- **Passive Stretch:** Pectoral Stretch against door frame. Hold for 30 seconds. Done 3 times per week. Both arms.
- Following 3-week exercises:
- **Mobilization Exercise**: Pendulum Swings. 30 secs. Done 3 times per week. Both arms.
- **Active Isolated Stretch**: Rhomboid stretch. 3 sets of 10 reps, both arms. Done 3 times per week.
- **Strengthening Exercise**: Scapular push ups against the wall. 3 sets of 5. Done 3 times per week.

At week 16, a follow up will be made either online/ telephone or in person, to fill out the last SPADI questionnaire. This will be to ascertain if any longer-term benefits have been made.

Participants will be sent the SPADI questionnaire electronically via Google forms or another format such as JotForm (GDPR equivalent), six days after each session to be returned within 24 hours.

## Section 6: Describe what your participants need to do.

During the recruitment phase, potential participants will be required to attend either an online, telephone or in-person meeting to:

- Check suitability for the study, so if they meet the inclusion criteria.
- Have the study explained in detail, so that they can give informed consent to take part.
- Collect the necessary information for the initial consultation.
- After they have been accepted, a participant letter will be sent to them, and they need to read and sign the consent form.

During the control phase, which is week 1-6 of the study, participants need to:

- Complete the SPADI questionnaire once a week for 6 weeks and return it to the researcher electronically. There will be no intervention at this stage.

During the intervention phase, which is week 7-12 of the study, participants:

- Will be receiving a standardized Jing Method shoulder girdle protocol massage.
- This will be once a week for 6 weeks.
- The treatment includes: the inclusion of Amma, heat, (hot stones and a heated blanket), Myofascial techniques, trigger point therapy and broad massage techniques, stretching, mobilizations and acupressure point massage. Treatments will be performed in a prone, side-lying and supine position.
- After 6 days following each session, the SPADI questionnaire will be completed and returned to the researcher electronically within 24 hours.
- Will be performing specific self-care exercises 3 times per week; this will be evaluated at each session to check compliance.

At week 16, the researcher will contact the participants and complete the SPADI questionnaire with them as a follow up to ascertain longer term results. This can be either online, telephone call or in person.

Participants will be required to inform the researcher if they receive any manual therapy or other relevant therapy or take any medication for their shoulder pain, throughout the duration of the study.

## Section 7: Respecting confidentiality and ethical issues for participants

How will you manage participant confidentiality? Ensure that the information refers to GDPR and is compliant with this legislation. What ethical considerations are there?

- All data will be collected and stored according to the General Data Protection Regulation (GDPR) requirements.
- Participants' information will not be available for third parties and this information will be stated in the participants' letter and again with communication with participant.
- Assurance that privacy and confidentiality will be upheld, that their details will not be seen or shared by anyone else.
- Participants' details will be anonymous in the study, as their names will be replaced by numbers.
- At conclusion of the study, their details will be deleted.
- Participants will be asked not to have any outside communication with other participants about their sessions, this information will also be written in the participant and consent letter.
- There is a minimum risk of injury. However, there may possibly be some localized bruising, this can occur especially if the participant presses too hard on their skin during the self-administered acupressure point massage. Also, if they perform any of the self-care exercises in an incorrect or dangerous manner. There is also the possibility of transient muscle aches that occur after the massage. This will all be explained to the participants before their consent is given.
- This study involves chronic pain and therefore psychological factors could be involved. Should the researcher be concerned about the wellbeing or health of the participant during the study, resources will be made available to the participant of local specialists that could be of further help.
- Also, if during the study, the participant's symptoms get to a stage where outside intervention is needed, such as medical intervention, then the participant will be referred to their preferred practitioner.

## Section 8: Inclusion and exclusion criteria

What sort of people will the subjects be?
The study will include:

- Professional drivers over 18 years old and been in the profession for longer than 1 year.
- Age range and gender might be further specified after initial recruitment.
- Having non-specific shoulder pain. Which is defined as shoulder pain that has no specific pathology or physical signs (Van den Dolder and Ferreira and Refshauge. 2015).
- The pain has been going on for longer than 3 months.
- Be able to understand and converse in spoken English.

The study will exclude those who:

- Only been in the profession for less than one year.
- Have a specific shoulder pathology that has been diagnosed.
- Have any acute injury to the shoulder such as a recent (within 3 months) sprain or strain.

| |
|---|
| |

## Section 9: Student declaration:

| | | |
|---|---|---|
| I understand that I can only start my project, once this ethical application has been approved. This applies to ALL projects, whether using human participants or not. | YES | NO |

Student's handwritten signature:

(To be completed, once ethical approval has been provided)

Print Name: Lauren Starkey Date: 1/05/2024

ONCE YOU HAVE COMPLETED THE ABOVE ETHICS DETAILS, THEN YOU CAN PROCEED TO PARTICIPANT INFORMATION AND CONSENT FORMS, SO READ BELOW AS IT IS IMPORTANT TO BE CLEAR ABOUT WHAT YOUR PARTICIPANTS NEED TO DO.

Informed consent must be obtained for all participants before they take part in your project. The Consent Form should clearly state the parameters and content of the research. It should explain what is expected of the participants and what they will be doing. It should draw specific attention to any elements that could conceivably cause subsequent objections, and the measures you are taking to ensure the confidentiality of their data. It should also state that the participants are free to withdraw from the study at any time.

Studies should not involve participants under 18 without express permission from your supervisor. Studies carried out in schools require the permission of the head-teacher, and of any responsible adults as per the head teachers' recommendation. Minors aged over 14 years should also sign an individual consent form themselves. If you are planning to carry out a project whereby you will be in contact with minors, you must establish from the head-teacher or other responsible adult whether the work proposed will require you to have the relevant DBS disclosure. Please seek advice from your Local Authority.

You must complete a consent form for every participant involved in your study.

## Jing's assessment (to be signed by Jing after ethics and participant information details completed)

EITHER:
This project is not designed to include fieldwork with human participants. Insofar as secondary data are to be used, I am confident that appropriate procedures are in place for data protection and non-disclosure of any personal or confidential data.

Signature: .....date: .....

OR:
This project is designed to include fieldwork with human participants.
(please circle yes or no)

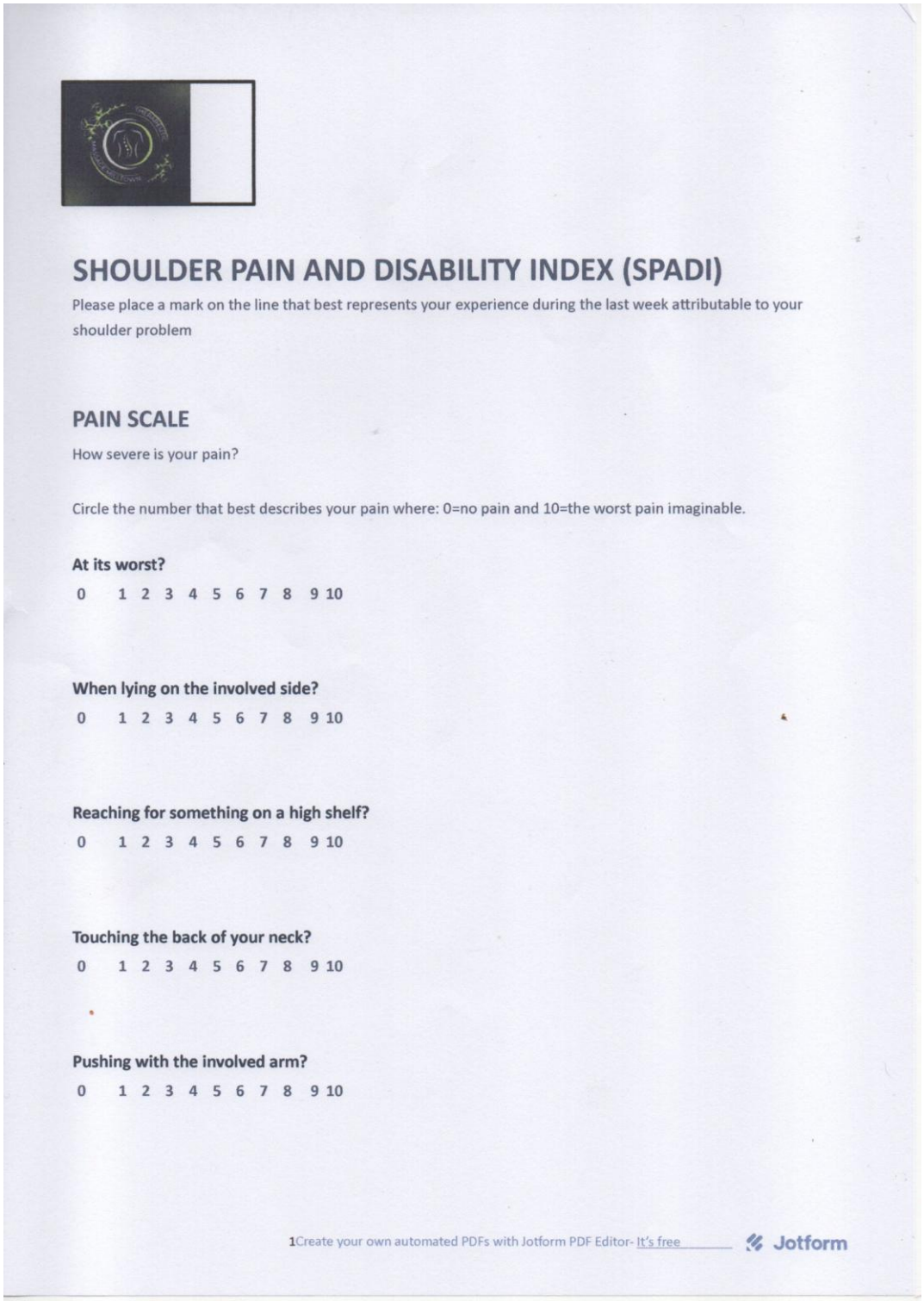
| | |
|---|---|
| *YES,* | All necessary statutory, legislative or other formal external approvals have been obtained (e.g., permissions, police checks, external research ethics and governance approvals in the case of research involving NHS staff or patients or Local Authority service providers or users). |
| *YES* | The design of this study ensures that the dignity, welfare and safety of the participants will be ensured and that if children or other vulnerable individuals are involved, they will be afforded the necessary protection. |
| *YES* | I am confident that participants will be given all necessary information before the study, in the consent form, and after the study if necessary. |
| *YES* | I am confident the participants' confidentiality will be preserved. |
| *YES* | I consider that any risks involved to the student, the participants, and any third party are minimal. |
| *YES* | I consider that Departmental approval should be given, since ethical risks have been appropriately addressed in the proposal and I am confident that steps will be taken to minimise any risks. |

Signature: .....Susan Harrison..... date: ....30/4/24.....

If a second opinion was sought from a research ethics expert, the advisor should also sign this form below:
Advisor's name (please print):

Advisor's signature: ..... date: .....
Once the Jing's signature has been obtained, the student must return the completed form to the Jing Office.

## Appendix 2: Shoulder Pain and Disability Index (SPADI)



# SHOULDER PAIN AND DISABILITY INDEX (SPADI)

Please place a mark on the line that best represents your experience during the last week attributable to your shoulder problem

## PAIN SCALE

How severe is your pain?

Circle the number that best describes your pain where: 0=no pain and 10=the worst pain imaginable.

**At its worst?**

0 1 2 3 4 5 6 7 8 9 10

**When lying on the involved side?**

0 1 2 3 4 5 6 7 8 9 10

**Reaching for something on a high shelf?**

0 1 2 3 4 5 6 7 8 9 10

**Touching the back of your neck?**

0 1 2 3 4 5 6 7 8 9 10

**Pushing with the involved arm?**

0 1 2 3 4 5 6 7 8 9 10

## DISABILITY SCALE

How much difficulty do you have?

Circle the number that best describes your experience where: 0=no difficulty and 10= so difficult it requires help.

**Washing your hair?**

0 1 2 3 4 5 6 7 8 9 10

**Washing your back?**

0 1 2 3 4 5 6 7 8 9 10

**Putting on an undershirt or jumper?**

0 1 2 3 4 5 6 7 8 9 10

**Putting on a shirt that buttons down the front?**

0 1 2 3 4 5 6 7 8 9 10

**Putting on your pants?**

0 1 2 3 4 5 6 7 8 9 10

**Placing an object on a high shelf?**

0 1 2 3 4 5 6 7 8 9 10

**Carrying a heavy object of 10 pounds (4.5kg)?**

0 1 2 3 4 5 6 7 8 9 10

**Removing something from your back pocket?**

0 1 2 3 4 5 6 7 8 9 10

**Name**

Last Name

First Name

## Appendix 3: Example of hands-on protocol used.

**DISSERTATION INTERVENTION PROTOCOL WEEK 7-9**

**PRONE:**

Bolster under ankles

Pressures on feet and amma walk up back of body (body covered by towel)

Undrape back

Direct Myofascial Release: Fist down each side of spine to sacrum. Skin rolling shoulder blades, erectors and neck.

Apply medium: unscented balm.

Broad work to back, neck and shoulders.

Hot stone therapy to back, shoulders and up neck.

Specific work down erectors and around shoulders (rhomboids, traps), lower back to iliac crest, both sides.

Start with affected side:

Arm to the side, broad work with forearm to arm and scapula.

Specific work to rotator cuff muscles and attachments, deltoids, upper traps and lats.

Lat stretch and dying swan, place arm back and repeat to other side.

Broad and specific work to neck and occipitals.

Boad work to back.

Cover and amma down back of body, pressures on feet.

Remove any bolstering and turn client over.

**SUPINE:**

Boster to head and under knees

Apply medium.

Broad work across chest, shoulders, down arm and up neck.

Specific work to pec major and minor, GHJ (Glenohumeral Joint) attachments, muscles around clavicle, upper traps and neck muscles up to mastoid process attachments of neck muscles and down arms ( both sides).

Scalp massage

Acupressure points: shoulders and scalp.

Arm and leg pull

Finnish with acupressure point K1

**CHANGES TO ABOVE PROTOCOL ADDED WEEK 10-12**

**SIDELYING**

Bolster under the head

Trapezius stretch

Supported shoulder rotations GHJ

Broad work to back, shoulder and neck.

Specific work to vertebral and auxiliary border of the scapula, latissimus dorsi, serratus anterior, pec major and minor, deltoids.

Specific work to traps and neck including STR (Soft Tissue Release).

Broad work to back and shoulder

Devil Pec Stretch

Latissimus dorsi stretch

Remove bolster

**SUPINE**

STR to Pectorals

Arm bent 90 degrees: PNF stretches: (Proprioceptive Neuromuscular Facilitation) internal and external rotation of GHJ.

**Appendix 4: Participant Letter and Consent**

**STUDENT NAME: Lauren Starkey**
**STUDY LOCATION: 7 Carraig An Duin**
**Milltown, co. Kerry.**
**Ireland, V93K0V2**

**Tel: 087 362 0990**
**e-mail: laurenstarkey3@gmail.com**

**Jing Advanced Massage Training**
**28/29 Bond Street**
**Brighton BN1 1RD**

**www.jingmassage.com**
**01273 628942**

Dear XXX,

**Re: Evaluating the Effects of the Jing method of Clinical Massage on Chronic Non-Specific Shoulder Pain in Professional Drivers**

Thank you for showing interest in my study. I appreciate you responding to my call for participants. Let me tell you a little more about what it entails.

I am looking for people who are over 18 years old and experience some of the following symptoms, but not all:

- You are currently experiencing shoulder pain.
- Pain that has been going on for longer than 3 months.
- Pain that feels dull, achy, sharp or severe.

- Pain at night, particularly when sleeping on affected side.
- Pain that triggered or worsened by everyday activities, overuse or exertion.
- Experiencing decrease in strength, mobility and function of the shoulder and arm.
- Tenderness around the shoulder area when touched.
- Difficulty dressing or washing hair.

This study is for professional drivers, people who are employed to drive a vehicle. Examples would include bus drivers, taxi drivers, truck drivers or ambulance drivers.

This study excludes:

- People who are under the age of 18 years old.
- Been a professional driver for less than 1 year.
- If your shoulder pain is currently being treated by medical intervention such as surgery or steroid injections.
- Recent injury to the shoulder in the last 3 months.

If you decide to participate in the study, it will begin around July 2024. Participation is completely voluntary, and you can withdraw from the study at any time without giving a reason. All your information will be kept confidential, and your data will be anonymous.

**What does the study involve?**

We will have an initial video or telephone call or in person meeting where we can discuss the study, gather contact information and any other relevant details and go through the questionnaire. Once all this is done you will be sent a consent form to sign to take part.

The first week will begin approximately the middle of July 2024.

The first 6 weeks will be all about understanding your pain, it will involve you completing the questionnaire electronically, once a week for 6 weeks. It should take approximately 5 minutes to fill out and return to me. I will send out reminders, during this time. Once all the data from the 6 weeks is collected, we should have a clearer understanding of what is involved and how best we can make a difference.

**From week 7-12, you will be receiving a 60-minute hands on clinical massage treatment, once per week. Each session will be held on the same day each week and will involve a variety of massage techniques to aid in treating your symptoms. You will be shown 3 self-care exercises to help with your symptoms at home. These are to be performed 3 times per week.**

6 days following the session you will be sent the questionnaire to complete and send back to me.

4 weeks after the last massage therapy session, you will be contacted either by telephone call, video call or in person, whichever is preferable. This will be a follow up to see if there are any longer-term benefits made due to the intervention. You will be asked to complete the questionnaire one last time and a feedback form will be sent to you to complete (this is optional).

If you found the sessions helpful for you, you are welcome to continue them, as a client of mine.

There is a small charge for the study to cover costs.

For 6 sessions I normally charge €360, but for this study, it is as at a **discounted rate of:**

**€120 ( €20 per session).**

**Are there any risks or benefits to taking part?**

- There is a minimum risk of injury. This might occur if you perform any of the self-care exercises in the incorrect or dangerous manner. There is also the possibility of temporary muscle aches or discomfort that may occur days following the massage sessions. This will all be explained to you during our first call/meeting.
- This study involves chronic pain and therefore psychological factors could be involved. Should I be concerned about your wellbeing or health during the study, resources will be made available to you of local specialists that could be of further help.
- Also, if during the study, your symptoms get to a stage where outside intervention is needed, such as medical intervention, then you will be referred to your preferred practitioner.
- Benefits of taking part in the study will be that you may experience reduction in your pain levels, increase in your mobility and functioning of your affected shoulder. Which in turn may improve your overall wellbeing and working life.

Your data will be mathematically analysed together with all the other participants' data, and the findings from this analysis will be communicated to the project supervisor and possibly other practitioners.

Once my research is published, I will share with you my findings and invite you to the online conference, where my colleagues and I will be presenting all our findings.

It is very important that you don't engage in other pain-relieving activities including the use of pain medication, trying a new therapy for your pain/wellbeing/stress without letting me know.

**About Me:**

I have been a massage therapist since 2005 and I specialize in the treatment of chronic pain. In my clinic, I work mostly with individuals suffering with a range of chronic pain such as headaches, frozen shoulders, and fibromyalgia.

In 2023, I embarked on an advanced degree qualification in my field: the BTEC Level 6 in Advanced Clinical and Sports Massage offered by Jing Advanced Massage, the highest level of education a manual therapist can achieve in the UK. It is overseen by experts in the field of Musculoskeletal Pain, Education, Sports Science and Psychology.

As part of our course work, we are given an opportunity to design and carry out a study into the effects of clinical massage wellness program. I have chosen to investigate the effects of the Jing Method of clinical massage on chronic, non-specific shoulder pain in professional drivers.

**Please call me with any questions.**

Thank you again for considering this project, your participation will make a difference to your pain levels and that of others.

Sincerely,

Lauren Starkey

## PARTICIPANT CONSENT FORM

**Title of study:** The Effects of the Jing method of Clinical Massage on Chronic Non-Specific Shoulder Pain in Professional Drivers

**Name of student:** Lauren Starkey

| | Yes | No |
|---|---|---|
| I have read the information letter about this study. | | |
| I have had an opportunity to ask questions and discuss this study. | | |
| I have received satisfactory answers to all my questions. | | |
| I have received sufficient information about this study. | | |
| I understand that I am / the participant is free to withdraw from this study:<br>• At any time (until such date as this will no longer be possible, which is once all anonymised data has been merged)<br>• Without giving a reason for withdrawing<br>• That I am free to refuse to answer any question without saying why<br>• That the services I am receiving will not be affected whether I participate or not. | | |
| I understand that my research data may be used for a further project in anonymous form, but I am able to opt out of this if I so wish, by ticking 'No' here. | | |
| I confirm that I can commit to the times and dates agreed. | | |
| I agree to take part in this study. | | |

**Signature (participant)** **Date:**

**Name: (BLOCK LETTERS)**

**Signature (parent/guardian/other, if under 18)** **Date:**

**Name: (BLOCK LETTERS)**

BTEC students contact details:

**Lauren Starkey**
**Tel no: 087 362 0990**
**Email: laurenstarkey3@gmail.com**