Evaluating the effects of the Jing Method™ on the wellbeing of women with joint hypermobility

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

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"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 the Jing Institute of Massage and Complementary Medicine. 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".

Beth Ells: _____

Date: 7 March 2026

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ABSTRACT

Aim: To evaluate the effects of the Jing Method™ (TJM) of advanced clinical massage on the wellbeing of women with joint hypermobility.

Method: Eleven women were recruited, nine of whom completed the study. Of these, three had a Beighton Score of at least five, three had a Hypermobility Spectrum Disorder (HSD) diagnosis and three were diagnosed with hypermobile Ehlers-Danlos Syndrome (hEDS). A within-subjects design study was conducted over a 16-week period, with weeks 1–6 being the control phase, weeks 7–12 comprising the intervention phase and week 16 being a follow-up, where feedback was sought to assess any ongoing effects of the intervention. During the study the participants completed a Pain Outcomes Questionnaire (short form) (POQ) weekly. During the intervention phase participants received a 45-minute whole body massage protocol based on TJM Stress and Chronic Pain Protocol. They were also given 10 minutes of self-care practices and asked to complete these three times a week between treatments.

Results: The results of this study show positive improvement across all six categories measured by the POQ (namely pain intensity, mobility, activities of daily living, vitality, negative effect and fear/fear avoidant behaviour), with the total mean scores across these categories having improved by 20.1% during this time. At week 16 the improvement in total mean scores remained at 18.3% suggesting that the wellbeing benefits were well maintained across all categories except pain intensity.

Conclusion: Data from this study supports the efficacy of TJM as a treatment for the wellbeing of women with joint hypermobility, HSD and hEDS. Given the lack of understanding of how to treat these conditions, this study provides promising evidence suggesting that the multi-

modal approach of TJM massage therapy could be a viable option for those seeking relief from the varied symptoms that often accompany hypermobility conditions. The results of this hands-on study provide a foundation for future research in this area, which would expand the sample size and provide further insight into this area of research.

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ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
ADL	Activities of Daily Living
AIS	Active Isolated Stretching
ASD	Autism Spectrum Disorder
CAM	Complementary and Alternative Medicine
CSF	Cerebrospinal fluid
EDS	Ehlers-Danlos Syndrome
GORD	Gastroesophageal reflux disease
hEDS	Hypermobile Ehlers-Danlos Syndrome
HSD	Hypermobility Spectrum Disorder
IBS	Irritable Bowel Syndrome
MCAS	Mast Cell Activation Syndrome
MFR	Myofascial Release
POQ	Pain Outcomes Questionnaire
PNF	Proprioceptive Neuromuscular Facilitation.
PTSD	Post-Traumatic Stress Disorder
POTS	Postural Orthostatic Tachycardia Syndrome
TJM	The Jing Method™

LITERATURE REVIEW

Introduction

Joint hypermobility is when a joint can be taken into a greater than normal range of motion. Approximately 30% of the UK population are affected, with around 10% experiencing mild to severe symptoms (The Hypermobility Syndromes Association, 2025). The most common conditions associated with joint hypermobility are the connective tissue disorders: hypermobile Ehlers-Danlos Syndrome (hEDS) and Hypermobile Spectrum Disorder (HSD) (Clark et al., 2023). Although their exact prevalence is difficult to determine (due to underdiagnosis, misdiagnosis and underreporting), a 2019 study found HSD/hEDS to be present in one in 500 of the general population in Wales, challenging the previous belief that these conditions are rare (Demmler et al., 2019). Demmler et al. (2019) found HSD/hEDS to be more prevalent in women (accounting for 70% of the 6021 individuals included), which supports previous research (Beighton, Solomon and Soskolnet, 1973; Wordsworth et al., 1987; Larsson et al., 1993; Jansson et al., 2004; Clinch et al., 2012; Singh et al., 2017).

hEDS is the most common of 13 types of heritable Ehlers-Danlos Syndromes (EDS). HSD (also heritable) is a diagnosis given to those with symptomatic joint hypermobility who do not meet the hEDS diagnostic criteria (or those of any other connective tissue disorders). While it was previously thought that HSD was milder and less problematic than hEDS, the range of symptoms and severity of both these life-long conditions are now understood to be comparable (Francomano et al., 2024: 1) and requiring the same treatment (Aubry-Rozier et al., 2021).

Symptoms and impact from a biopsychosocial perspective

Although some individuals with joint hypermobility are asymptomatic or view their hypermobility as advantageous (such as dancers or gymnasts), those who are symptomatic can present with a wide variety of symptoms across multiple body systems, including the musculoskeletal, autonomic, cardiovascular, neurological, cognitive, gastrointestinal, dermatological, urogenital and immune systems (Russek, Simmonds and Stott, 2019). These symptoms are set out in Appendix 1.

Symptoms can vary significantly from person to person, differing in severity and complexity, and in their impact on function and quality of life (even amongst close family members (Halverson et al., 2021)). While symptoms are mild for some, others suffer more severely or can experience flare-ups after periods of stress, inactivity or overactivity (Russek, Simmonds and Stott, 2019). Several studies report how disabling this can be, not only negatively affecting physical health, wellbeing and daily activities, but also impacting people emotionally, psychologically, socially and in terms of education and employment (Bennett et al., 2021; Halverson et al., 2021; Clark et al., 2023).

Taking a biopsychosocial perspective, that pain is derived not only from tissue damage or disease, but psychological and social factors too (Fairweather and Mari, 2015), the physical, psychological and social impact of these symptoms is illustrated in Figure 1. Notably, anxiety and depression are most often cited as contributing to poorer quality of life in people with HSD/hEDS (Clark et al., 2023). Indeed, anxiety has been found to be four times higher in people with HSD than those without and they are more likely to suffer depression or panic disorders (Smith et al., 2014).

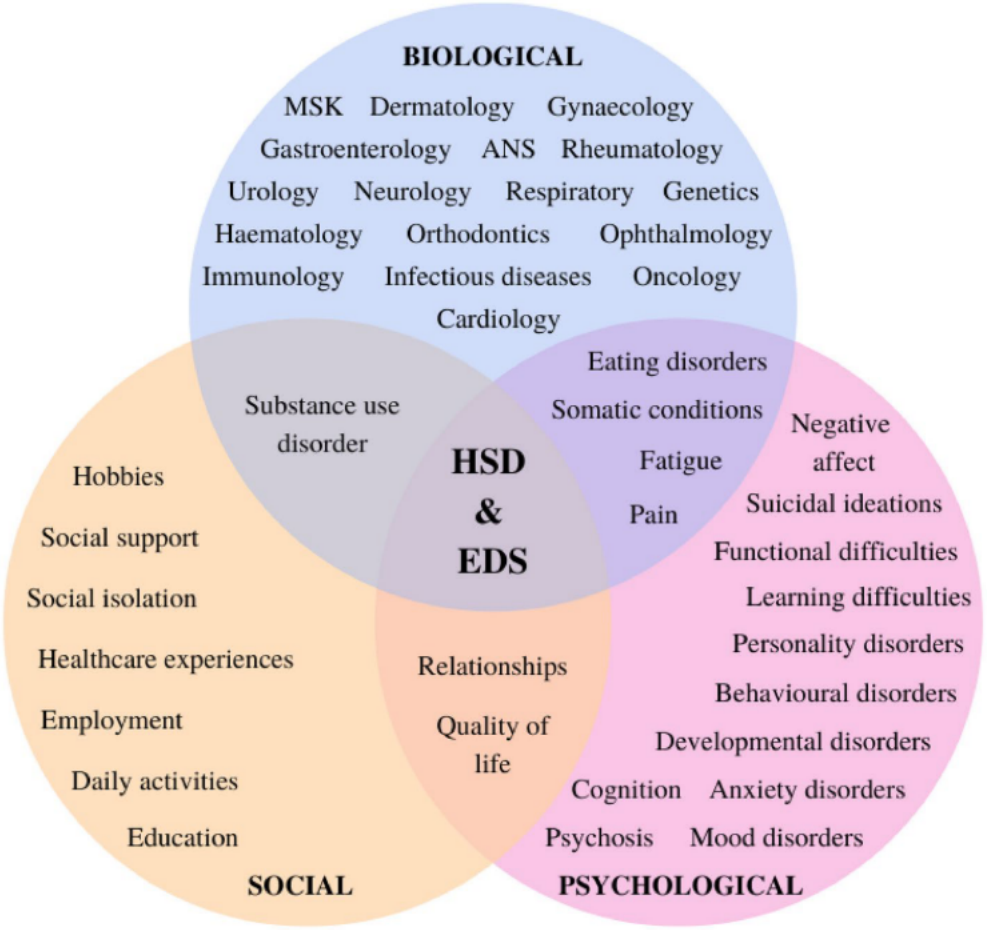

Figure 1: Venn diagram of the biopsychosocial impact of HSD/EDS

(Clark et al., 2023) [open access]

Diagnosis

The diagnostic criteria currently in place for EDS and HSD (see Appendix 2) were set out by the International Consortium on the Ehlers-Danlos Syndromes in 2017, but will change in late 2026 when a review of the classifications, diagnosis and care plans is due to be completed (The Ehlers-Danlos Society, 2025c).

The wide-ranging symptoms (which overlap with other conditions (Tinkle et al., 2017)) and absence of genetic testing for HSD/hEDS (although genetic tests exist for all other types of

EDS) means diagnosis is reliant on clinical assessment and often complex and lengthy. These conditions are also often misunderstood or misdiagnosed (Daylor et al., 2025; The Ehlers-Danlos Society, 2025d). Diagnosis can take many years, averaging anything from 11 to 22 years (Halverson et al., 2021; Daylor et al., 2025), but can take longer, leaving symptoms unmanaged and, in some cases, worse (Demmler et al., 2019; Halverson et al., 2021; Anderson and Lane, 2022). It seems possible that these difficulties and delays may impact existing research findings, with those undiagnosed or misdiagnosed excluded from research and those included possibly having deteriorated while waiting for diagnosis, thus potentially skewing data.

Knowledge of HSD/hEDS is lacking among healthcare professionals (Palmer et al., 2016; Halverson et al., 2021; Anderson and Lane, 2022), with many patients reporting negative experiences, examples of which are set out in Appendix 3. This fosters lack of trust in the healthcare system, resulting in people avoiding seeking help, worsening pain and psychological distress (Berglund, Mattiasson and Randers, 2010; Kalisch et al., 2020; Halverson et al., 2021).

Although the journey to diagnosis may be fraught, Halverson et al (2021) found beneficial effects to receiving a diagnosis, including a sense of calm, reduced anxiety, validation and new social networks created with other sufferers. However, Bennett et al (2021) reported that even after diagnosis some still feel dismissed as being "just bendy".

As Teran-Wodzinski and Kumar (2023) state, people with hEDS and HSD "desperately need more effective treatment options, a better diagnostic process, and education among health care providers".

Treatment

As HSD and hEDS are on the same spectrum, both conditions require the same management and treatment (Chuchin and Ornstein, 2024). Although several studies suggest treatment should be symptom-based and tailored to the specific individual (Engelbert et al., 2017; Aubry-Rozier et al., 2021; Eichinger et al., 2025; Wang et al., 2025), others recommend a longer term holistic approach, considering the body as a whole rather than treating individual joints for acute issues (Palmer et al., 2016; Russek, Simmonds and Stott, 2019).

A multi-disciplinary approach comprising physical and psychological support is often recommended (Kalisch et al., 2020; Buryk-Iggers et al., 2022; Carroll, 2023). Within this, physical therapy (or physiotherapy) plays a central role (Engelbert et al., 2017) and is the most common conventional treatment (Eichinger et al., 2025), with occupational therapy, surgery, bracing, taping and medication being others (Song et al., 2020).

Physiotherapy usually combines manual therapy techniques and rehabilitation exercises (Desroches, 2024). When delivered by practitioners with specific HSD/hEDS knowledge, physiotherapy has been found to provide "support and hope", helping individuals cope with and manage their condition (Bennett et al., 2021). However, according to Palmer et al. (2016), referral can be "difficult and convoluted", make pain worse (if the physiotherapist is unfamiliar with hypermobility) and cause frustration if sessions are not available on an ongoing basis. As Şlicaru and Cerchez (2023) state, while physical therapy and exercise improve posture, mobility and function for the hypermobile, to be successful and long lasting it needs to be two to three times a week and integrated into the patient's lifestyle.

The biopsychosocial impact of HSD/hEDS has been noted above. Despite the recommendation for a multi-disciplinary approach, however, patients report a lack of support for the psychological impact of HSD/hEDS on their lives (and the stress and worry associated with fears for the future) (Bennett et al., 2021).

A qualitative study of 30 people (24 of whom had in-depth interviews) on the use of Complementary and Alternative Medicine (CAM) therapies by hEDS patients found that they turned to CAM therapies due to dissatisfaction with the ability of conventional treatment to manage their symptoms (Doyle and Halverson, 2022). Various CAM modalities are used, with Doyle and Halverson (2022), as well as a larger study by Song et al. (2020) (which reviewed treatment options for 98 EDS patients in a clinical setting) finding massage to be the most useful. Song et al. (2020) also found heat beneficial and Doyle and Halverson (2022) found myofascial release (MFR) to be helpful, also noting patients' perceptions that CAM practitioners are more attentive to, and less sceptical of, their symptoms than conventional counterparts.

The Jing Method™

The Jing Method™ (TJM) of advanced clinical massage, created by Fairweather and Mari (2015), is a multimodal approach comprising a mix of Eastern and Western bodywork techniques.

Centred around the Biopsychosocial Model, TJM is client and outcome centred, advocating strong therapeutic alliance and encouraging education and self-care so clients feel supported

and empowered. This approach is supported by recent evidence (Gillingham, 2017; McParlin et al., 2022; Kerry et al., 2024; Stewart-Richardson et al., 2024).

TJM framework is based on Heat, Fascia, Muscles, Acupressure, Stretching and Teaching, embodied in the HFMAST mnemonic. Table 1 identifies various studies that support the use of HFMAST and a multimodal approach to manage symptoms of hypermobility.

Table 1: Elements of TJM and their relevance for the management of symptoms related to joint hypermobility

Element of TJM	**Relevance for the management of symptoms related to joint hypermobility**	**Reference**
H The use of **h**eat and/or cold	Heat found to be the most helpful (alongside massage) of the CAM therapies for the treatment of EDS.	(Song et al., 2020)
	Heat makes us feel safe, nurtured and relaxed, reduces muscle tightness, increases circulation, increases the pliability of fascia and reduces perception of pain.	(Fairweather and Mari, 2015) (Klingler, 2012)
	Heat and massage reduce the stress response and down regulates sympathetic nervous system activity.	(Lee, Park and Kim, 2011)

F The use of direct and/or indirect **f**ascial techniques	Fascia found to be a key player in the pathogenesis of HSD/hEDS, which involve alterations in fascial structure, function and regulation. Both conditions show consistent abnormalities in fascial thickness (higher viscosity), interfascial gliding (less lubrication and sliding), myofibroblast activations, tendon elongation and tissue stiffness. These changes in the fascia and muscles can lead to pain, dysfunction and joint instability.	(Wang and Stecco, 2021; Wang et al., 2023; 2025).
	MFR found to be a useful CAM therapy for hEDS.	(Doyle and Halverson, 2022)
	MFR may impact the proprioceptive feedback loop, enhancing the body's awareness of its spatial orientation and movement patterns. May also reduce pain sensitisation and perception of pain, as well as increase sense of wellbeing through release of endorphins. Note that poor proprioception is a feature of hypermobility.	(Sur et al., 2024).
	Chronic emotional stress/psychological triggers (relevant for hEDS and HSD) can cause fascial changes and dysfunction.	(Wang et al., 2025)

M Treating **m**uscles with precise Trigger Point Therapy and specifically treating all the muscles around an affected joint to release trigger points	Touch-based therapies such as massage, delivered with a strong therapeutic alliance, should form part of a multi-modal approach to chronic pain. The global effects of affective touch and manipulation techniques mean that it is possible to gain benefit from touching other areas of the body than the site of specific pain. Trigger point release (and self trigger point release) found to be beneficial for hEDS, although Fairweather and Mari suggest that this should be used sparingly as heavy trigger point work can be counter-productive in the case of chronic pain, and may lead to more pain. The effectiveness of massage treatments is achieved through individualised treatments involving problem solving for each individual client rather than predetermined techniques or strokes.	(Desroches, 2024) (Pennetti, 2018) (Russek, Simmonds and Stott, 2019) (Fairweather and Mari, 2015) (Stewart-Richardson et al., 2024)
A Treating relevant	Treating acupressure points can reduce pain, anxiety and depression.	(Ghanbari et al., 2022; Lin et al., 2022)

Acupressure points	Acupressure points can treat conditions such as sleep disturbance, chronic fatigue and neck or back pain that does not respond to standard massage techniques and can easily be taught to clients as part of their self-care.	(Fairweather and Mari, 2015)
S **S**tretching: Static, proprioceptive neuromuscular facilitation (PNF) or active isolated stretching (AIS)	Stretching is appropriate for hypermobility if used to address muscle imbalances and to avoid muscle spasms. PNF can improve balance, muscle strength and pain in patients with chronic ankle instability. It may also improve "joint position sense" for a period of time. PNF improves range of motion and strength across various muscle groups. Isometric exercises appear to be "reasonable" for the management of HSDs as they do not extend the muscle completely. Proprioceptive training can improve movement precision and reduce kinesiophobia, and general/targeted strengthening can reduce pain and reinforce joint stability, although progression should be slow to avoid irritation.	(Russek, Simmonds and Stott, 2019; Song et al., 2020; Tinkle, 2020; Yin et al., 2025) (George et al., 2025) (Carroll, 2023). (Yin et al., 2025). (Russek, Simmonds and Stott, 2019).

	Stretching exercises reduce levels of anxiety, bodily pain and exhaustion, and improve vitality, mental health, general health and flexibility and thus can be seen as a strategy for improving wellbeing.	(Montero-Marín et al., 2013).
T **T**eaching self-help strategies (within the massage therapist's scope of practice). E.g. Self trigger point release, stretching, mobilisation exercises and simple breathing techniques.	As HSD/hEDS is complex and often misunderstood, educating clients about their condition (within scope) and signposting them to relevant resources (such as The Ehlers-Danlos Society's website) will help and empower them. Pain education helps hypermobile patients understand and self-manage their pain. Pain catastrophising and anxiety predicts current and future disability. Education (and strategies to enhance the long term maintenance of exercise and rehabilitation) are recommended to optimise therapeutic outcomes. Exercise avoidance leads to deconditioning which may make joint instability and pain worse due to poor movement patterns and	 (Russek, Simmonds and Stott, 2019). (Smith et al., 2014) (Buryk-Iggers et al., 2022) (Chuchin and Ornstein, 2024)

	compensations, which then reinforces movement avoidance. Targeting the fear-avoidance factors of pain catastrophising, anxiety and fear of falling (such as through focussing on proprioception and balance) in individuals with HSD/hEDS is suggested to improve avoidance of activities and mitigate deconditioning.	
	Exercise is important for joint stability and should be tailored to the individual and be part of their lifestyle on an ongoing basis.	(Şlicaru and Cerchez, 2023)
	A recent study looking at an online Pilates programme for people with hypermobility disorders (although these recommendations could be applied to any form of exercise) found that exercises should be hypermobile specific, have different options (for instance, easier options for during flare-ups), should be gentle (to account for and help with pain and fatigue), include exercises for proprioception/ interoception and incorporate breathing and relaxation. Common watchpoints should be provided to help people identify any mistakes in execution of the exercises.	(Russek et al., 2025)

	Therapeutic exercise and motor function training improves function, wellbeing and quality of life in people with HSD/hEDS.	(Brittain et al., 2024)

Given the breadth and complexity of symptoms and their biopsychosocial impact, it could be suggested that a multimodal biopsychosocial approach comprising the comfort of heat, appropriate listening touch and empowerment through education and self-care may improve wellbeing in women with joint hypermobility. This study aims to explore how TJM of clinical massage may help manage these conditions, building on previous research findings that this method reduced joint pain in people with joint hypermobility (Drew, 2024), although note that this study seeks to focus more broadly on wellbeing rather than solely on joint pain.

METHOD

Ethical approval was sought from the Jing Institute of Massage and Complementary Medicine (Appendix 4) for "Evaluating the Effects of the Jing Method™ on the wellbeing of women with joint hypermobility". Research was carried out through searches of Mendeley, Google Scholar and Pub Med to identify previous research in this area.

Participants were recruited over a 1-month period through online advertisements on the researcher's professional and personal social media accounts (Appendix 5), displaying posters locally and asking existing clients and local business networking groups.

Interested individuals were asked to complete an online pre-screening questionnaire (Appendix 6) to determine their potential eligibility. Those immediately excluded (see Appendix 4 for inclusion/exclusion criteria) were thanked for their interest. The others were invited via email to book a 50-minute video Consultation. This comprised discussion about the study and their right to withdraw at any time, checking their Beighton Score (if required) and answering questions, as well as the researcher's usual Consultation. During this Consultation, those who met the inclusion criteria were asked to verbally consent to taking part and sent a Participants Letter and Consent Form (Appendix 7) to sign and return.

Of the 31 individuals who completed the online questionnaire, several were immediately excluded, some did not book a Consultation, four were excluded during the Consultation and two who started the study withdrew at week 8. Nine women completed the study, seven of whom were in their 40s, with the other two being aged 21 and 33.

The study used a within-subjects design, which is helpful for small-scale studies as it reduces variability between participants. It was assessed over 16 weeks, comprising a 6-week control period (weeks 1–6), a 6-week treatment phase (weeks 7–12) and a post-treatment follow-up 4 weeks after the last treatment (week 16). Participants' personal information was held securely and the data anonymised.

The instrument used throughout the study was the Pain Outcomes Questionnaire (short form) (POQ) (Appendix 8) (Clark and Gironda, n.d.), chosen because it includes questions covering a range of wellbeing categories (see Table 2).

Table 2: Categories evaluated by the POQ

Pain intensity	Vitality (activity and energy levels)
Impact of pain on mobility	Negative effect (emotional distress e.g. low self-esteem, anxiety, depression, and poor concentration associated with chronic pain)
Ability to undertake Activities of Daily Living (ADL)	Pain-related fear and fear avoidant behaviour

During weeks 1–6 the POQ was sent out weekly to establish the baseline for each participant. No treatment was provided.

During weeks 7–12 each participant attended a weekly in-person treatment (although due to illness, childcare issues and the therapist's attendance at a family funeral three participants had

2 weeks between two of their treatments). Within a clinical hour they received a 5-minute check-in, a 45-minute TJM clinical massage comprising grounding, hot stones, MFR, effleurage, acupressure and proprioceptive neuromuscular facilitation (PNF) stretching and were taught 10 minutes of self-care, to be practiced at home three times a week between treatments (Appendix 9).

The massage treatment was developed as a whole-body protocol (based on TJM Stress and Chronic Pain Protocol) rather than focused on specific areas, such as shoulders or lower back and was kept the same each week. The self-care exercises were changed every two weeks to provide progression and designed so that participants could continue to use them after the study. During this phase they were also asked to complete the POQ 5 days after each treatment (one participant did not complete the week 12 POQ).

At week 16 participants were again asked to complete the POQ to assess any longer term effects of the treatment. They were also asked to complete a feedback form (Appendix 10).

This study (hereinafter referred to as 'This Study') was devised and conducted in conjunction with Andrews (2026) and Janneman (2026). Each study used the same massage treatment, self-care, instrument and feedback form, although slightly differing participant inclusion criteria (see Table 3). The three studies together are referred to as the 'Combined Studies' and their results as the 'Combined Results' or 'Combined Data'.

Table 3: Combined Participants for Andrews (2026), Ells (2026) and Janneman (2026) and the basis upon which they were included in each study

Inclusion Criteria:	**hEDS**	**Classical EDS**	**HSD**	**Beighton score ≥ 5 (where no HSD/EDS diagnosis)**	**Beighton score ≥ 6 (where no HSD/EDS diagnosis)**	**Total**
Andrews	6	-	-	-	3	9
Ells	3	-	3	3	-	9
Janneman	5	1	4			10
TOTAL	**14**	**1**	**7**	**3**	**3**	**28**

RESULTS

Nine women completed This Study and positive improvements were made across all categories of the POQ (pain intensity, mobility, Activities of Daily Living (ADL), vitality, negative effect and fear). Improvement across all categories is also evident when combining these results with those of Andrews (2026) and Janneman (2026). Together the Combined Studies included a total of 28 women.

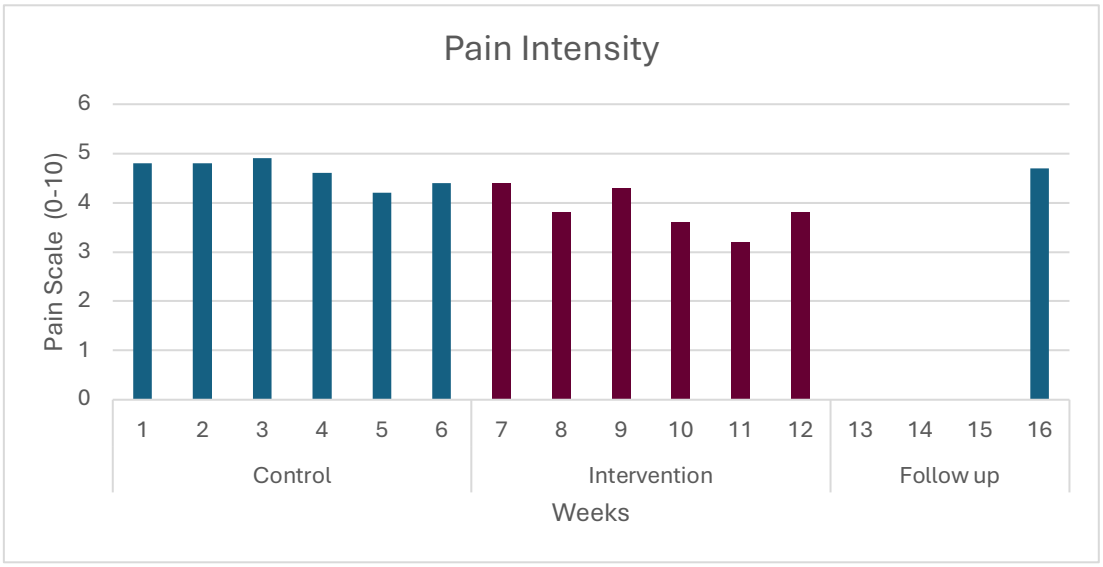

Figure 2: This Study: the effect of TJM on pain intensity

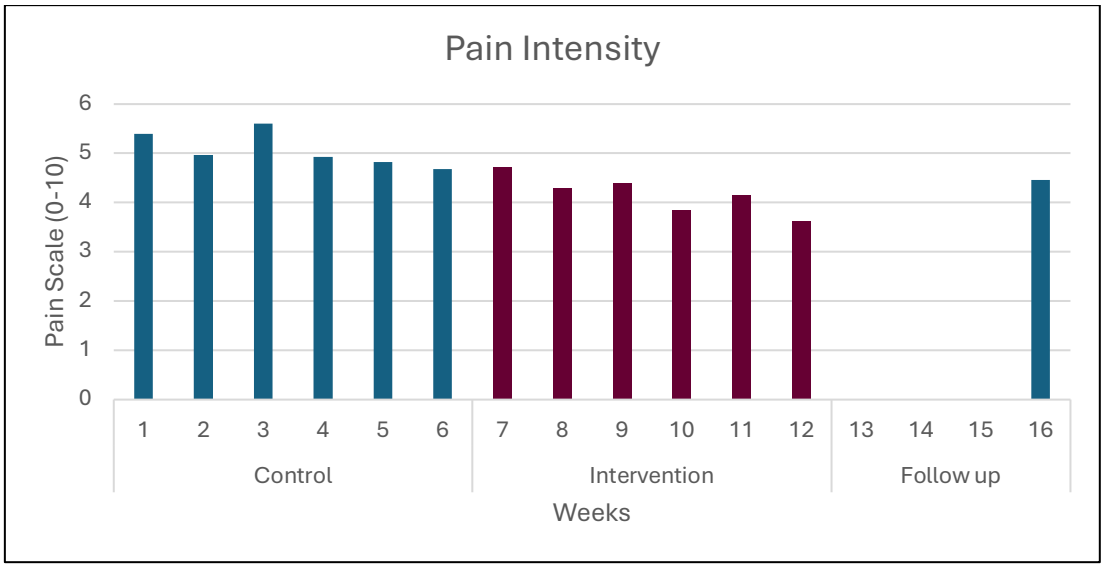

Figure 3: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on pain intensity

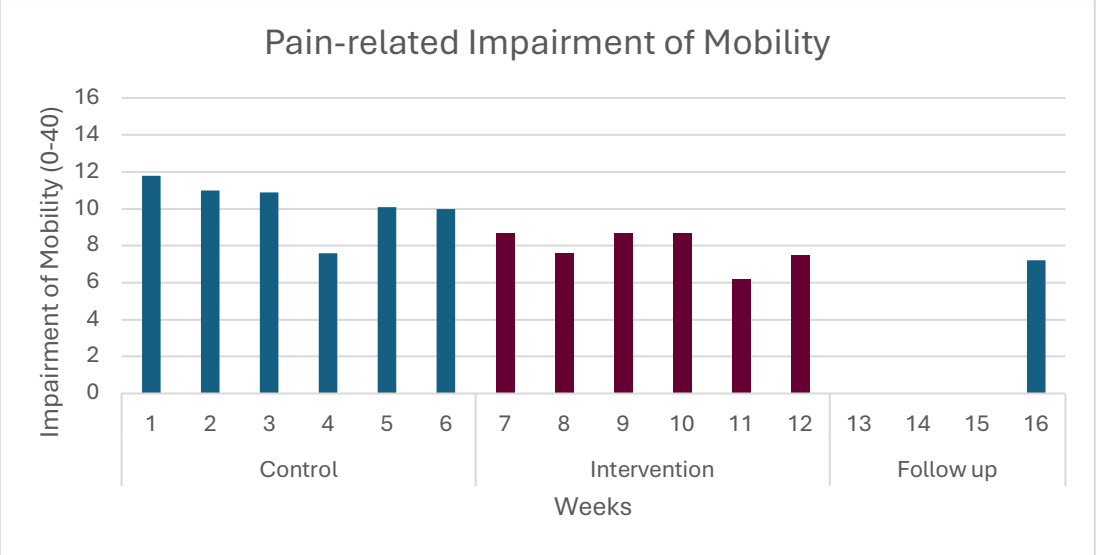

Figure 4: This Study: the effect of TJM on pain-related impairment in mobility

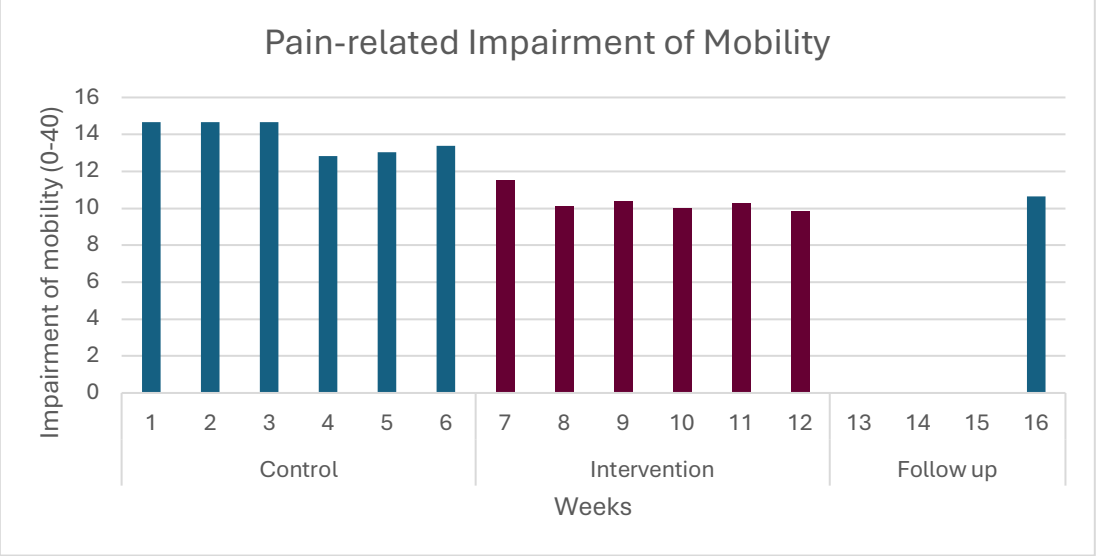

Figure 5: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on pain-related impairment in mobility

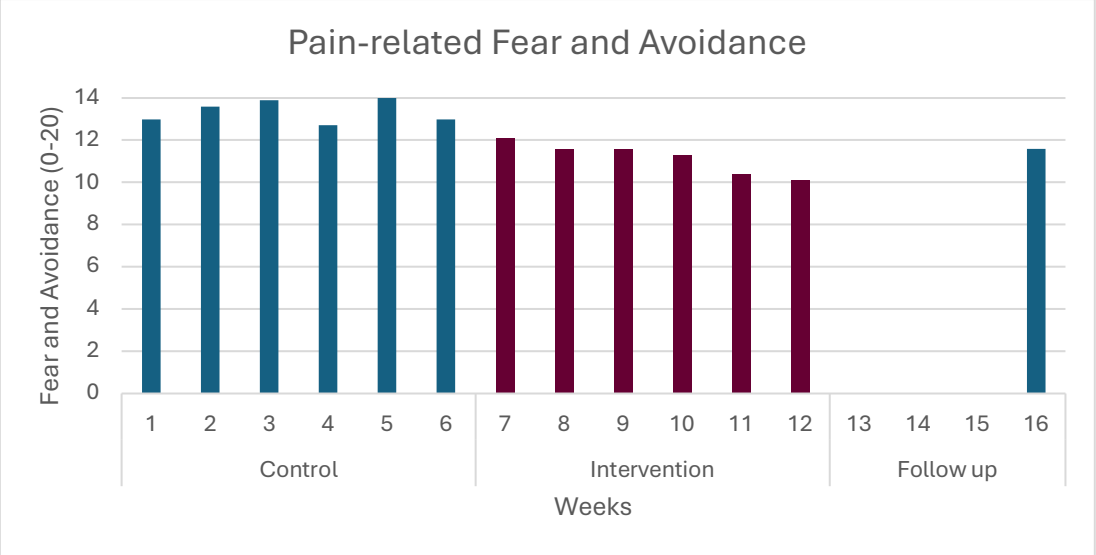

Figure 6: This Study: the effect of TJM on pain-related fear and avoidance

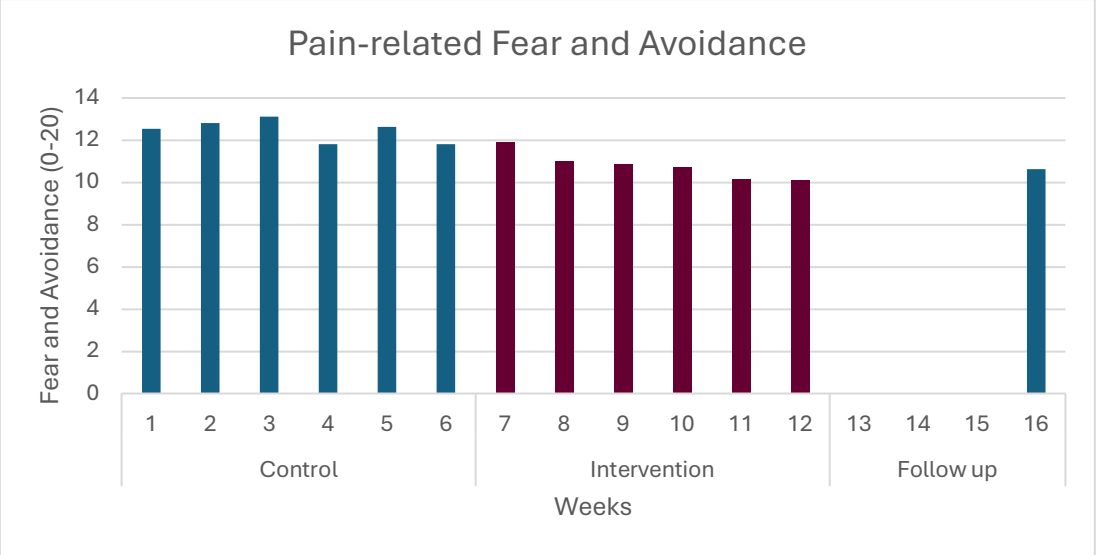

Figure 7: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on pain-related fear and avoidance

See Appendix 11 for results relating to total POQ scores, impairment in ADL, vitality and negative effect and the percentage reductions in POQ scores for all categories from week 1 to weeks 12 and 16.

DISCUSSION

Key Findings

The results of This Study support the hypothesis that TJM of advanced clinical massage could be effective in improving the wellbeing of women with joint hypermobility through combining hands-on treatment and teaching self-care. This is further supported when combining these results with those of Andrews (2026) and Janneman (2026). Data from This Study and the Combined Data four weeks after the intervention period suggest that wellbeing benefits were well maintained (or even improved) across all categories except pain intensity, for which the benefits had started to decline.

Pain intensity and flare-ups

While detailed research on the specific massage techniques most beneficial for management of HSD/hEDS is sparse, massage has been found to be one of the most useful CAM modalities for hypermobility (Song et al., 2020; Doyle and Halverson, 2022). A small-scale study by Drew (2024) found TJM to be effective in improving pain in people with joint hypermobility (although different inclusion criteria and instruments were used) and this is further evidenced by This Study, which found a 20.8% reduction in mean pain intensity between weeks 1 and 12 (with the Combined Results further supporting a reduction in pain).

Data from This Study and the Combined Data indicate that participants experienced fluctuations in pain during both the control and intervention phases. During This Study's intervention phase, increases in pain typically coincided with participants verbally reporting

illness, injury (through accident or overexertion) or high levels of stress in their personal or work lives or due to world events. This is consistent with Russek, Simmonds and Stott's (2019) finding that these types of events can prompt flares in some with HSD/hEDS.

Several participants did, however, report their belief that the treatments minimised the impact of these stressful events, reducing or preventing flare-ups in pain or subluxations when they would have expected them. We know alterations in the structure, function and regulation of fascia are a key factor in the pain, dysfunction and instability experienced by people with HSD/hEDS and chronic stress or psychological triggers can add to these changes (Wang and Stecco, 2021; Wang et al., 2023; 2025). The impact of stress on fascia more generally (without HSD/hEDS being present) is also reported in the literature (Barsotti et al., 2021). This would seem to add support to the participants' beliefs, particularly given TJM's multimodal approach, incorporating MFR (alongside a biopsychosocial approach, building therapeutic alliance, heat to activate the parasympathetic nervous system and acupressure points to promote calming and grounding). It is not possible to record this absence of an expected flare in the POQ, thus it is possible that This Study's results may not fully reflect the benefits participants experienced from treatment (which Participants have commented on in their feedback).

Feedback from participants of This Study at week 16 indicates that while from weeks 7 to 11 (when they were being asked about completion of their self-care at their next appointment) adherence to completing it three times a week was excellent, this dropped off after the last treatment, with most continuing to undertake self-care only once a week or not at all. This lack of continuation with self-care may partially explain the increase in pain reported at This Study's follow up, suggesting that regular follow up treatments alongside accountability to help prioritise self-care would be beneficial and this is supported by the literature. Şlicaru and

Cerchez (2023) found that to achieve longstanding results physical therapy (incorporating hands-on treatment and exercise) needs to be performed two or three times a week and become integral to patients' lives. Furthermore, Palmer et al. (2016) noted a need for continuous ongoing access to physiotherapy rather than the six sessions typically allocated via the National Health Service, highlighting the importance of ongoing 'maintenance' treatment. Providing online self-care sessions, which have been shown to improve wellbeing and pain (Birch, 2024; Russek et al., 2025; 2026; Wall, 2025) could be an accessible option to consider.

As there was no treatment at week 13, data regarding completion of week 12's self-care was not collected (which may have provided some insight into why This Study's week 12 results had declined compared with week 11). It would have been beneficial to include a question on self-care with the POQ to ensure week 12 self-care data was collected and provide accountability for completion that week.

Mobility and fear and avoidance

This Study found that pain-related impairment of mobility improved by 36.4% between weeks 1 and 12 (continuing to improve at week 16) and pain-related fear and avoidance had reduced by 22.3% by week 12 (although this had approximately halved at follow up). These improvements seem to correlate with the above-mentioned increase in pain levels at This Study's follow up.

A possible explanation could be that, with less impairment in mobility and less fear around movement, participants may have been moving more, creating the potential for increased pain. Indeed, a small number of participants did verbally report they had been able to take part in

recreational activities that they would not normally have done or had increased the intensity or duration of their usual exercise during the study. In some cases, this led to an increase in pain or injury but suggests their confidence to move may have increased.

The efficacy of TJM in improving mobility and reducing fear and avoidance is important given that long term, fear and avoidance of movement can lead to de-conditioning and create a cycle of increased pain and disability in those with hypermobility (Chuchin and Ornstein, 2024). Verbal feedback indicates that post intervention several participants of This Study are open to undertaking therapeutic exercise and the benefits of this are supported in the literature (Brittain et al., 2024; Russek et al., 2025). While therapeutic exercises were incorporated into the treatments and self-care, it may have been beneficial to introduce an isometric exercise.

It should be noted that the findings in This Study in relation to mobility and fear and avoidance and the willingness of the participants to engage in exercise may reflect the bias of the therapist, who has a strong background as a movement therapist and Pilates teacher.

The benefits of a global approach to treatment

Due to the multi-systemic nature of HSD/hEDS some literature recommends treating the body as a whole rather than focussing on individual acute issues (Palmer et al., 2016; Russek, Simmonds and Stott, 2019). TJM Stress and Chronic Pain Protocol was chosen because it takes a global whole-body approach to treatment, is gentle and nurturing, and focuses on calming the nervous system and central sensitisation rather than treating a specific joint or musculoskeletal issue. The global effects of affective touch and manipulation are also discussed by Desroches (2024) in her literature review of the role of massage in the treatment of chronic pain, which

found that it is possible to gain benefit from touching other areas of the body than the site of specific pain.

Although several studies advocate symptom-based treatment tailored to the individual, data from This Study and the Combined Data (which show improvement in total scores as well as all six categories of the POQ), does support the hypothesis that taking a global approach is beneficial in reducing pain in hypermobile joints (without treating the joints specifically). While the POQ does not track data around specific symptoms experienced by each participant, this hypothesis is further supported by participants' verbal reports that, for example, they had experienced improvements in knee pain, back pain, headaches/migraines, shoulder pain, endometriosis pain and sensitivity to synthetic fragrances, despite the treatment not directly addressing any of these specific issues.

Limitations and recommendations

Although studies evaluating the use of massage for the management of hypermobility/HSD/hEDS do exist, other than Drew (2024) who treated four hypermobile participants, they appear to be survey-based rather than conducted with hands-on intervention. Although with nine participants This Study is small, conducting it in conjunction with Andrews (2026) and Janneman (2026) brings the total participants to 28, making it more noteworthy. Importantly, it also brings evidence to an area for which there is almost no previous research. A larger sample size would provide a more comprehensive picture, perhaps by including more therapists or extending the recruitment period to allow time to attract more participants.

Although the Combined Studies included the same instrument, treatment, self-care and feedback form, This Study utilised the broadest inclusion criteria (including a Beighton Score of at least 5, as well as diagnoses of HSD/hEDS) in order to recruit the desired number of participants, resulting in a less homogenous group of participants. A more homogenous group could be achieved by using narrower inclusion criteria (and the same across all studies). As symptoms, complexity and severity can vary greatly between individuals (with some affected mildly and others more disabled) (Russek, Simmonds and Stott, 2019), it may also be useful for potential participants to complete the POQ during the recruitment process in order to select participants who are impacted by their condition to a more similar extent.

The POQ is a self-reporting tool and several participants commented that it did not allow them to adequately reflect the benefits they gained from the study, nor provide context around any flare-ups. Future studies could include a free form box with the POQ to allow recording of such data, providing additional context to results.

Given the systemic nature of hypermobility, the variability in symptoms (which can be influenced by many factors including stress levels, hormones, sleep quality and temperature) and the flare-ups and injuries that often accompany it, a longer study period may be beneficial. The timing of flare-ups or injuries (for instance, whether they happen during the control or intervention phase) may also impact results and lengthening the study would provide a more accurate understanding of how massage therapy and self-care may help manage symptoms. Even with just 6 weeks of intervention, however, This Study has demonstrated (and the Combined Studies support) that taking a multi-modal whole body approach (rather than treating individual joints or issues) could be effective in both relieving the wide-ranging

symptoms, and in reducing the frequency and/or severity of flare-ups associated with these systemic conditions.

Considering these positive findings, and the reported lack of understanding of how to treat HSD/hEDS, improving awareness and education around how appropriate massage therapy can assist in managing hypermobility symptoms would be beneficial. This could include:

- delivering talks to local support groups, such as those run by Ehlers-Danlos Support UK and the Hypermobility Syndromes Association;
- collaborating with local training providers for Pilates instructors and personal trainers to run workshops for their students and approaching local gyms and Pilates studios about giving talks to their staff. These could highlight how massage can improve mobility and kinesiophobia, thus helping people with symptomatic hypermobility have positive experiences of exercise so they continue with it; and
- delivering talks to local physiotherapy and osteopathic clinics, and wellness networking groups comprising practitioners across a range of disciplines (including nutritionists and health coaches). This could develop into closer collaborations where relevant, such as speaking on podcasts, presenting to their clients or including massage in their client programmes.

It would also be beneficial to approach the Ehlers-Danlos Society, Ehlers-Danlos Support UK and the Hypermobility Syndromes Association to explore possible opportunities to collaborate. Discussions could include raising awareness regarding the upcoming publication of the new HSD/hEDS diagnostic criteria and whether they could provide funding and/or practical support to help facilitate a larger-scale research study. This might, for instance, include providing a small research grant to help enable a larger participant group, longer treatment and follow-up

phases and the inclusion of accountability or online sessions for self-care, as well as practical help with recruiting participants.

Having been conducted utilising hands-on massage treatments, This Study, together with those of Andrews (2026) and Janneman (2026), provides a unique and informative insight into how clinical massage therapy could be used to support those with symptomatic hypermobility (and how to approach massage with this population using a multi-modal methodology). It is hoped that other TJM therapists will build on the work of these studies in the future.

CONCLUSION

Data from This Study supports the efficacy of TJM as a treatment to improve the wellbeing of women with joint hypermobility, HSD and hEDS. This result is further supported when combined with those of Andrews (2026) and Janneman (2026).

As an actual hands-on massage therapy study rather than via survey alone, this appears to be a new area of research into the management of these conditions. The results, which have been produced by three independent therapists, show real promise and it is hoped that they will provide a foundation for future research. Expanding the study to a larger sample size would further validate these findings.

Raising awareness among the hypermobile community, as well as practitioners and exercise professionals working with hypermobile patients, around the supportive role that multi-modal massage therapy can play within a multidisciplinary approach to managing symptomatic hypermobility will also be important. Given the researcher's movement therapy background, the potential of massage therapy to help facilitate participation in therapeutic exercise by hypermobile patients who have anxiety around, or previous negative experiences of, exercising is of interest. This could also be a potential area of focus for future research.

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APPENDIX 1 - SIGNS AND SYMPTOMS OF HEDS AND HSD

Table 4: Signs and Symptoms of hEDS and HSD

Adapted from Russek, Simmonds and Stott (2019), with information from: Chopra et al. (2017); Malfait et al. (2017); Tinkle et al. (2017); Alsiri et al. (2020); Tinkle (2020); Baeza-Velasco (2021); Bennett et al (2021); Pearce et al. (2023); Chuchin and Ornstein (2024); Daylor et al. (2025) and Clarkson University (2025).

System Affected	Health Issues
Musculoskeletal	• Instability, frequent sprains, subluxations, dislocations • Chronic joint pain, osteoarthritis, temporomandibular joint dysfunction, foot dysfunction • Gait impairment • Scoliosis • Possible decreased bone density, although evidence for this is mixed, according to Tinkle et al (2017) • Tendinitis, bursitis, synovitis, tenosynovitis, fasciitis, tendon ruptures • Trigger points, muscle spasm, muscle strain, deconditioning • Some periodontal issues (although not to be confused with periodontal EDS which is early onset and involves widespread tooth loss), dental crowding or high/narrow palate
Autonomic	• Dysautonomia: Orthostatic Hypotension and/or Postural Orthostatic Tachycardia Syndrome (POTS) presenting with: tachycardia, dizziness, vertigo, presyncope/syncope, anxiety, chronic fatigue, sleep disorder, exercise intolerance, dependent edema, purpling skin, temperature dysregulation/heat intolerance, brain fog, trouble concentrating, trouble swallowing • Raynaud Syndrome
Cardiovascular	• Varicose veins • Mitral valve prolapse or aortic dilatation (not common) • Pelvic congestion syndrome • Median acuate ligament syndrome • Superior mesenteric artery syndrome • Dysautonomia, POTS
Neurological	• Motor delay (in children), developmental co-ordination disorder

	• Proprioceptive, interoceptive and motor control deficits leading to clumsiness, poor balance, frequent falls, trips or bumping into things • Fibromyalgia/central sensitisation, hyperalgesia • Headaches, migraines, dizziness • Cervico-medullary syndrome/myelopathy • Chiari malformation, Tarlov cysts, cerebrospinal fluid (CSF) leaks, idiopathic intracranial hypertension • Paraesthesias and nerve compression disorders, tethered cord • Restless leg syndrome • Pseudo-seizures, syncope • Central sensitisation • Resistance to anaesthesia (including shortened effect, insufficient pain control)
Neurodevelopmental, Cognitive and Mental Health	• Motor delay (in children), developmental co-ordination disorder • Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Tourette Syndrome • Interoceptive disorders • Anxiety and panic disorder • Fear of movement, kinesiophobia, pain catastrophising • Memory, concentration or processing problems, brain fog • Depression • Medical Post-Traumatic Stress Disorder (PTSD)
Gastrointestinal	• Gastroesophageal reflux disease **(**GORD), Irritable bowel syndrome (IBS), constipation or diarrhoea, nausea/vomiting, bloating, abdominal pain, gastroparesis, food sensitivities • Gastroesophageal reflux, chronic gastritis, heartburn • Prolapsed rectum, diverticulitis, colitis • Hernias (all types)
Urogenital and gynaecological	• Urinary incontinence • Prolapsed bladder or uterus • Pelvic floor disorders • Urinary tract infections • Interstitial cystitis • Dysmenorrhea, endometriosis, adenomyosis, vulvodynia, pelvic pain, painful intercourse • Pregnancy complications – higher incidence of: pre-eclampsia, eclampsia, pre-term births, pre-term rupture of membranes, ante/post-partum haemorrhage, hyperemesis gravidarum, shoulder dystocia, caesarean wound infection, postpartum psychosis, PTSD, precipitate labour

Immune	• Mast Cell Activation Syndrome (MCAS): hives, flushing, chemical and environmental sensitivities, medication and food sensitivities, fatigue, trouble concentrating, migratory pain, excessive inflammatory response, anxiety
Dermatological and Haematological	• Hyperextensible and fragile skin • Slow healing or scarring, poor wound healing, excessive bleeding • Easy bruising • Piezogenic papules • MCAS skin issues • Excessive menstrual bleeding, Gastrointestinal bleeding, haematomas, haemarthroses
Respiratory	• Costochondritis • Slipping ribs • Dysfunctional breathing, asthma, vocal cord dysfunction • Pectus excavatum
Visual	• Ocular disorders, including astigmatism, myopia, hyperopia • Light sensitivity, visual disturbances, dry eyes, double vision
Non-System	• Insomnia, sleep disturbance, debilitating chronic fatigue

APPENDIX 2 – CURRENT DIAGNOSTIC CRITERIA FOR JOINT HYPERMOBILITY, HSD AND HEDS

Joint hypermobility

Joint hypermobility is currently assessed using the age and gender specific Beighton Score, with its nine point scoring system (Figure 8).

Figure 8: Beighton Score infographic (included with kind permission from The Ehlers-Danlos Society) (The Ehlers-Danlos Society, 2025a)

However, the validity of the Beighton Score as a measure of true generalised joint hypermobility has been criticised due to its focus on the upper limbs and single plane of motion as well as its exclusion of many major joints (such as the shoulders, hips and ankles), which could potentially lead to diagnoses being missed (Singh et al., 2017; Malek, Reinhold and Pearce, 2021; Daylor et al., 2025).

In addition, a 5 part questionnaire was designed by Hakim and Grahame in 2003 (Hakim and Grahame, 2003) as a quick alternative to the Beighton Score for determining joint hypermobility. Answering yes to two or more of the following questions predicts a Beighton Score of 4 (the lowest threshold for joint hypermobility) or more (The Ehlers-Danlos Society, 2025a).

1. Can you now [or could you ever] place your hands flat on the floor without bending your knees
2. As a child, did you amuse your friends by contorting your body into strange shapes or could you do the splits
3. Can you now [or could you ever] bend your thumb to touch your forearm
4. As a child or teenager, did your kneecap or shoulder dislocate on more than one occasion
5. Do you consider yourself "double-jointed"?

HSD

HSD is diagnosed through a combination of physical examination and a review of the patient's medical history for symptoms. To be given a diagnosis of HSD they must have symptomatic joint hypermobility AND the following must also be ruled out:

- other connective tissue disorders (including hEDS, other EDS types and Marfans Syndrome);
- autoimmune conditions (such as rheumatoid arthritis);
- chromosomal conditions (such as Downs Syndrome); and
- neuromuscular conditions (such as Multiple Sclerosis).

HSD can only be diagnosed in the absence of any other explanation for symptoms (The Ehlers-Danlos Society, 2025d).

hEDS

hEDS is diagnosed clinically via a combination of:

- a positive Beighton Score (denoting generalised joint hypermobility);
- the presence of two or more of the following:
    - indications of systemic conditions associated with general connective tissue disorders (the requirement is to meet 5 of a list of 12 indications);
    - a close family history of hEDS; and/or
    - at least one of several musculoskeletal complications; and
- exclusion of other types of EDS, other types of connective tissue disorders or alternative diagnoses for their joint hypermobility (Malfait et al., 2017).

A checklist used by doctors to diagnose hEDS is included at Figure 9.

The International Consortium on Ehlers-Danlos Syndromes & Related Disorders
In Association with The Ehlers-Danlos Society

Diagnostic Criteria for Hypermobile Ehlers-Danlos Syndrome (hEDS)

This diagnostic checklist is for doctors across all disciplines to be able to diagnose EDS

Distributed by The Ehlers Danlos Society.

Patient name: _____ DOB: _____ DOV: _____ Evaluator: _____

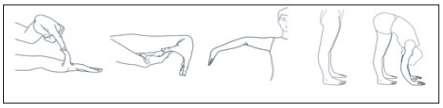
The clinical diagnosis of hypermobile EDS needs the simultaneous presence of all criteria, 1 ***and*** 2 ***and*** 3.

CRITERION 1 – Generalized Joint Hypermobility

One of the following selected:

- ☐ ≥6 pre-pubertal children and adolescents
- ☐ ≥5 pubertal men* and women* to age 50
- ☐ ≥4 men* and women* over the age of 50

Beighton Score: _____/9



If Beighton Score is one point below age- and sex-specific cut off, two or more of the following must also be selected to meet criterion:

- ☐ Can you now (or could you ever) place your hands flat on the floor without bending your knees?
- ☐ Can you now (or could you ever) bend your thumb to touch your forearm?
- ☐ As a child, did you amuse your friends by contorting your body into strange shapes or could you do the splits?
- ☐ As a child or teenager, did your shoulder or kneecap dislocate on more than one occasion?
- ☐ Do you consider yourself "double jointed"?

CRITERION 2 – Two or more of the following features (A, B, or C) must be present

Feature A (five must be present)

- ☐ Unusually soft or velvety skin
- ☐ Mild skin hyperextensibility
- ☐ Unexplained striae distensae or rubae at the back, groins, thighs, breasts and/or abdomen in adolescents, men or pre-pubertal women without a history of significant gain or loss of body fat or weight
- ☐ Bilateral piezogenic papules of the heel
- ☐ Recurrent or multiple abdominal hernia(s)
- ☐ Atrophic scarring involving at least two sites and without the formation of truly papyraceous and/or hemosideric scars as seen in classical EDS
- ☐ Pelvic floor, rectal, and/or uterine prolapse in children, men or nulliparous women without a history of morbid obesity or other known predisposing medical condition
- ☐ Dental crowding and high or narrow palate
- ☐ Arachnodactyly, as defined in one or more of the following:
  (i) positive wrist sign (Walker sign) on both sides, (ii) positive thumb sign (Steinberg sign) on both sides
- ☐ Arm span-to-height ratio ≥1.05
- ☐ Mitral valve prolapse (MVP) mild or greater based on strict echocardiographic criteria
- ☐ Aortic root dilatation with Z-score >+2

Feature A total: _____/12

Feature B

- ☐ Positive family history; one or more first-degree relatives independently meeting the current criteria for hEDS

Feature C (must have at least one)

- ☐ Musculoskeletal pain in two or more limbs, recurring daily for at least 3 months
- ☐ Chronic, widespread pain for ≥3 months
- ☐ Recurrent joint dislocations or frank joint instability, in the absence of trauma

CRITERION 3 - All of the following prerequisites MUST be met

1. Absence of unusual skin fragility, which should prompt consideration of other types of EDS
2. Exclusion of other heritable and acquired connective tissue disorders, including autoimmune rheumatologic conditions. In patients with an acquired CTD (*e.g.* Lupus, Rheumatoid Arthritis, etc.), additional diagnosis of hEDS requires meeting both Features A and B of Criterion 2. Feature C of Criterion 2 (chronic pain and/or instability) cannot be counted toward a diagnosis of hEDS in this situation.
3. Exclusion of alternative diagnoses that may also include joint hypermobility by means of hypotonia and/or connective tissue laxity. Alternative diagnoses and diagnostic categories include, but are not limited to, neuromuscular disorders (*e.g.* Bethlem myopathy), other hereditary disorders of the connective tissue (e.g. other types of EDS, Loeys-Dietz syndrome, Marfan syndrome), and skeletal dysplasias (*e.g.* osteogenesis imperfecta). Exclusion of these considerations may be based upon history, physical examination, and/or molecular genetic testing, as indicated.

Diagnosis: _____

*Sex assigned at birth. Currently, we do not have data to provide specific additional guidance to individuals on changes in joint hypermobility following treatments that alter sex hormone levels.

v9

Figure 9: Diagnostic checklist used by doctors to diagnose hEDS (included with kind permission from The Ehlers-Danlos Society) (The Ehlers-Danlos Society, 2025b)

APPENDIX 3 – EXAMPLES OF NEGATIVE EXPERIENCES REPORTED BY PATIENTS DURING THE PROCESS OF BEING DIAGNOSED OR TREATED FOR HSD/HEDS

Examples of negative experiences reported by patients during the process of gaining a diagnosis of, or being treated for, HSD/hEDS include:

- delays in diagnosis;
- inappropriate treatment making them worse;
- unnecessary treatment/procedures;
- misdiagnosis;
- lack of empathy/support;
- disbelief about symptoms or accusations of making it up;
- being ignored, belittled or not taken seriously;
- having complaints trivialised;
- being told their symptoms are due to mental health issues; and
- accusations of family abuse.

(Berglund, Mattiasson and Randers, 2010; Kalisch et al., 2020; Halverson et al., 2021)

APPENDIX 4 – ETHICS FORM

	CHECKLIST OF INSTRUCTIONS FOR STUDENTS	✓
1	Complete Section 1 to Section 9	✓
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:	Beth Redfern
Student number:	RC84148
BTEC Year-group:	2024 - 2026
Date of application:	23/4/24
Student e-mail address:	bethcg@gmail.com
Title of research project:	Evaluating the Effects of the Jing Method™ on the wellbeing of women with joint hypermobility

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?	X	
If yes, does it involve children under 16?		X
If yes, does it involve children under 18?		X
Other vulnerable populations (i.e. mental illness, aged subjects)?		X
Does your project involve NHS patients, NHS staff or Local Authority Service Providers?		X
Are you planning to use deception?		X

Are you collecting sensitive personal data such as sexuality, mental health data, etc.? *In relation to POM questionnaire.*	X	
Does your study involve paying participants or an alternative incentive to participate		X
Could the study put you or someone else at risk of injury?		X
Does your project make use of a validated questionnaire?	X	
If yes, please specify the name of the validated questionnaire you are using and attach a copy here. Pain Outcomes Questionnaire (short form with 20 questions)		

Section 3: Research premises

Where is your research being undertaken? At my home clinic: Great Dunmow, Essex CM6 1SG.	
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?

- Advertising on my own Facebook, Instagram and LinkedIn accounts, as well as posting in local Facebook groups
- Advertising in Jeannie di Bon's hypermobility Facebook group (I have her permission), also on the Jing Facebook groups (Jing Hub and JAMMM)
- Advertising at 3 local networking groups I belong to and posting on their members' WhatsApp and Facebook groups. Also asking certain members with appropriate businesses to take flyers (a co-working space, a wellbeing clinic, a swimming business). Also placing adverts in the newsletters of these groups.
- Put posters or flyers up in local Tesco, local library, local community space, local hotel/bar.
- Promote through existing/former clients
- Word of mouth
- Other Pilates teachers I know

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.

- This study aims to evaluate the effects of the Jing Method ™ of clinical massage on the wellbeing of women with joint hypermobility.
- The study will use a 'within subjects' design.
- Participants will be recruited for the study using the methods set out in Section 4 above.
- All applicants will be required to complete an initial online questionnaire to assist in establishing their suitability to be a participant in the study.
- All chosen Participants will have a one to one online consultation to confirm their suitability (which, in the case of Participants who do not have an EDS/HSD diagnosis, will include checking their Beighton Score), explain the study (including expectations and dates) and gain their consent.
- Send out Participants Letter
- Participants then issued with the Pain Outcomes Questionnaire (short form) to be completed in Weeks 1 – 12 and week 16 of the study.
- Weeks 1 – 6 of the study there will be no intervention, however Participants will be required to complete the Pain Outcomes Questionnaire on a weekly basis to obtain the baseline of their level of wellbeing.
- Week 7 – 12 of the study will be the intervention period:
    - Within a clinical hour, the participants will receive a 45 minute clinical massage once a week at my home clinic using the Jing Method ™ Stress and Chronic Pain Protocol (see Massage Fusion, pp. 355 – 369). This protocol will be used each week for the 6 weeks, comprising grounding, hot stones, indirect and direct myofascial release, effleurage, acupressure, PNF stretching and teaching. There will be relaxation music playing during the treatment.
    - Participants will be given 10 minutes of self-care to be completed 3 times between their weekly treatments (instructions and videos for these will be issued at weeks 7, 9 and 11 and each lot of self-care will be completed for a 2 week period). Week 7 self-care will comprise breathwork only, Week 9 self-care will comprise breathwork and an isometric exercise and Week 11 self-care will

comprise breathwork and a proprioceptive exercise. Each time the breathwork exercise will be changed. They will be asked at their next treatment how many times they have completed the self-care (as I will be recording their compliance). The remaining time will be spent checking in with the Participant.
    - They will also be asked to complete the Pain Outcomes Questionnaire (short form) 6 days after each treatment and return it within 24 hrs and before the next treatment.
    - Details of the treatment and the self-care will be included as an appendix to the study
- Week 16 Participants will be asked to complete the Pain Outcomes Questionnaire (short form, to assess the long-term effects post treatment) and a study feedback form.

Section 6: Describe what your participants need to do

Participants will need to:

- Contact me to confirm they are interested in the study and provide basic contact details.
- Complete the online questionnaire so I can assess their suitability for the study.
- Attend a one to one 30-minute online consultation, including completing my usual client intake form. This will include gathering information on their lifestyle and health history, as well as any other treatments/physical exercise they may be undertaking during the study. For Participants who do not have an EDS/HSD diagnosis only, this will also include checking their Beighton Score. During this one to one the Participants will be given the opportunity to ask questions before committing to their involvement in the study.
- Complete the consent form for the study (should they wish to proceed).
- Inform me of any other relevant treatment they are receiving for their hypermobility throughout the duration of the study (aside from anything that is agreed at the outset of the study as part of the participant selection process).
- During weeks 1 – 6 they will need to complete the Pain Outcomes Questionnaire (short form) once a week.
- During weeks 7 – 12 they will need to attend a weekly standardized 45-minute Jing Method™ clinical massage treatment using the Jing Method™ Stress and Chronic Pain Protocol (specific details of which will be set out in the appendix of the study but - as noted above - will include grounding, hot stones, indirect and direct myofascial release, effleurage, acupressure, PNF stretching and teaching).
- During weeks 7 – 12 they will also need to complete their self-care 3 times a week (with each set of self-care being completed for a 2 week period). Week 7 self-care will comprise breathwork, Week 9 will comprise breathwork and an isometric exercise and Week 11 will comprise breathwork and a proprioceptive exercise (each time the breathwork exercise will be changed). They will also need to complete the Pain Outcomes Questionnaire (short form) on day 6 after their massage and inform me as to how many times they completed the self-care during the week.
- At week 16 they will be required to complete a final Pain Outcomes Questionnaire (short form) and provide feedback on 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?

GDPR/confidentiality: all data will be held in accordance with GDPR (my Privacy Policy is displayed on my website and the link will be made available to them if they wish to view it), participants personal information will not be made available to anyone other than the researcher, all data will be password protected if stored on a computer and held in a locked filing cabinet if hard copy. Participants' data will be anonymised (Participants names will be replaced by numbers) and all study data will be deleted or destroyed on completion of the study.

Ethical issues: Participants will be fully informed of what is expected of the study (I will provide a participants letter detailing this), they will be given the opportunity to ask questions before committing to their involvement and a consent form will be completed by them prior to starting the study. Participants can withdraw at any point without any explanation.
I am a fully certified and insured therapist (and gym/Pilates instructor), with a Health and Safety Policy in place and up to date Emergency at Work first aid training. I have a first aid kit in the treatment room.
Should any trauma, mental or emotional issue arise (as these issues can arise for anyone at any point) I will use my usual approach of: taking a biopsychosocial approach during consultations and treatment; Green Cross Coding during treatments; behaving with sensitivity; and signposting to appropriate talk lines and/or therapists if relevant.

Section 8: Inclusion and exclusion criteria

What sort of people will the subjects be?
The study will include: symptomatic female adults who either have a diagnosis of EDS/HSD or score at least 5 on the Beighton scale.

The study will exclude:

- Men.
- Anyone under the age of 18.
- Women scoring less than 5 on the Beighton Scale who do not have an EDS/HSD diagnosis or who are not symptomatic.
- Women who are pregnant.
- Those who have had surgery in the last 8 months.
- Those who are intending to start any type of new intervention during the study period (unless discussed and agreed).
- Those with any ongoing medical issue outside of those associated with hypermobility, such as cancer (as the stress and treatment associated with this would impact the treatment).

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	

Student's handwritten signature:

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

Print Name: **EC Redfern** **Date:** **15/6/25**

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: ....27/5/25.....

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 5 – RESEARCH STUDY ADVERTISEMENT

HYPER-MOBILITY STUDY

Research participants wanted

JING ADVANCED CLINICAL MASSAGE THERAPIST

Beyond Pain Therapies

Do you suffer with hyper-mobility symptoms, such as painful joints, poor balance, or extreme fatigue?

Perhaps it is time to experience clinical massage!

SCAN ME

I am looking for women to take part in a 16 week scientific research study to assess the effects of the **Jing Method ™ of clinical massage** on the wellbeing of women with **joint hyper-mobility**.

WHO CAN JOIN?

Females, who are **aged 18 or over**, with **symptomatic joint hyper-mobility** (medical diagnosis not necessary).

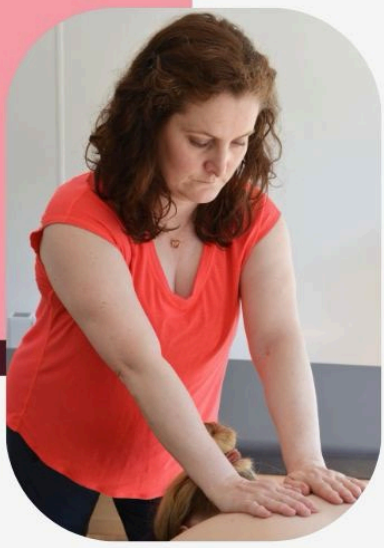
HOW TO JOIN?

To register your interest, and to determine eligibility, please use the **QR code** and submit a completed form.

WHAT WILL PARTICIPANTS BE ASKED TO DO?

- Complete weekly **questionnaires** relating to wellbeing,
- Attend **6 weeks** of weekly **massage treatment**,
- Practice brief **self-care techniques** at home.

Study starts in **July 2025**.
Treatments in **Great Dunmow, Essex**.
Over **60% discount in treatment cost** for participants.



Any questions?
Contact Beth at:
hello@beyondpaintherapies.com

APPENDIX 6 – ONLINE PRE-SCREENING QUESTIONNAIRE COMPLETED BY THOSE INTERESTED IN PARTICIPATING IN THE STUDY

Research study participants application form

Thank you for your interest in participating in my research study 'evaluating the effects of the Jing Method of clinical massage on the wellbeing of women with joint hypermobility'. Please complete the questions below (which will be used to determine your eligibility for inclusion in the study) and I will be in touch. If you have any queries about completing this form, please email beth@beyondpaintherapies.com. Thank you.

- Name
- Email
- Phone Number
- Please state your age
- Which gender were you assigned at birth?
- Are you pregnant, could you be pregnant or are you planning to start a family in 2025?
- Have you had surgery in the last 8 months?
- Do you have a formal diagnosis of Ehlers-Danlos Syndrome (EDS) or Hypermobility Spectrum Disorder (HSD) (please note that this is not necessary for inclusion in the study)
- If you answered Yes to the above, when were you diagnosed? What type of EDS do you have if not hEDS?
- Please look at the graphic regarding the Beighton scoring system. What is your score (note that for A, B C and D you score a point for each side)?

- Do any of the following apply to you (please tick all that apply):
    - Can you now [or could you ever] place your hands flat on the floor without bending your knees
    - As a child, did you amuse your friends by contorting your body into strange shapes or could you do the splits
    - Can you now [or could you ever] bend your thumb to touch your forearm
    - As a child or teenager, did your kneecap or shoulder dislocate on more than one occasion
    - Do you consider yourself “double-jointed”?
- Do you have any ongoing medical issues aside from those associated with hypermobility, EDS or HSD? If yes, please provide brief details of the medical issues (if you are able to):
- Are you intending to start any new type of treatment or intervention during the period of this study (likely to be July to October 2025, with the treatment phase running from September to

October). If yes, please provide brief details of what type of intervention or treatment you are considering.

- Are you available to attend weekly hands on treatments for 6 weeks commencing the week of 8 September 2025 and can you get to Great Dunmow, Essex?

- For information on the Privacy Policy of Beyond Pain Therapies (formerly known as Beth Redfern Pilates + Movement Therapy), please see: https://bethredfernpilates.co.uk/privacy-policy/

Thank you for your time.

Signature

APPENDIX 7 – PARTICIPANTS LETTER AND CONSENT FORM

Beyond Pain Therapies
[Address]

Tel: 07974 424059
e-mail: beth@beyondpaintherapies.com

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

www.jingmassage.com
01273 628942

Dear XXX,

Re: Research Study Evaluating the Effects of the Jing Method on the Welling of Women with Joint Hypermobility

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 have been a massage therapist since 2020 and I specialise in the treatment of chronic pain. In my clinic, I work mostly with individuals suffering with a range of chronic pain such as neck, shoulder, back, hip, knee and ankle pain as well as complex persistent pain conditions such as hypermobility and osteoarthritis.

In 2022, 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 Training, an industry leader in massage training for the last 20 years. The BTEC Level 6 is the highest level of education a massage therapist can achieve in the UK and 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 a clinical massage wellness programme. I have chosen to investigate the effects of the Jing Method™ of clinical massage on the wellbeing of women with joint hypermobility.

I am looking for people who are:

- Females over 18 years old;
- Experiencing symptoms associated with hypermobility – this includes those with a formal diagnosis of Hypermobility Spectrum Disorder or Ehlers-Danlos Syndrome but also those who do not have a diagnosis.

If you decide to participate in the study, it will begin around late July 2025. 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 anonymised.

What does the study involve?

We will have an initial one to one meeting on zoom to talk through the study. During this session I will gather your contact information, introduce you to the Beighton Score (which is used to assess joint hypermobility) and the Pain Outcomes Questionnaire (which I will be asking you to complete during the study). Once the study is fully explained to you, I will ask you to give your consent to take part.

The first 6 weeks will be about understanding your wellbeing. During this time, every Monday, you will fill in the questionnaire and send it to me via email. The questionnaire is made up of 20 questions and should take you no more than 5 minutes to complete. I will send you an email to remind you to complete it. Once all that data is gathered, we will move onto the in-person treatment phase.

For weeks 7 to 12 you will receive a 45 minute clinical massage treatment once a week at my clinic in Great Dunmow. I will also teach you a short routine of self-care exercises to be done at home 3 times a week. Each session will be an hour in total. During these 6 weeks you will continue to complete the Pain Outcomes Questionnaire 6 days after your treatment. I will continue to send you a reminder email and will also ask how many times you're performed the self-care routine.

In week 16 (4 weeks after the last hands on treatment) I will ask you to complete the Pain Outcomes Questionnaire for the final time. At the end of the study I will also ask you to provide some feedback in order to help any future research. This should only take you 5 minutes.

Are there any risks or benefits to taking part?

There is a small risk that you may feel some expected muscles soreness from completing the self-care exercises, but overall the hope is that you will experience a greater sense of wellbeing.

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 conference, where my colleagues and I will be presenting all our findings.

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

Cost

My treatments are usually priced at £70 - £75 per hour. However, I will be offering all 6 treatments as a package for £150, which can be paid in whole at the start of study or in 2 instalments of £75 at week 1 and week 7. I will be donating £25 from each package to the Ehlers-Danlos Society. These sessions are being offered to you at a significantly discounted

rate to reflect your invaluable contribution to the study and to acknowledge the time and feedback you provide to support the research.

Please feel free to get in touch with any questions you may have about the study.

Thank you again for considering this project, your participation will make a difference to your wellbeing and that of others living with hypermobility.

Yours sincerely,

Beth Redfern ACMT

PARTICIPANT CONSENT FORM

Title of study: Evaluating the Effects of the Jing Method on the Welling of Women with Joint Hypermobility

Name of student: Beth Redfern

	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: • At any time (until such date as this will no longer be possible, which is once all anonymised data has been merged) • Without giving a reason for withdrawing • That I am free to refuse to answer any question without saying why • 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 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 (including telephone number and e-mail address):

Beth Redfern
Tel no: 07974 424059
Email: beth@beyondpaintherapies.com

APPENDIX 8 – PAIN OUTCOMES QUESTIONNAIRE AND SCORING

PAIN OUTCOMES QUESTIONNAIRE (Short form)

Michael E. Clark, Ph.D. and Ronald J. Gironda, Ph.D.

James A. Haley Veterans Affairs Hospital, Tampa, Florida.

We ask that **all patients regardless of condition** complete the remainder of the questionnaire.

I. INSTRUCTIONS:

Please circle the number that best describes the question being asked.
Choose only 1 number per question.

1) Enter today's date: _____/_____/_____ (dd/mm/yyyy)

2) On a scale of 0 to 10, with 0 being no pain at all and 10 being the worst possible pain, how would you rate your pain on average during the **past week**?

←											→
No Pain	0	1	2	3	4	5	6	7	8	9	10	**Worst Possible Pain**

3) Does your pain interfere with your ability to walk?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

4) Does your pain interfere with your ability to carry/handle everyday objects such as a bag of groceries or books?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

5) Does your pain interfere with your ability to climb stairs?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

6) Does your pain require you to use a cane, walker, wheelchair, or other devices?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

7) Does your pain interfere with your ability to bathe yourself?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

8) Does your pain interfere with your ability to dress yourself?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

9) Does your pain interfere with your ability to use the bathroom?

←	→

Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

10) Does your pain interfere with your ability to manage your personal grooming (for example, combing your hair, brushing your teeth, etc.)?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

11) Does your pain affect your self-esteem or self-worth?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

12) How would you rate your physical activity?

←											→
Significant limitation in basic activities	0	1	2	3	4	5	6	7	8	9	10	**Can perform vigorous activities without limitation**

13) How would you rate your overall energy?

←											→
Totally worn out	0	1	2	3	4	5	6	7	8	9	10	**Most energy ever**

14) How would you rate your strength and endurance **today?**

←											→
Very poor	0	1	2	3	4	5	6	7	8	9	10	**Very high**

15) How would you rate your feelings of depression **today?**

←											→
Not at all depressed	0	1	2	3	4	5	6	7	8	9	10	**Extremely depressed**

16) How would you rate your feelings of anxiety **today?**

←											→
Not at all anxious	0	1	2	3	4	5	6	7	8	9	10	**Extremely anxious**

17) How much do you worry about re-injuring yourself if you are more active?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

18) How safe do you think it is for you to exercise?

←											→
Not safe at all	0	1	2	3	4	5	6	7	8	9	10	**Extremely safe**

19) Do you have problems concentrating on things **today?**

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

20) How often do you feel tense?

←											→
Not at all	0	1	2	3	4	5	6	7	8	9	10	**All the time**

(Clark and Gironda, n.d.)

Pain Outcomes Questionnaire: Short Form - Scoring Template

Pain:
Self-report of pain intensity
_____ Item 2

Mobility:
Self-report of pain-related impairment in mobility
_____ Item 3 + _____ Item 4 + _____ Item 5 + _____ Item 6 = _____ Total

Activities of Daily Living (ADL):
Self-report of pain-related impairment in completing ADLs.
_____ Item 7 + _____ Item 8 + _____ Item 9 + _____ Item 10 = _____ Total

Vitality:
Subjective sense of impairment in activity and energy levels.
30 – (_____ Item 12 + _____ Item 13 + _____ Item 14) = _____ Total

Negative Affect (NA):
Self-report of dysphoric affect and associated symptoms.
_____ Item 11 + _____ Item 15 + _____ Item 16 + _____ Item 19 + _____ Item 20 = _____ Total

Fear:
Pain-related fear and avoidance.
(10 - _____ Item 18) + _____ Item 17 = _____ Total

Total Score:
Sum of the five subscale scores.
_____ Total Score

POQ: Intake Inpatient Data (N=466)

%ile	Pain	ADL	Mobility	Vitality	NA	Fear	Total
1	3	0	0	8	1	0	31
10	5	0	12	14	11	4	60
25	6	1	19	18	19	10	77
50	7	8	28	22	29	12	97
75	8	18	35	25	37	16	121
90	9	28	40	28	44	18	138
99	10	40	40	30	50	20	170

POQ: Intake Outpatient Data (N=240)

%ile	Pain	ADL	Mobility	Vitality	NA	Fear	Total
1	2	0	0	2	0	0	2
10	5	0	12	14	8	5	51
25	6	1	18	17	15	10	71
50	7	7	25	21	27	13	97
75	8	21	35	24	36	17	120
90	9	29	39	28	42	19	145
99	10	40	40	30	50	20	173

CHRONIC PAIN REHABILITATION PROGRAM
Tampa, Florida
CARF and JCAHO Accredited

Revised 10/28/2003

(Chronic Pain Rehabilitation Program, 2003)

APPENDIX 9 – TREATMENT PROTOCOL AND SELF-CARE

Treatment Protocol

Prone (over drape)

- Grounding - hands on sacrum and scapula
- Deep grounding/relaxation - forearms either side of spine, sinking in, shifting weight
- Double palm erectors
- Back shu points (bladder channel)

Prone (undrape back)

- MFR - cross hand stretch to upper trapezius
- Lean in with forearms at upper trapezius
- MFR - cross hand stretch - sacrum and lumbar spine
- Lean in with forearms at lumbar area
- Single forearm effleurage to lumbar area from side of table x 3
- Power effleurage with hot stones x 3
- Deep forearm work to erectors from head of table x 3
- Tune in - hands on sacrum and shoulder blades

Supine

- Place hot stones on solar plexus and belly
- Hands on stones and tune in
- MFR pelvic transverse plane release (belly sandwich)
- MFR solar plexus transverse fascial plane release
- MFR fascial single leg pulls
- Bent knee hamstring PNF stretch – each side
- Ki 1 (Gushing Spring)
- Conception vessel
- Diaphragm – static compressions
- Strip intercostals – upper and lower ribs
- Deep work to posterior neck – distal to proximal
- CV 17 (Chest Centre)
- Shampooing head

- Pressure points across forehead
- Massage around jaw – medial to lateral
- GV 20 (Hundred Convergences)
- Still head hold

Self-Care

Each set of self-care exercises to take no longer than 10 minutes and performed 3 times per week.

Weeks 7 and 8

- Relaxation and breathwork, introducing lengthening of the exhale to activate parasympathetic nervous system. An audio recording was made during each participant's week 7 session and sent to them for their self-care, a summary of which is below.
    - Finding a comfortable position without any distractions, ideally lying supine with knees bent or a cushion/pillow under the knees, but if that is uncomfortable, lying on your side or sitting comfortably. Close your eyes if that feels good.
    - Bring your awareness to your breathing, noticing that you're breathing in and breathing out and how you know that you're breathing in and breathing out. Observe the breath moving in and out of your body.
    - Bring your awareness to your exhale. Every time you exhale allow your body to soften/melt/let go/surrender (whatever word resonates with you) into whatever you're lying on, to the extent that you can, with no judgement. Allow gravity to really do its job on you, so your bones naturally become heavier every time you breathe out.
    - Coming back to your inhale and your exhale for a moment. Breathe a little more slowly and a little more deeply. Without forcing anything, allow your exhale to become a little longer than your inhale. Again, no judgement with this, just allowing your exhale to lengthen a little. Continue for 2 minutes. Then wiggle your fingers and toes, open your eyes and bring your awareness back into the room.
- Self-treatment of acupressure point LI 4 (Union Valley/Great Eliminator) – 3 times per day (on the 3 days per week that the self-care is performed), holding for 12 seconds on each hand. Participants to choose when to do this.

Weeks 9 and 10

- Relaxation and Resonance Frequency breathing (5 minutes) to activate parasympathetic nervous system. An audio recording was made during each participant's week 9 session and sent to them for their self-care, a summary of which is below.
    - Finding a comfortable position without any distractions, ideally lying supine with knees bent or a cushion/pillow under the knees, but if that is uncomfortable, lying on your side or sitting comfortably. Close your eyes if that feels good.
    - Bring your awareness to your breathing, noticing that you're breathing in and breathing out and how you know that you're breathing in and breathing out. Observe the breath moving in and out of your body.
    - Bring your awareness to your exhale. Every time you exhale allow your body to soften/melt/let go/surrender (whatever word resonates with you) into whatever you're lying on, to the extent that you can, with no judgement. Allow gravity to really do its job on you, so your bones naturally become heavier every time you breathe out.
    - Coming back to your inhale and your exhale. Breathe a little more slowly and a little more deeply, allowing your exhale to become a little longer than your inhale. Start counting the length of your inhale and the length of your exhale. Again, no judgement with this. Ultimately we are aiming for an inhale of 4 and an exhale of 6, but 2/4 or 3/5 (or somewhere in between) is fine. Continue for 5 minutes. Then wiggle your fingers and toes, open your eyes and bring your awareness back into the room.
- Self-treatment of acupressure point LI 4 (Union Valley/Great Eliminator) – 3 times per day (on the 3 days per week that the self-care is performed), holding for 12 seconds on each hand. Participants to choose when to do this.
- Pelvic tilts – 8 repetitions
    - Lie supine with knees bent, arms by your side and feet flat on the floor hip distance apart
    - Inhale to prepare
    - Exhale and tuck your pelvis, rounding your low back towards the floor as if you were rolling a marble on your lower belly up towards your belly button
    - Inhale and tilt your pelvis, rolling the marble down towards your pubic bone

- If you feel any discomfort, reduce the range of movement, making the tuck and the tilt much smaller

Weeks 11 and 12

- Relaxation and Resonance Frequency breathing (7 minutes) to activate parasympathetic nervous system. An audio recording was made during each participant's week 11 session and sent to them for their self-care, a summary of which is below.
    - Finding a comfortable position without any distractions, ideally lying supine with knees bent or a cushion/pillow under the knees, but if that is uncomfortable, lying on your side or sitting comfortably. Close your eyes if that feels good.
    - Bring your awareness to your breathing, noticing that you're breathing in and breathing out and how you know that you're breathing in and breathing out. Observe the breath moving in and out of your body.
    - Bring your awareness to your exhale. Every time you exhale allow your body to soften/melt/let go/surrender (whatever word resonates with you) into whatever you're lying on, to the extent that you can, with no judgement. Allow gravity to really do its job on you, so your bones naturally become heavier every time you breathe out. You might notice that your body is able to relax more quickly now you've been practicing this for a few weeks.
    - Coming back to your inhale and your exhale. Breathe a little more slowly and a little more deeply, allowing your exhale to become a little longer than your inhale. Start counting the length of your inhale and the length of your exhale. Again, no judgement with this. Ultimately we are aiming for an inhale of 4 and an exhale of 6, but as before 2/4 or 3/5 is fine (notice if this has changed at all or become easier with your practice). Continue for 7 minutes. Then wiggle your fingers and toes, open your eyes and bring your awareness back into the room.
- Self-treatment of acupressure point LI 4 (Union Valley/Great Eliminator) – 3 times per day (on the 3 days per week that the self-care is performed), holding for 12 seconds on each hand. Participants to choose when to do this.
- Pelvic clock – 8 repetitions in each direction
    - Lie supine with knees bent, arms by your side and feet flat on the floor hip distance apart.
    - Imagine there is a clock on the back of your pelvis with 12 o'clock at the top of your sacrum, 6 o'clock at your tailbone and 3 and 9 o'clock at your hips.

- Roll the marble back towards 12 o'clock and then roll it around all the numbers on the clock (from 1 to 2 to 3 etc) until it comes back to 12, noticing whether any of the numbers feel sticky or stiff. Repeat 7 times seeing if you can smooth the circles out as you go. Keep breathing throughout (make sure you aren't holding your breath) and don't force anything.
- Repeat in the other direction (from 11 to 10 to 9 etc)
- If you feel any discomfort, reduce the range of movement or return to pelvic tilts.

APPENDIX 10 – FEEDBACK FORM AND RESPONSES

Why did you choose to take part in this study?	
P1	I am hypermobile and have had lots of issues my whole life. I have tried all sorts of physical therapies but I keep being in pain.
P2	I have known I was hypermobile since my late teens but didn't have any pain or issues from it until I had children. The pain has got worse since pregnancy, life getting busier and 9 years of no time for self care. When I saw the study I thought it would be a great opportunity to see a hypermobility specialist which is something I had been meaning to do for a while.
P3	Interested in the concepts of study and how it could positively impact my body and wellbeing.
P4	I really enjoy massages as I'm often in a lot of pain and I find they help me. I was also interested in contributing to research about how massages can help people with hypermobility. I find that it's a very broad diagnosis and it's often not treated at all.
P5	I'd not seen other forms of treatment for specifically Hypermobility pain advertised before and was curious to see whether it would make a difference to myself or not. I also wanted to support research surrounding Hypermobility so that hopefully it would be able to help other Hypermobile people in the future be able to manage their pain levels easier.
P6	I was interested to know if there was something out there that could help with my pain and was keen to learn more about the condition.
P7	Beth was recommended by a friend. This seemed the perfect introduction to this type of massage. As a member of a lay panel for Barts Health I regularly listen to project and study proposals. Beth presented and explained the study very well, clearly outlined study objectives the pros and cons. Was able to answer questions and was surprisingly knowledgeable about my multiple health conditions.
P8	Because I'd like to help others with hypermobility and the chance of cheaper sessions with Beth is too good to miss!
P9	I have hypermobility so wanted to know more about what the benefits might be, but also like to try treatments before I recommend to my own patients. Research is so important for a condition that has not be well understood and for the patients that live with it.

What did you find beneficial in the study?	
P1	It is very gentle and seems to dissolve the tension in my body which causes most of my issues and pain.
P2	The treatments were very relaxing and definitely reduced my tension. Being forced to take an hour just for me was very nice and contributed to feeling better.
P3	Found sessions themselves relaxing and did see improvement in pain particularly first 24 hours.
P4	I think because hypermobility is so broad and most people just see it as being very bendy, rather than the pain that it can cause on a day to day basis, it's not taken very seriously. I think the study helped me feel validated in how my pain affected me. I also do feel that it's been beneficial, I have less random aches and pains and more only when I've over exerted myself.
P5	The hands on treatment did noticeably alleviate some pain and the self care breath work help to maintain energy levels and manage pain during the week. It was also good to actually take the time to consider the impact of my pain on a daily basis and what i could do to try and manage that.
P6	I am not sure I appreciated quite how much I was benefiting from it during the study. A week or so after the sessions ended everything came back and I was reminded how I had felt prior to starting the study. Especially with my endometriosis, I had felt hardly any pain during the study. Sadly the pain has returned and the same with my headaches.
P7	An ability to try a different type of therapy. A chance to reflect on pain and lack of pain. It's very easy to focus on the fact there's pain, without considering the severity of the pain and what activities I was able to do.
P8	Revising breathwork, making time to do exercises at home because I didn't want to not do the homework! Relief of tension on bad days.
P9	Having a therapist that understood that symptoms vary and move body part from one week to the next, that you're not a difficult patient or just making up symptoms. Treatments were gentle

How did you find the self-care element? Have you continued with any of this following the last hands-on treatment?	
P1	I learned that in order to do exercise with less risk of getting injured you need to relax your muscles first. Mindfulness/bodyscans are an excellent tool to locate the tension and try to relax it. Yes I try to do it regularly.
P2	I had to prompt myself to remember to do it, setting alarms and leaving reminders next to the bed. I would say this was the biggest struggle. As a busy mum I always put myself last so this was always a last thing at night squeeze into the day thing!
P3	Didn't feel any benefit to the pressure point but did try to do the other relaxation aspects though I haven't continued with this due to time constraints.
P4	I found it quite helpful actually. Trying to do it enough times was difficult sometimes, but mainly due to finding the time but I found the acupressure point helped alleviate a headache. The breathing exercises helped me fall asleep on a number of occasions. I found the pelvic movements easy enough to do and it felt like a good stretch. I have used all of these since on a couple of occasions.
P5	The breath work was useful in taking the time to focus on looking after my body. I think the mid-length session was the most effective for me and the one I will continue to use. The acupressure points were easy to do and to fit into a day, however its hard to tell whether they had any extra effect on top of the hands-on treatment.
P6	I found it very helpful and relaxing especially at bedtime. I have dipped into it a bit but not as much as during the study.
P7	I was very excited by this aspect as someone who practises meditation. However personal circumstances, my father becoming severely ill and hospitalised meant I wasn’t able to do as much as I would have liked.
P8	I’ve done the self care element about once a week.
P9	Using the acupressure point on the hand was great, can easily and subtly be used in every day life. Have continued with this. Would benefit from the relaxation tasks, I just forget to do them.

From this experience, in what way/s do you think clinical massage could play a role for people living with hypermobility/HSD/EDS, if at all?	
P1	Helps to relieve tension in the muscles and tissue which will help with movement and prevent injury. It might also help to build muscles which will help to support the joints. I have chronic neck and shoulder tension and pain and get migraines. Exercise is the best way to support my spine and deal with stress however I quickly get injured which makes my symptoms worse. I feel like I am stuck in a vicious cycle. Massage seems to help to break the cycle to achieve long term improvement.
P2	I think it's extremely beneficial. For me the tension I hold is the source of all my pain and massage is really the only thing that helps.
P3	I think it could be useful addition in managing the condition especially if individualised.
P4	I think that it has helped with my pain levels, particularly in my back. I think it could be used to help treat people living with hypermobility etc to understand their bodies and manage pain. The stretching back muscles in particular felt like it helped.
P5	I think if carried out at regular intervals (dependent on the person), alongside possibly other movement or strengthening treatments, it could definitely help alleviate build ups of pain and tension for people with hypermobility etc.
P6	It definitely helps in terms of pain that I hadn't realised was there I think it's something you just live with. Knowing there is help is amazingly beneficial.
P7	Very important, a way to address pain without the reactions that traditional methods cause. For example my physio appointments were in the last year resulting in pain, headaches for days afterwards.
P8	I think it's definitely beneficial to relieve tension and helps with releasing areas that are overcompensating.
P9	I found my sleep was improved during the study period - less night awakening, which has increased again since I finished the study. It was gentle so reduced the anxiety about a treatment causing a flare in symptoms.

What have you gained/learned by taking part in this study?	
P1	You need a combination of ‘treatments’ and exercise to best support a hypermobile body. To break the vicious circle.
P2	I don’t spend enough time helping myself feel better and I need to come for more treatment!
P3	Benefit from sessions. Reminder of importance of self care.
P4	As I said, I've learned more about how hypermobility is a valid diagnosis that explains the pain I get, rather than I'm just bendy. That's helped me emotionally as I don't feel as 'lazy'. It's helped my pain levels and I don't feel as many unexplained pains.
P5	I have gained the knowledge of ways that i can help myself manage my pain as well as knowing that other forms of treatment are available.
P6	That there are options to help with pain. It doesn't have to be medical or taking painkillers all the time.
P7	The best result was for two days following a treatment I was able to tell people “I felt normal” no pain something I hadn’t felt for years.
P8	How much breathwork can help with my rib pain. A better understanding of how stress affects my hips!
P9	Regular input is important and I need to allocate more time to self care. I can now also share with patients the benefits that can be gained from this type of treatment.

Do you have any suggestions for improving this study in the future?	
P1	It is not a clinical study so life events impact the wellbeing of the participants. I had a number of very stressful situations which would normally have caused worse symptoms. The study really helped prevent this however that would not show in the questionnaire as the questions did not allow for this. If the questions can include this nuance you might get a more accurate result.
P2	No, I think it was very well run and I really enjoyed being part of it. Thank you very much.

P3	N/A
P4	I think it would've been good if the questionnaire had more space for notes or feedback as it didn't take into account things like when my son had surgery and I had to travel to London with him, I was very anxious and tense and I had more walking than normal to do, and that was reflected in my questionnaire but without reasoning.
P5	Maybe add in a notes box on the questionnaire at the end to self-report any specific pain changes or flare-ups etc that wouldn't otherwise be reflected in the general week overview as the questionnaire currently asks for an average pain score across the week.
P6	Not at all. I thoroughly enjoyed the sessions and really felt the benefits.
P7	I thought the questionnaire was at times generic. I was unable to differentiate between on going pain and an improvement in another pain'. Even a comments box to add additional comments or observations, one day with EDS is never the same.
P8	The questionnaire felt limited, I think I answered pretty much the same every week even though lots changed. It wasn't clear whether 'tense' was mental or physical. Maybe a diary where you can enter how you are each day would help so you're not trawling to remember what hurt when!
P9	Questionnaire was not sensitive enough to pick up changes in my symptoms. Although I struggle every day I am not significantly impaired by my fatigue and joint hypermobility e.g. I can perform all self care tasks., so those numbers will very rarely been above 1.

This is an opportunity to provide any general feedback you may have (eg. running and design of the study, symptom management it may offer, where it fits as part of hypermobility/HSD/EDS care more generally etc...)	
P1	Please continue the research as I truly believe it could be revolutionary for pain and symptom management for people with HSD/EDS/hypermobility
P2	I think, for me, it would fit well with a strengthening programme. Relaxation and massage is incredibly important for me for reducing tension, without regular massages from my husband I don't think I'd be able to function normally, and

	obviously your massage and treatment is a whole other level. I found that it reduced my headache frequency and also where scents would usually trigger a migraine, I was able to cope and not have an attack.
P3	N/A
P4	I just want to say thank you to Beth, you are so warm and welcoming and you made me feel comfortable from the get go. I am really pleased I got to do the study. I do feel more validated and understood and anything that helps me experience less pain which the study has, is a welcome experience! Thank you for researching this.
P5	I really enjoyed being a part of the study. I think the aims were well thought out and it was convenient to fit into my usual schedule/routine.
P6	The study proved to me that there are alternatives to pain killers and a different way to manage the effects. It would be wonderful if this could be more widely known. I wouldn't have found this out without being part of the study. More awareness of this condition can only be beneficial to the suffers.
P7	I think the study was very well designed and run. I had a small issue with the questionnaire as I don't think it was reflective of how much I got from the treatment. I ended up looking forward to the end of the programme so that I could have a more tailored treatment to deal with my problems areas more specifically.
P8	-
P9	Hopefully the results of the study will promote more discussion and highlight specific areas to focus future research.

APPENDIX 11 – POQ RESULTS FOR TOTAL SCORES, ADL, VITALITY AND NEGATIVE EFFECT AND PERCENTAGE REDUCTION IN POQ SCORES FOR ALL CATEGORIES

POQ Results

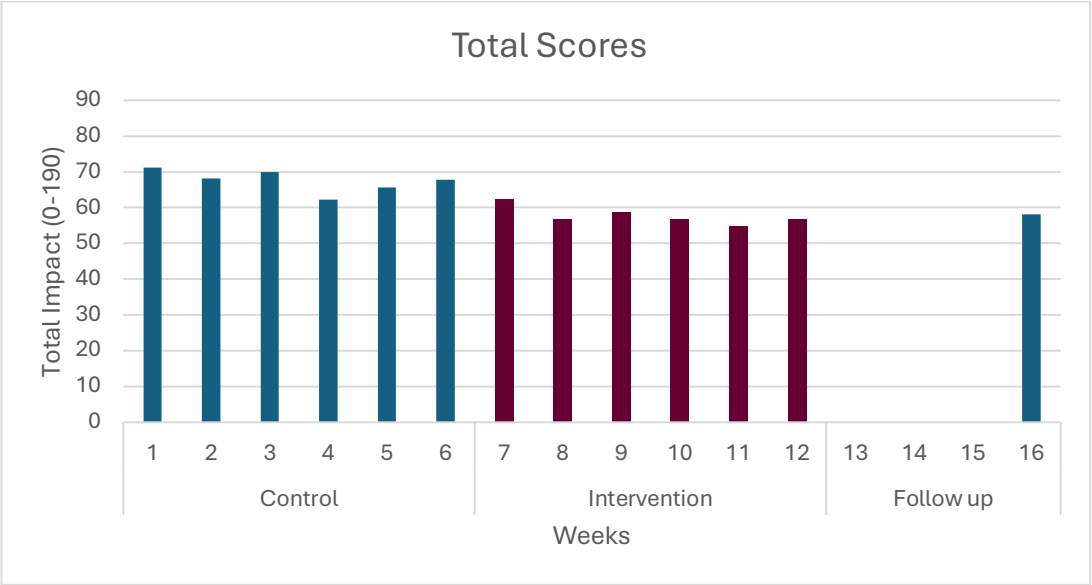


Figure 10: This study: the effect of TJM on POQ total scores

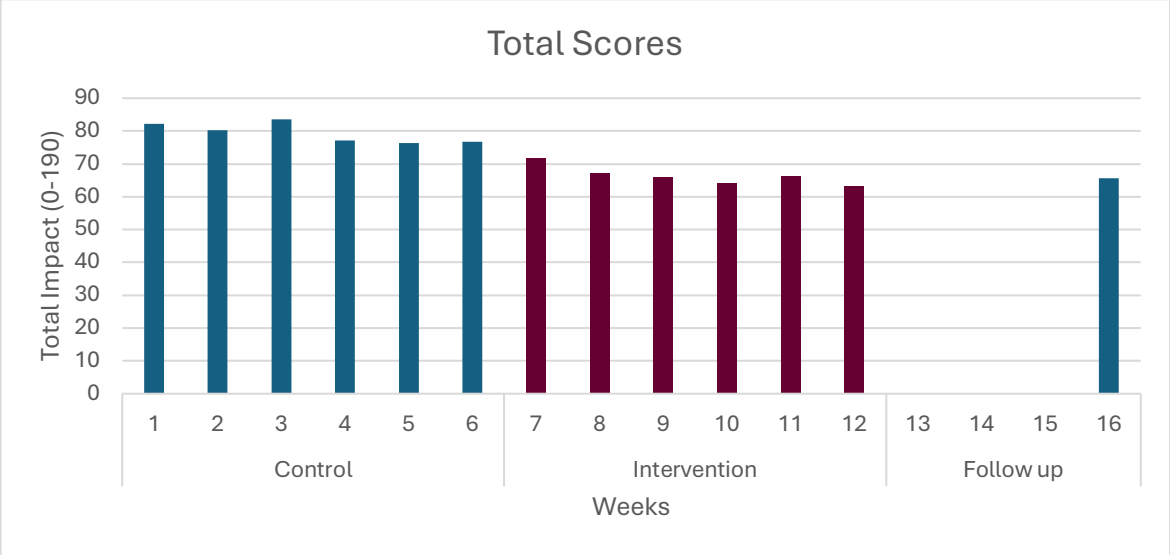


Figure 11: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on POQ total scores

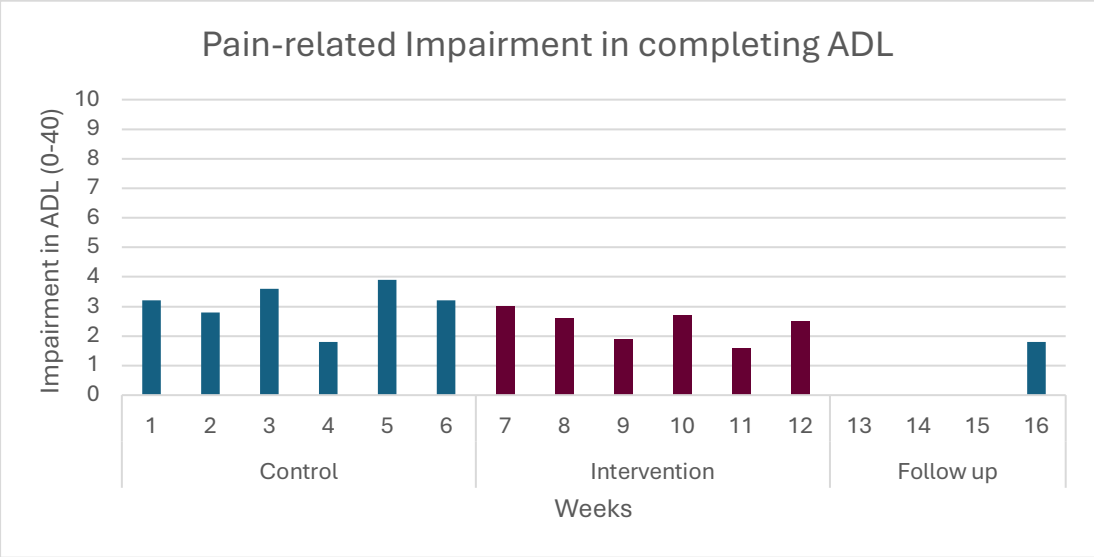


Figure 12: This study: the effect of TJM on pain-related impairment in completing ADL

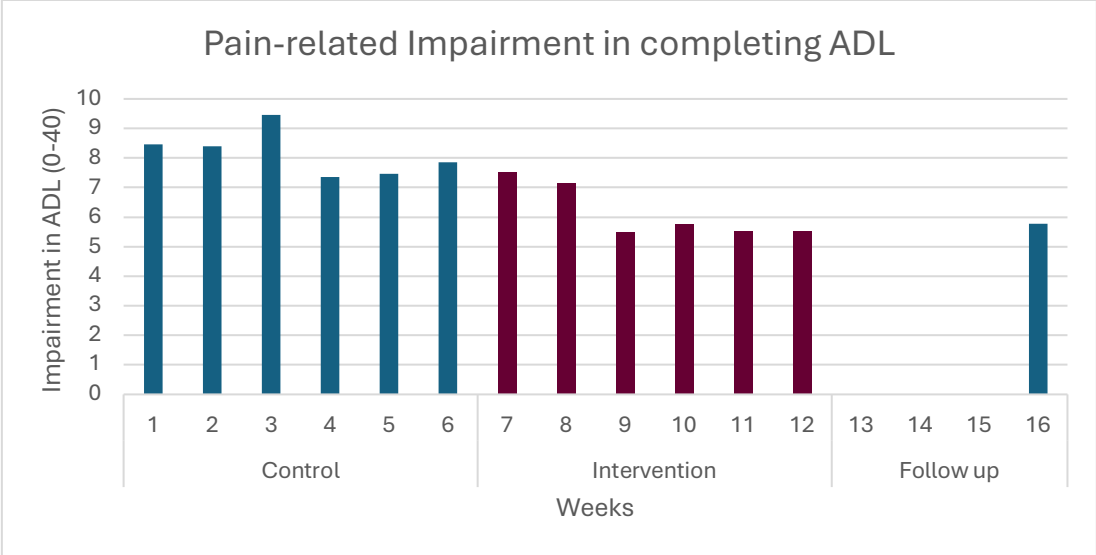


Figure 13: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on pain-related impairment in completing ADL

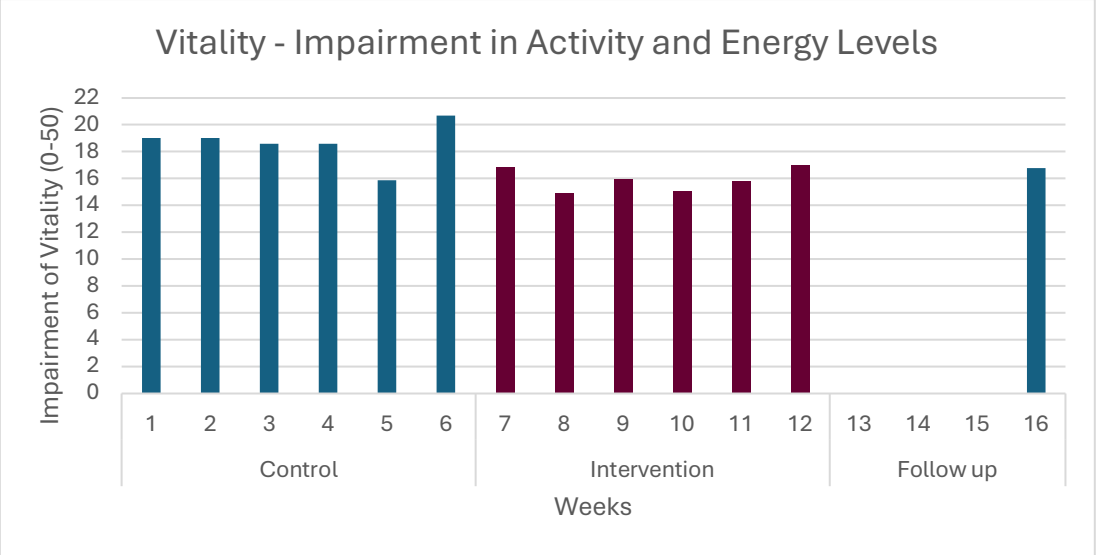


Figure 14: This study: the effect of TJM on vitality (activity and energy levels)

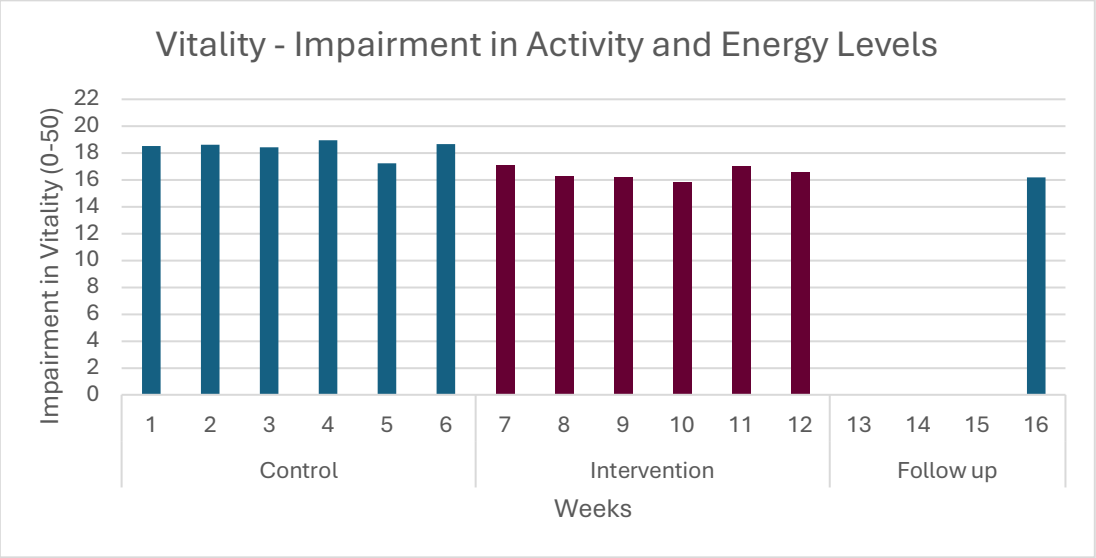


Figure 15: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on vitality (activity and energy levels)

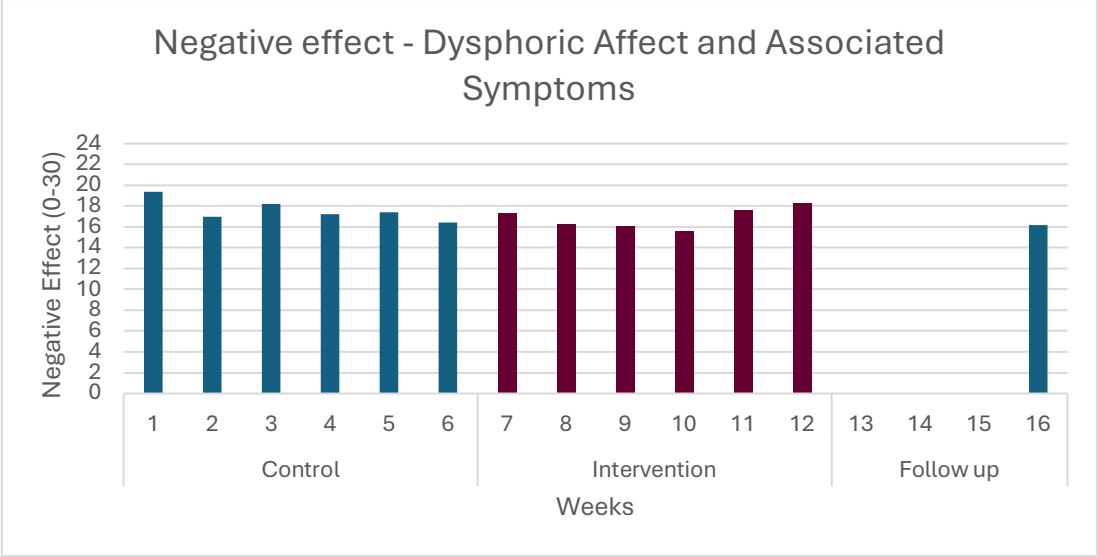


Figure 16: This study: the effect of TJM on negative effect (dysphoric and associated symptoms)

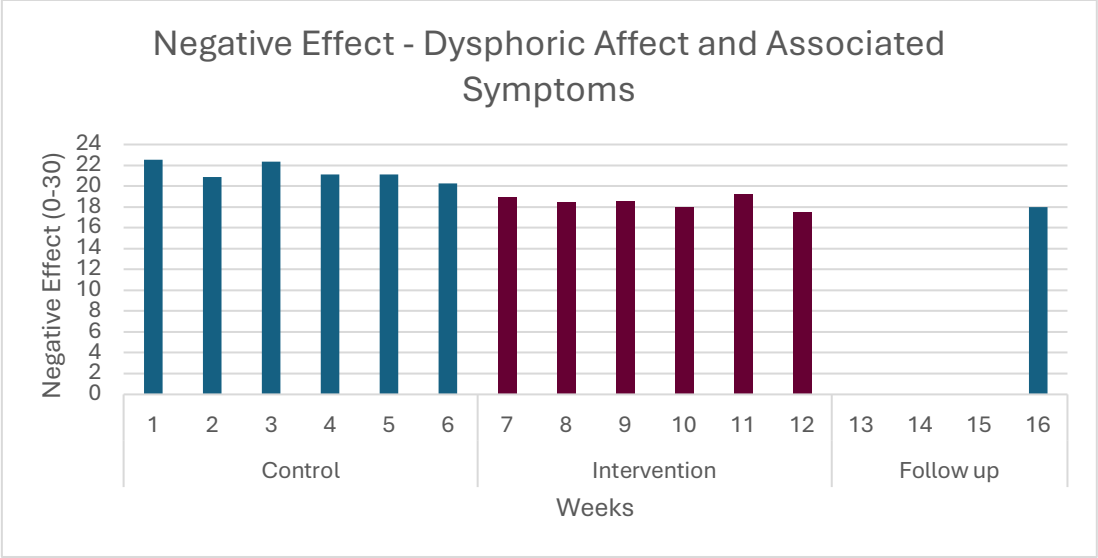


Figure 17: Combined Data for Andrews (2026), Ells (2026) and Janneman (2026) on the effect of TJM on negative effect (dysphoric and associated symptoms)

Percentage Reductions In POQ Scores For All Categories

Table 5: Reductions in POQ scores for all Categories for This Study and the Combined Studies of Andrews (2026), Ells (2026) and Janneman (2026) from weeks 1 to weeks 12 and 16

Category	This Study (% reduction from week 1)		Combined Studies (% reduction from week 1)	
	Week 12	Week 16	Week 12	Week 16
Pain intensity	20.8	2.1	32.7	17.2
Pain related impairment of mobility	36.4	39.0	32.9	27.5
Pain related impairment in completing ADL	21.9	43.8	34.8	31.6
Vitality – impairment in activity and energy levels	10.5	11.6	10.5	12.7
Negative effect – dysphoric affect and associated symptoms	5.7	16.5	22.1	20.3

Pain-related fear and avoidance	22.3	10.8	19.3	15.1
Total impact	20.1	18.3	23.0	20.0