

Evaluate the Effects of the Jing Method® Clinical Massage on the Quality of Life in Women aged 40+, diagnosed with Fibromyalgia

By Gail Dawe

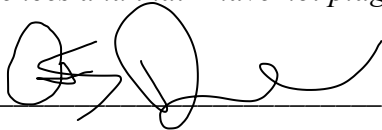
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Mrs Gail Dawe:  _____

Date: March 2024

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Mrs Gail Dawe:  _____

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ABSTRACT

Purpose

To evaluate the effects of a Jing Method ® clinical massage intervention on the quality of life in women aged 40+ diagnosed with fibromyalgia.

Method

The study was undertaken with six fibromyalgia participants, over a 12-week period.

Symptoms, function and overall impact were assessed weekly using the Fibromyalgia Impact Questionnaire Revised (FIQR) from weeks 1-6 without intervention to establish a baseline control. Participants underwent a clinical massage intervention using the Jing Method ® Chronic Pain and Stress protocol once a week from weeks 7-12. Each treatment lasted for 50 minutes and included heat, fascial work, mobilisations, some trigger point work, acupuncture and stretching.

Four stretches were given to each participant to be carried out each day at home – one for the cervical spine, shoulders, lumbar spine and hips. Symptoms, function and overall impact continued to be assessed weekly at weeks 7-12, six days after each treatment, using the same FIQR questionnaire and returned to the researcher prior to their next treatment. A further questionnaire was filled out six days after the final treatment and returned to the researcher.

Results

Upon analysing the scores of this study, it was discovered that participants' quality of life had improved based on their overall FIQR scores during the 6-week intervention period. 50% of participants acknowledged that they occasionally forgot to take their medication throughout the study period and were too busy to do their exercises at intervention. However, the result still indicated an improvement overall.

Conclusion

Participants reported better function, reduced symptoms, and an overall ability to achieve daily activities after a six-week intervention that included a fifty-minute specific chronic pain and stress treatment.

It is critical that the patient receives a prompt and precise diagnosis so that they can begin treatment. The best course of action appears to entail a combination of therapies, such as medication therapy, cognitive behavioural therapy and exercise therapy. The patient has to be educated about their diagnosis, available treatments, the function of combination therapy, the value of exercise, medication, and the nature of overlapping symptoms by the clinical team (Varrassi et al., 2023a).

TABLE OF CONTENTS

	Page
Acknowledgements.....	2
Abstract.....	3
List of Tables.....	6
List of Figures.....	7
List of Abbreviations.....	8
Introduction.....	9
Method.....	17
Results.....	20
Discussion.....	23
Conclusion.....	28
References.....	29
Appendix 1 – Research Ethics Form.....	34
Appendix 2 – Participant Consent Form.....	43
Appendix 3 – Fibromyalgia Impact Questionnaire Revised (FIQR).....	44
Appendix 4 – Jing: Stress and Chronic Pain Protocol.....	45
Appendix 5 – Stretches.....	46
Appendix 6 - Nociceptive-based Fibromyalgia Features (NFF).....	47

TABLES

	Page
TABLE 1 Mean Average Scores of the Group at Non-Intervention Weeks 1-6.....	20
TABLE 2 Mean Average Scores of the Group at Intervention Weeks 7-12.....	21
TABLE 3 Percentage Difference of Mean Average Group Scores between Pre and Post Intervention.....	22

FIGURES

Page

FIGURE 1 Graph Showing the Mean Average Overall Scores for the Group at Non- Intervention; Weeks 1-6.....	20
FIGURE 2 Graph Showing the Mean Average Overall Score for the Group at Intervention; Week 7-12.....	21
FIGURE 3 Graph Showing Comparative Average Scores between Pre and Post Intervention	22

ABBREVIATIONS

FM – Fibromyalgia

CWP – Chronic Widespread Pain

FIQR – Fibromyalgia Impact Questionnaire (Revised)

FIQ – Fibromyalgia Impact Questionnaire

NFF – Nociplastic-based Fibromyalgia Features

CBT – Cognitive Behavioural Therapy

CNS – Central Nervous System

FAS – Fibromyalgia Assessment Status

PDS – Polysymptomatic Distress Scale

NSAID – Non-Steroidal Anti-Inflammatory Drugs

BPS – Biopsychosocial

HFMAS – Heat; Fascia; Muscles; Acupressure; Stretches; Teach

INTRODUCTION

Fibromyalgia (FM) is a chronic idiopathic pain condition that affects muscles and joints. There is no obvious trigger but symptoms often begin following physical or emotional trauma. (Siracusa et al., 2021a).

Symptoms can include fatigue, widespread pain at multiple anatomical sites, extreme sensitivity, poor sleep quality and cognitive problems often referred to as brain-fog (Littlejohn, 2001). Patients often look well and the symptoms share similar pathophysiologic mechanisms that are found in other conditions, such as chronic fatigue and irritable bowel syndrome (Islam et al., 2022). Symptoms are characterised by medically unexplained fatigue, widespread sensitised pain pathways, autonomic dysfunction, stress and effort intolerance (Van Houdenhove and Luyten, 2008).

There are two types of fibromyalgia according to Bennett and Friend (2019). Primary fibromyalgia manifests from unknown causes with no associated underlying disorders, whereas secondary fibromyalgia can occur in patients with underlying rheumatic diseases.

Misdiagnosis, overdiagnosis, and underdiagnosis are frequent. Guidelines recommend a thorough clinical assessment in order to prevent this diagnostic problem. Every patient with chronic pain needs to be evaluated for chronic widespread pain (CWP), which is characterised by discomfort in four of the five body regions. After that, those with CWP should be examined for the existence of any other significant FM symptoms, such as exhaustion and restless nights. In order to confirm the diagnosis of FM, a thorough physical examination and medical history are required when evaluating a patient with CWP (Hauser et al., 2019)

It is uncommon for FM to occur on its own. Numerous individuals present with coexisting mental health issues or chronic pain concerns. Treatment planning and the expected course of

care for a certain patient can be influenced by an understanding of the severity of their FM (Siracusa et al., 2021b).

Fibromyalgia affects approximately 2% of the population in the United States alone and is more common in women than in men (Winslow et al., 2023). According to Amin et al. (2022), latest research has shown a deficiency in Serotonin resulting in an imbalance of Substance P which transmits pain messages to the brain. This strongly indicates that a central nervous system (CNS) dysfunction is primarily responsible for the increased pain sensitivity (Amin et al., 2022).

Clinical sensory-related, psychological, and psychophysical factors are interrelated, albeit in different clusters, according to research by Varol et al. suggesting an FM paradigm. They bolster the psychobiological processes that underlie FM's classification as a nociplastic disorder, with sensitisation playing a significant role. 'Nociplastic discomfort' is "pain that originates from altered nociception despite no clear evidence of actual or threatened tissue injury, or evidence for disease or lesion, triggering the activation of peripheral nociceptors of the somatosensory pathways resulting in pain" (Varol et al., 2023).

Fibromyalgia appears to have a significant negative impact on quality of life with pain intensity, depression and anxiety being the most relevant components (Campos & Rodriguez, 2012). This was shown by Bernard et al. (2000) who conducted a study showing different ratings of quality of life in fibromyalgia sufferers in the past and present. There was a significant decrease in quality of life carrying out basic day to day functions. Examples of this were climbing stairs, cleaning or preparing a meal. Bernard et al. (2000) also reported a lack of social support and the need for better educated health professionals around diagnosing fibromyalgia and the impact it can have.

Choy (2015) showed that poor sleep quality had a significant implication to quality of life in fibromyalgia sufferers. Sleep deprivation was found to exacerbate symptoms of fibromyalgia and increase pain, therefore carry a risk of developing widespread pain.

Interestingly, employment has also been shown to make a difference to women suffering with fibromyalgia. A study conducted by Reisine et al. (2004) showed that there were no differences in the mental components for women who were employed or unemployed. However, physical component scores differed significantly showing that unemployed women had worse physical health, relating to quality of life.

Treatments can vary between conventional medicine, in the form of anti-depressants, exercise programmes and relaxation techniques, and other alternative therapies like cognitive behavioural therapy (CBT) (Ughreja et al., 2021). Different medication is used to treat the many symptoms involved with fibromyalgia. Non-Steroidal-Anti-Inflammatory-Drugs (NSAID) painkillers are often used, but seldom work well for pain hypersensitivity linked with fibromyalgia, even though they can be effective for osteoarthritis and inflammatory arthritis symptoms (McDonagh et al., 2020).

Stronger opioid painkillers have previously been prescribed but have shown little benefit. They carry the risk of addiction and other negative health side-effects (Fitzcharles et al., 2011). Antidepressants are a common medication as they suppress the neurotransmitters involved with pain and depression in the brain. Not only do they assist with pain levels, they can also reduce sleep disturbances which can improve overall function. Duloxetine, milnacipran, pregabalin and amitriptyline are among the most common drugs used (Winslow et al., 2023).

In contrast, Thorpe et al (2018) found that other antidepressant medications may be of benefit by improving sleep patterns or lifting moods, but have shown little other significant value.

There is little evidence to support the use of these combined medications in the treatment of fibromyalgia (Thorpe et al., 2018).

Other treatments that have shown to benefit people with fibromyalgia are exercise and talking therapies like CBT and patient education (Winslow et al., 2023) and (Ughreja et al., 2021). These therapies can help make changes to improve quality of life and change thoughts and behaviours giving some very positive results. Regular exercise has been shown to help reduce pain and improve quality of life and can continue for the long term (Busch et al., 2011). Mind-body forms of exercise should be considered, like yoga or tai chi, as previous research has shown therapeutic benefits (Wang et al., 2010).

Statistics have shown that 90% of people with fibromyalgia also turn to complementary medicine to help manage their symptoms (Siracusa et al., 2021a). Research is limited regarding massage as a treatment for Fibromyalgia. Li et al (2014) indicated that there were short-term benefits particularly with reducing pain, anxiety, depression and sleep disturbances. However, these benefits do not appear to have many long-lasting effects (Li et al., 2014).

Another study conducted by Yuan et al (2015) aimed to evaluate the effectiveness of massage therapies like myofascial release which seemed to have a large, positive effect on pain levels, anxiety and depression at the end of a treatment. Other therapies used throughout this study consisted of Shiatsu, Swedish massage, connective tissue massage and manual lymphatic drainage. Shiatsu was seen to have the best results improving pain, pressure pain threshold, fatigue, sleep and quality of life. Swedish massage had no improvement outcomes at all. Manual lymphatic drainage and connective massage was seen to improve stiffness, depression and quality of life (Yuan et al., 2015).

A further study carried out by Ekici et al. (2009) analysed the effects of manual lymphatic drainage and connective tissue massage on women with primary fibromyalgia. The results showed short-term improvements in pain levels but manual lymphatic drainage was found to be more effective than connective tissue massage in morning tiredness, anxiety and the FIQ (Fibromyalgia Impact Questionnaire) total score. In conclusion, it was decided that longer-term follow-up studies were needed.

Flynn (2020) found that individual therapies had no consistent benefit so a multimodal approach is recommended. Massage and myofascial release showed a small improvement along with cognitive behavioural therapy, rehabilitation and exercise so patients are encouraged to engage in a variety of therapies.

Massage studies have been carried out to determine the effect on general well-being. Research has shown that massage is beneficial on various conditions including depression, behavioural disorders like autism, skin conditions and pain syndromes like fibromyalgia. Immune, autoimmune and ageing conditions have also been seen to benefit (Field, 2016).

Moderate pressure massage has been seen to have positive effects on parts of the brain responsible for stress and emotions; reducing depression, anxiety and lowering the heart rate (Field, 2014). For massage therapy to be effective, Field et al (2010) suggested that moderate pressure must be used so the pressure receptors are stimulated, which increases the vagal activity. This mediates the diverse benefits noted.

This could be contradictory as patients with fibromyalgia have shown that gentle techniques such as myofascial release, have still shown significant positive changes in their symptoms (Yuan et al., 2015). However, Nadal-Nicolas et al (2020a) discovered that 15 minutes of manual therapy using moderate pressure on the posterior cervical spine, showed a decrease in pain perception, muscle fatigue and tension caused by anxiety in fibromyalgia patients.

Another study conducted by Brattberg (1999) showed a decrease in symptoms of pain, depression and the use of analgesics, with positive effects on quality of life in fibromyalgia patients after 15 treatments of connective tissue massage. However, six months following treatments, 90% of symptoms had returned to their basic values.

The JING Method – what is it? In a nutshell, the JING Method is a multi-modal approach to massage therapy. It encompasses the use of hot and cold; fascia techniques, trigger point therapy, stretching and educating the client to help themselves (Fairweather and Mari, 2015).

The JING Method can be summarised as follows - HFMAST:

Heat – use of heat or cold; when it comes to chronic pain, heat is a very powerful treatment.

The best way to describe chronic pain is as dull, achy, or long-lasting discomfort that has lasted over the typical healing period following an injury. The benefits of heat in cases of chronic pain can be summed up as follows: psychological impacts; reduced trigger point activity and muscular tightness; improved circulation and shortened recovery times; enhanced fascia pliability; and decreased pain perception (Fairweather and Mari, 2015).

In the clinic, heat treatment greatly alleviates the inexplicable debilitating pain associated with fibromyalgia syndrome, and these patients are frequently avid users of hot stone massage, particularly in conjunction with fascia manipulation (Fairweather and Mari, 2015).

Fascia – fascia techniques; fascial work is the next phase in the HFMAST protocol after applying heat.

The fibrous soft tissue components of connective tissue, or fascia, is present throughout the body. Ligaments, tendons, brain meninges, nerves (epineurium), bones (periosteum), muscle fibres (endomysium), and muscle bundles (myofasciae) are all formed by fascia. These tissues are all linked together and can be viewed as a single fascial network.

Muscles – trigger point therapy; What is a trigger point in a muscle? Simons et al (1999) classifies a trigger point as: “A hyperirritable spot in skeletal muscle that is associated with a hypersensitive palpable nodule in a taut band. The spot is painful on compression and can give rise to characteristic referred pain, referred tenderness and autonomic phenomena.”

So, what are they? Although they resemble muscular knots, they are actually small areas of strongly contracted muscle; they are located in a palpably tense ring of skeletal muscle; trigger point pain has a distinct pattern that frequently results in discomfort in other body areas; other symptoms in the body, such as headaches and tinnitus, can also be caused by trigger points (Fairweather and Mari, 2015).

Acupressure – acupressure points; cleavages within fascial planes. According to Gach (1990), acupressure is "an ancient healing art that stimulates the body's self-curative abilities by using the fingers to press certain points on the body" (Lindquist et al., 2013).

Stretching – stretching techniques; numerous studies have demonstrated the effectiveness of stretching exercises in reducing the symptoms of FM. Stretching activities did not appear to have the same significant impact on reducing anxiety as aerobic exercise did. In comparison to a moderate-intensity aerobic exercise programme alone, stretching improved sleep quality, lessened the negative effects of fibromyalgia on quality of life, and decreased pain (Gomez-Hernandez et al., 2019).

Teaching – teaching the client to use self-help; the complementary therapy approach has always been centred around the importance of self-care. Complementary therapists held a fundamental conviction in holism long before the word "biopsychosocial" was established (Fairweather and Mari, 2015).

The JING Method encompasses the use of the biopsychosocial (BPS) model. This model demonstrates that health is made up of biological, psychological and social factors: "The

treating of the whole person, taking into account mental and social factors, rather than just the physical symptoms of a disease." According to the holistic approach, pain and illness can arise from an excess or deficiency of a number of elements because health is closely linked to constitutional equilibrium (Fairweather and Mari, 2015).

The BPS model was developed by George L. Engel in 1977. He believed that conventional medicine treated the mind and body of patients as separate entities, and only the biological factors of illnesses were accounted for (Bashmi et al., 2023). There was no room for psychological, social and other behavioural dimensions within the framework of biomedicine at that time (Engel, 1977).

Engel (1977) went on to evaluate the patients' suffering by placing value on the psychological and social factors combined with biological (physical) issues. Similarly, treatment was aimed at biological (medication & surgery), psychological (psychotherapy) and social interventions (Bashmi et al., 2023).

Hauser et al (2013) demonstrated that non-pharmaceutical, complementary therapies like some massage techniques and exercise should be provided to help patients diagnosed with fibromyalgia. Therapy techniques should be adapted to the severity of the condition (Hauser et al., 2013).

Hauser et al. (2013) also found that physical, somatic and psychological factors all overlapped in fibromyalgia patients and people suffering with widespread chronic pain.

In contrast, there was a study conducted by Skelly et al., (2018) that found non-invasive, non-pharmacological interventions showed a slight improvement in fibromyalgia. Massage, in particular, showed little or no improvement in pain levels but showed an improvement in function. This study revealed that multidisciplinary therapies like exercise, rehab and CBT all had slight to moderate improvements in chronic pain conditions.

This study will use the Jing Method ® Chronic Pain and Stress protocol, incorporating the ‘HFMAST’ techniques to determine if this can improve quality of life in women diagnosed with fibromyalgia aged over 40.

METHOD

Ethical approval was given by Jing Institute of Massage & Complementary Medicine (Appendix 1).

This study was undertaken with six fibromyalgia participants, over a 12-week period from mid-August to late October 2023.

Participants were recruited via pre-existing clients and friends. All participants attended a one-to-one telephone consultation to ask any questions about the study, complete the consent form to participate approved by Jing Institute of Massage & Complementary Medicine (Appendix 2) and give brief contact details. The consultation included a detailed health history, lifestyle information and any fibromyalgia-related questions. Suitable participants were chosen based on the following criteria: medically diagnosed with fibromyalgia; female in gender aged 40 and over. Participants were required to partake in the study for 12 consecutive weeks.

During this study, participants informed the researcher of any previous therapies they'd had, how long ago, and any changes to their other therapies or medication (if any).

In the first 6 weeks, participants completed the Fibromyalgia Impact Questionnaire Revised (FIQR) (Appendix 3) once a week for 6 weeks prior to treatment intervention.

Results were gathered using the FIQR which is an updated version of the original validated Fibromyalgia Impact Questionnaire (FIQ) originally devised in 1991 to measure fibromyalgia symptoms and the response to therapeutic intervention.

This questionnaire is split into 3 sections assessing the participants' ability to perform day to day functions; the overall impact fibromyalgia has on the participant and the intensity of the symptoms. All questions are self-reporting and measured on a 0-10 numeric scale with the higher numbers indicating more severe symptoms and impaired physical function. Results are

calculated as follows: (FIQR: 0–23 = remission, 24–40 = mild disease, 41–63 = moderate disease, 64–82 = severe disease, and >83 = very severe disease).

From week 7, participants received a hands-on treatment once a week for 6 weeks. Each treatment lasted for 50 minutes and consisted of heat (hot stone treatment), fascial work, a little trigger point work, acupuncture and stretching, following the Jing Method ® chronic stress and pain protocol (Appendix 4). An FIQR continued to be completed 6 days following each treatment and returned to the researcher prior to the next one.

A series of 4 stretches (that remained the same throughout the study) were sent home with each participant – one for the cervical spine, shoulders, lumbar and hips (Appendix 5). These were carried out once each day, at any time. Participants informed the researcher of how frequently the self-care exercises were completed.

RESULTS

Clear improvements in quality of life were seen following the intervention stage.

Table 1 shows the mean average scores at non-intervention taken from the entire group.

Using the FIQR, these results showed the average scores to be within the FM moderate disease range of 41-63.

Table 1: Showing the Mean Average Scores of the Group following Non-Intervention at Weeks 1-6

Average Group Score	1	2	3	4	5	6
OVERALL	59.36	56.39	59.19	63.36	59.92	61.39

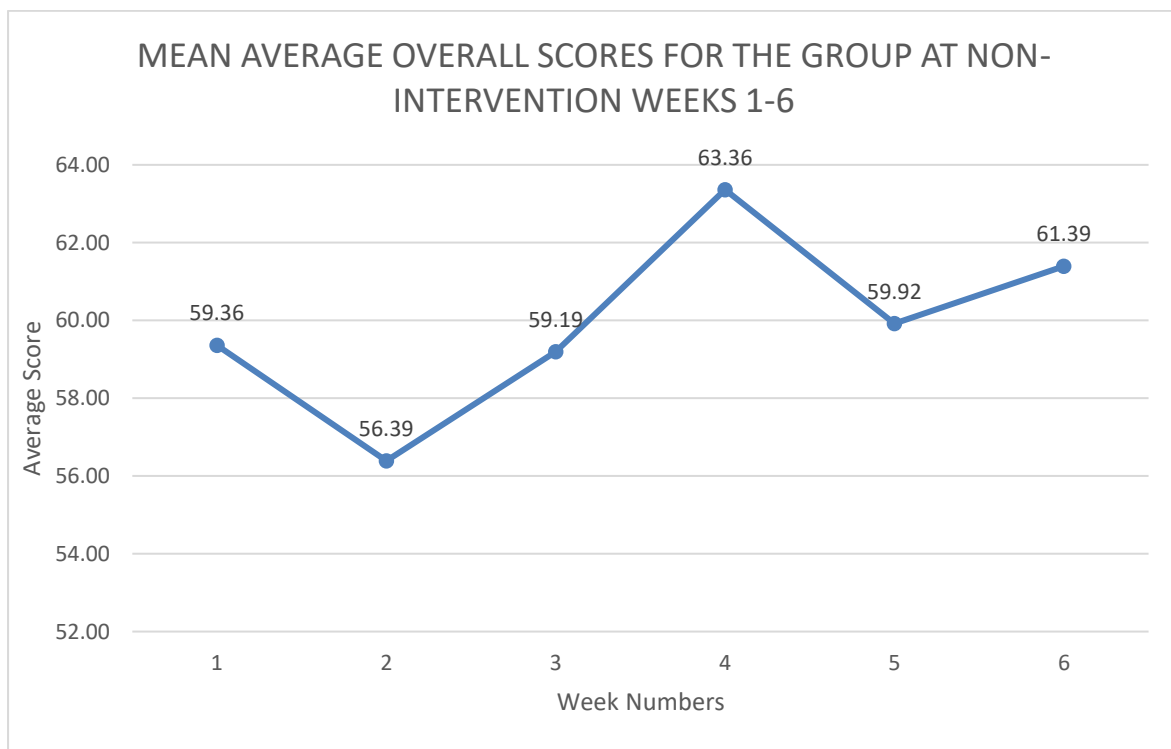


Fig 1: Graph Showing the Mean Average Overall Scores for the Group at Non-Intervention; Weeks 1-6

Figure 1 shows the same results as a graph. Results clearly fluctuated and gradually, the trend has increased.

Table 2 shows a marked improvement in the mean overall results for the group. Noticeably, at the start of the intervention stage, average results measured in the severe disease bracket (64-82 = severe disease). This table shows a consistent improvement from week 7-12. At the end of the intervention, average results had improved and fallen into the mild disease bracket (24-40 = mild disease). The difference in results between week 7 and week 12 showed an improvement in quality of life by 68.45% for the group.

Table 2: Showing the Mean Average Scores from the Group following Intervention at Week 7-12

Average Group Score	7	8	9	10	11	12
OVERALL	68.81	56.94	48.69	46.44	36.97	33.72

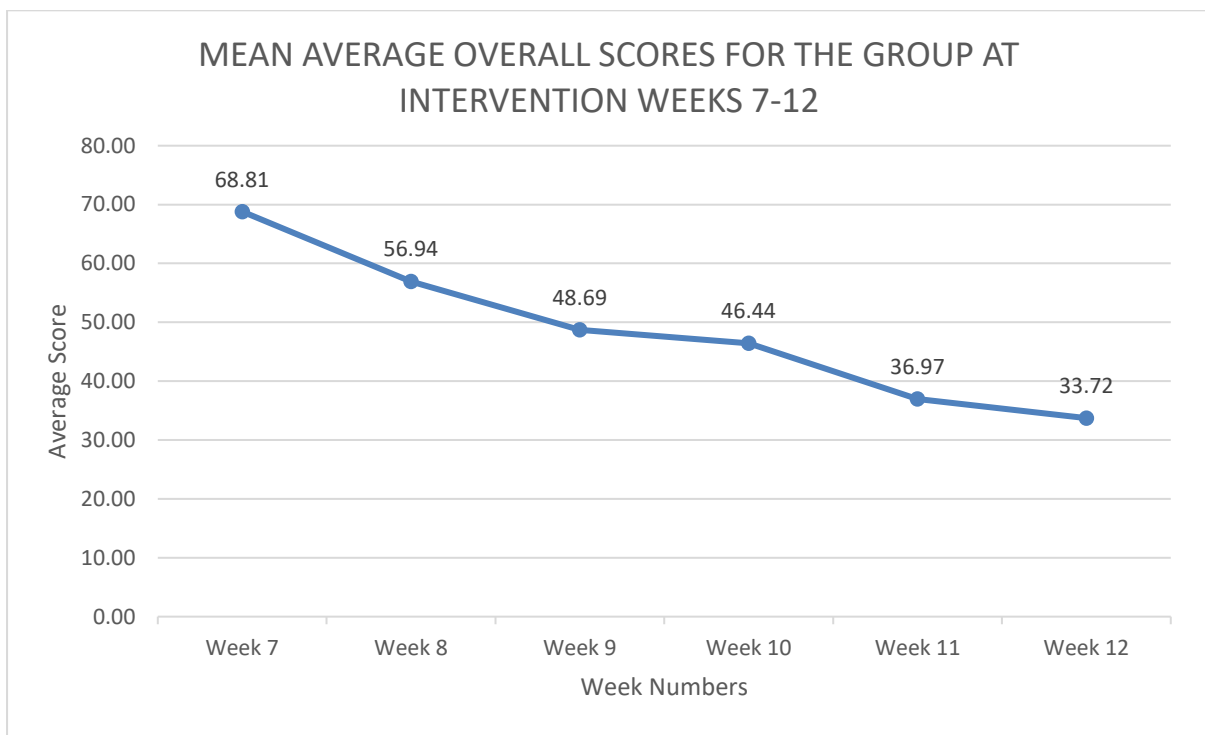


Fig 2: Graph Showing the Mean Average Overall Score for the Group at Intervention; Week 7-12

Table 3 shows the percentage difference in the results between pre and post intervention. The percentages highlighted in red show that there was a higher severity score at the beginning of the intervention stage. This improved quickly over the remaining weeks and ended with a 58.23% improvement on the comparative results between week 6 and week 12.

Table 3: Average Group Scores between Pre and Post Intervention showing the difference as a Percentage

Pre Weeks	Average Score	Post Weeks	Average Score	Difference	Percentage %
1	59.36	7	68.81	-9.45	-14.74
2	56.39	8	56.94	-0.55	-0.97
3	59.19	9	48.69	10.5	19.49
4	63.36	10	46.44	16.92	30.77
5	59.92	11	36.97	22.95	47.37
6	61.39	12	33.72	27.67	58.23

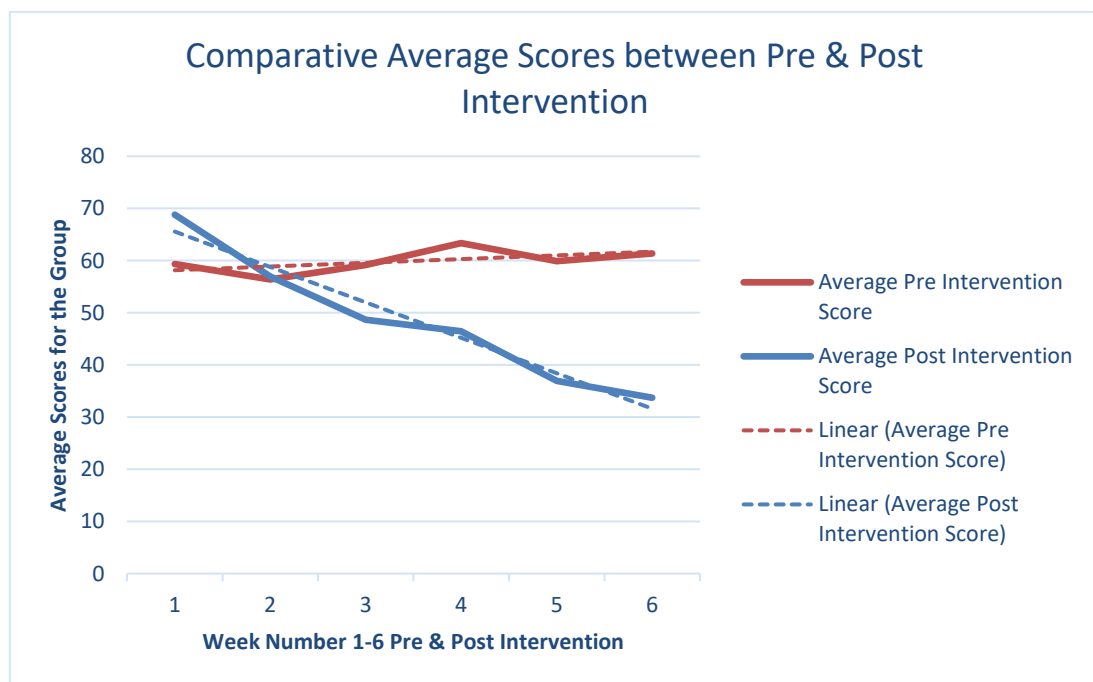


Fig 3: Graph Showing Comparative Average Scores between Pre and Post Intervention

Figure 3 demonstrates a comparison on the overall average scores for the group at pre and post intervention. The average post-intervention scores indicate a noticeable improvement, and the trend lines clearly demonstrate this.

DISCUSSION

The main findings from this study indicated that after a 6-week intervention period, an improvement to the quality of life was shown, according to the FIQR mean average scores.

Table 1 showed the mean average scores for each group at the end of the pre-intervention stage. Using the FIQR, these results showed the mean average scores to be within the moderate disease range of 41-63 (41-63 = moderate disease). Figure 1 gives a clearer picture of how the results fluctuated between weeks 1-6. For the researcher, this became increasingly interesting as attitudes seemed to change throughout this stage. In the beginning, attitudes were unfavourable towards the diagnosis of fibromyalgia and participants felt frequently dismissed and unheard. Three out of the six participants admitted to forgetting to take their medication on the odd day and not having the time to do their exercises at both pre and post intervention. As the exercises were the same throughout, this may have been down to boredom. However, attitudes differed between participants and this may have been a contributory factor. Over the remaining weeks of pre-intervention, mindsets began to change but the results remained spasmodic. Empathy has been found to be inversely connected with the difficulty of managing FM patients, underscoring the importance of the human connection between patients and their therapists (Giorgi et al., 2022).

The mean average scores for the group at the intervention stage are displayed in Table 2. Overall, there was a significant improvement. Figure 2 gives a clear picture of how the results improved each week. The start of the intervention stage showed a higher mean average score measuring on the FIQR at severe (64-82 = severe disease). Factors mentioned above may have contributed to this higher mean average score and interestingly there was an increase of depression and anxiety levels along with hypersensitivity to touch and clinical scepticism. This improved as the intervention weeks continued and the mean average score decreased

considerably. Attitudes and mindsets began to change as quality of life improved. At the end of the intervention stage, the mean average score measured at mild on the FIQR (24-40 = mild disease).

Table 3 is a comparison of the mean average scores between pre and post intervention measured as a percentage. This allows the reader to clearly see the measure of improvements and trends across the entire 12-week study. A further comparison can be obtained from table 3 between the average score at week 7 (68.81) and the average score at week 12 (33.72). An improvement of 68.45% is shown from the beginning of the intervention period to the end.

Figure 3 demonstrates a comparison on the overall average scores for the group at pre and post intervention. The average post-intervention scores indicate a noticeable improvement, and the trend lines clearly demonstrate this. Notice how the trend line rises steadily at pre-intervention. Despite medication and exercises being omitted on occasion, the results still showed an improvement at the intervention stage. Mindsets within the group were changing for the positive and this had a clear effect.

Other studies have shown that mind-body interventions have shown an improvement in fibromyalgia patients. Islam et al (2022) used CBT therapy and yoga exercise to better patient-reported outcomes such as decreased symptoms, improved sleep and quality of life, and mental health.

From the research reviewed so far, it appears that more in-depth studies are required to determine whether specific massage techniques alone would be of benefit to fibromyalgia patients. Some evidence suggests that particular techniques like myofascial release and Shiatsu massage are of benefit in pain levels, desensitisation and function (Yuan et al., 2015) but some studies indicate that massage alone has little or no benefit at all on pain levels, only function (Skelly et al., 2018).

However, with the Jing Method ®, there are various techniques that can be adapted to each individual patient and each of their needs can be addressed using the BPS model.

The Jing Method ® Stress and Chronic Pain regimen appears to have improved the groups overall quality of life, based on the results, but how can the researcher determine that the information gathered is reliable? Another question posed by the researcher was to ascertain whether a certain technique outperformed others when multiple techniques were employed in the protocol? An earlier Jing student looked at the impact of indirect myofascial release as a singular technique on FM patients' quality of life in a previous study. This appeared to have significantly beneficial effects. (Satchwell, L., 2015).

Pressure in the massage techniques used could potentially skew the varying results as FM patients can all react differently. Throughout this study, the pressure was kept at medium and progress was monitored closely with constant participant communication. This was in accordance with the findings of Nadal-Nicolas et al (2020b), who found that fibromyalgia patients experienced less pain perception, exhaustion, and tension due to anxiety after 15 minutes of manual treatment with moderate pressure on the posterior cervical spine. In a similar investigation, Nadal-Nicolás et al. (2020c) examined the impact of manual therapy administered with mild pressure on the variables of pain, muscle tiredness, sleep quality, and mood in women diagnosed with fibromyalgia. The results showed that the therapeutic advantage outweighed the benefits of a direct deep application without any form of mild pressure warm up. On the contrary, the significant result was thought to be related to the pressure applied in the massage which had to be applied in an increasing way so the results appear unclear.

Although there is a great deal of variation in fibromyalgia symptoms, the most prevalent ones include low mood, exhaustion, poor sleep, and widespread pain. For fibromyalgia,

nonpharmacological therapies are advised as a first line of treatment. However, uncertainty exists over the specific therapies that work best for the various symptoms (Kundakci et al., 2021).

Kundakci et al. (2021) discovered that sub-group analyses of all forms of exercise, with the exception of flexibility exercise, showed improvements in pain and depression, mind-body and strengthening exercises improved fatigue, and aerobic and strengthening exercises improved sleep. They also discovered that exercise, balneotherapy (hot baths), massage, psychological treatments, and multidisciplinary interventions improved FIQ scores. Pain, sleep, and depression were all improved by psychological therapies including mindfulness and cognitive-behavioural therapy, but not fatigue. These results imply that non-pharmacological therapies ought to be tailored based on the prevailing symptom, since research has indicated that cognitive-behavioural therapy works best for insomnia.

Over the past few years, there have been various attempts to establish fibromyalgia (FM) diagnostic criteria or a categorization scheme. Aside from additional socioeconomic and cultural factors, the vast range and bias of FM symptoms make it difficult to diagnose (Ghavidel-Parsa et al., 2021). Numerous articles have addressed the "measurability" of the condition, which is especially difficult in the case of FM and pain due to the lack of objective biomarkers to aid in decision-making (Giorgi et al., 2022).

Salaffi et al. (2021) identified a valid method for assessing the severity of the condition based on the results of the revised Fibromyalgia Impact Questionnaire, as used in this study; (FIQR: 0–23 = remission, 24–40 = mild disease, 41–63 = moderate disease, 64–82 = severe disease, and >83 = very severe disease); the modified 2019 Fibromyalgia Assessment Status (FAS 2019 mod: 0–12 = remission, 13–20 = mild disease, 21–28 = moderate disease, 29–33 = severe disease, and >33 = very severe disease) and the Polysymptomatic Distress Scale (PDS:

0–5 = remission, 6–15 = mild disease, 16–20 = moderate disease, 21–25 = severe disease, and >25 = very severe disease).

Additionally, efforts were made to guarantee a more precise clinical diagnosis of FM based on the nature and features of pain. A seven-item preliminary Nociplastic-based Fibromyalgia Features (NFF) questionnaire was published by Ghavidel-Parsa et al. (2021) – see appendix 7. This may be used in future clinical diagnosis.

Bennett et al. (2021), whose studies have served as a foundation for FM clinical research, noted that asking about the five symptoms of environmental sensitivity, poor balance, persistent deep aching that affects most of the body, tenderness to touch, and pain after exercise can boost the confidence in diagnosing FM.

CONCLUSION

There were a few constraints surrounding this study. Initially, there were fewer meaningful findings because the participation group was small. Secondly, due to clinic availability, the treatment time was limited to approximately six hours over six weeks and left no room for long term follow up. The FIQR was the only measurement instrument used in the study; it was selected due to ease of completion. However, since this is a self-reporting tool, the data gathered may be subjective because each person has a unique perspective on pain, anxiety, depression and other emotions. This study shows that fibromyalgia patients' quality of life can be effectively enhanced overall by the Jing Method ® Chronic Pain and Stress treatment but it's still unclear in this instance—where the protocol comprised multiple procedures—whether the use of a single technique or a combination of techniques improved the outcomes. To evaluate the durability of gains, extensive research is required with additional measuring instruments to determine a clearer FM diagnosis and the best course of treatment for the symptoms shown.

For the majority of patients, a multidisciplinary strategy combining pharmaceutical and non-pharmacological therapies is required. As part of routine clinical practice, doctors should assist and encourage patients with FM to engage in the non-pharmacological components of therapies (Varrassi et al., 2023b).

The results of this study have shown fibromyalgia patients reporting improved symptoms, function, and quality of life following a six-week intervention using a specific chronic pain and stress regimen once a week for fifty minutes.

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APPENDIX 1



Jing BTEC Research Ethics Form

BTEC Level 6 – Professional Diploma in Advanced Clinical Sports Massage

Section 1: to be completed by student

Student's name:	<i>Gail Dawe</i>
BTEC Year-group:	<i>BTEC 22-24</i>
Date of application:	<i>16th May 2023</i>
Student email address:	<i>gaildawe.gd@gmail.com</i>
Title of research project:	Evaluate the effects of the Jing Method of Clinical Massage on the Quality of Life in Women diagnosed with Fibromyalgia aged 40+.

Section 2:

Does your project involve any primary research using human subjects?

Please delete 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? <i>If yes, you must obtain 'external ethics approval' for your proposal before the form can be signed-off by 'Jing' and before you can start your fieldwork.</i>		X
Are you planning to use deception?		X
Are you collecting sensitive personal data such as sexuality, mental health data, etc?	X	
Does your project make use of a validated questionnaire? (FIQR) – Fibromyalgia Impact Questionnaire Revised	X	
Does your project make use of a new/adapted questionnaire or semi-structured interview checklist?		X

Section 3:

Where is your research being undertaken? <i>In my clinic at my home address</i>		
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.	YES	NO X

Section 4:

How will you recruit subjects for this research study?

- *Current clients and referrals;*
- *Promotional flyers in GP surgeries;*
- *Social Media; Linked-In;*
- *Create mailing list from current list of clients.*

Section 5:

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

- *All data to be held in accordance with the General Data Protection (GDPR – Data Protection Act 2018);*
- *Inform participants that all personal information will be stored on a hard-drive dedicated to this study;*
- *Data collected will be stored on a hard-drive that is password protected and stored securely;*
- *Participant names will be replaced by numbers to remain anonymous;*
- *All data relating to the study will be deleted upon completion.*

Section 6:

1. Outline your project procedure

- Recruit participants to evaluate the effects of the Jing Method of Advanced Clinical Massage on the Quality of Life in Women aged 40+ diagnosed with Fibromyalgia.
- Hold initial 1-2-1 consultations over the telephone with no treatment intervention
- Issue the FIQR questionnaire weekly via email as a word document over a 6-week period for completion by participants;
- Over the following 6 weeks, participants will receive one treatment a week for 50 minutes;
- Treatment will include; heat (stones), fascial work, mobilisations, a little trigger point work, stretching and acupuncture points.
- Homework will be a series of 4 stretches – one for the cervical spine, shoulders, lumbar and hips. These will be carried out once each day, at any time. The same will be given to each participant.
- Participants will be required to complete the FIQR questionnaire six days after each treatment and return to me prior to their next one.
- Participants will be asked how frequently they performed the self-care exercises each week.
- A further FIQR questionnaire will be completed six days after the final treatment and returned to me.
- If time permits, a follow up questionnaire will be requested at week 16 to assess any longer-term benefits of the study.

2. Briefly describe, **what your participants** have to do

E.g. will they be interviewed? Where, for how long? Will they complete a Questionnaire? Will they receive a treatment intervention? Will they be involved in a group discussion?

- *Participants will attend a one-to-one telephone consultation to ask any questions about the study, complete the consent form and give brief contact details. The consultation will include a detailed health history, lifestyle information and any fibromyalgia-related questions.*
- *Participants will sign the consent form prior to taking part;*
- *Participants will need to inform the researcher of any previous therapies they have had and how long ago. Participants will need to inform the researcher of any other*

therapies they begin during this study.

- Participants are required to fill in the FIQR questionnaire once a week for 6 weeks prior to treatment intervention.
- When treatment intervention begins, participants will be required to complete the FIQR questionnaire six days after each treatment and return to me prior to their next one.
- Participants will attend treatments once a week for 6 weeks. Each treatment will last for 50 minutes and consist of the HFMAST Clinical Massage formula for treating chronic pain and stress. This will include more heat, fascial work, mobilisations, a little trigger point work, acupuncture and stretching.
- Heavy trigger point work can be counterproductive for conditions closely linked with central sensitisation and possibly cause more pain; (Fairweather and Mari, 2015)
- A series of 4 stretches will be sent home with each participant – one for the cervical spine, shoulders, lumbar and hips. These will be carried out once each day, at any time. The same will be given to each participant.
- Participants will be required to complete the FIQR questionnaire six days after each treatment and return to me prior to their next one;
- Participants will be asked how many times they performed the self-care exercises each week.
- A further FIQR questionnaire will be completed six days after the final treatment and returned to me.
- If time permits, a follow up questionnaire will be requested at week 16 to assess any longer-term benefits of the study.

Section 7:

What sort of materials or stimuli will your participants be exposed to?		
	YES	NO
Questionnaires	X	
Pictures (will you take a photo of participants)		X
Sounds		X
Words	X	
Other	Clinical Massage for Chronic Pain; 4 simple stretches	

If using a questionnaire you are required to attach an example.

TEXT HAS BEEN DELETED AS NO PHOTOGRAPHS ARE BEING TAKEN.

For 'Other' please elaborate:

Jing Method Stress and Chronic Pain protocol taken from Fairweather and Mari (2015) Massage Fusion. Sample protocol sheet attached.

4 simple stretches that will be the same for every participant – sample attached.

Section 8:

What sort of people will the subjects be? E.g. people with non-specific back pain, women above 55 years or people diagnosed with osteoarthritis

Women aged 40+ with a formal diagnosis of fibromyalgia:

- *Symptoms need to be present throughout the entire body and include: -*
 - *Widespread muscle pain;*
 - *Touch sensitivity;*
 - *Stiffness and tiredness;*
 - *Sleep problems;*
 - *Headaches.*

Section 9:

If your research study involves minors, how will you obtain participation permission and who is the responsible adult?

N/A

Section 10:

Special Issues. Give brief details of other special ethical issues and the controls you will put in place to minimise ethical risk.

- *Qualified and insured therapist;*
- *Participants details will be kept fully confidential and secure;*
- *Participants data will be anonymised. Numbers will be used rather than names.*
- *During the consultation and treatment process, the researcher will observe participants' emotional well-being and direct them to additional resources if deemed necessary.*
- *Details of any traumatic experiences will be considered and kept confidential.*
- *Treatments will be performed in my clinic at my home address.*
- *Participants can withdraw at any time without any given reason.*
- *Recording of sessions will not be permitted.*

Section 11

What procedures will you follow in order to guarantee the confidentiality of your participants' data?

TIP: Personal data (name, addresses etc.) should not be saved whereby they can be associated with the participants' other data.

- Record participants name, contact details and DOB
- Each participant will be assigned a number
- Data will be stored on a hard drive assigned to this study only and password protected;
- Hard-drive will be stored securely.
- All data will be deleted once the study has been completed.

Section 12

Does any of the following apply to your research study?	YES	NO
It requires participants to give information of a personal nature	X	
It involves minors or other vulnerable individuals;		X
It involves paying participants or an alternative incentive to participate		X
It could put you or someone else at risk of injury.		X

Section 13:

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

Student's handwritten signature:



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

Print Name: GAIL SARAH DAWE

Date: 18th JULY 2023

IMPORTANT

Consent

Informed consent must be obtained for **all** participants before they take part in your project. The Consent Form (example below) 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 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.



PROJECT TITLE:

Evaluate the Effects of the Jing Method of Advanced Clinical Massage on the Quality of Life in Women aged 40+ Diagnosed with Fibromyalgia.

STUDENT NAME: GAIL DAWE

STUDY LOCATION: Core Body Massage Therapy - The Nursery, Popham Court Lane, Popham, Micheldever, Hampshire SO21 3BH

Tel: 07824 380794

Email: info@corebody.co.uk

INFORMATION FOR PARTICIPANTS

Important

Please be advised that you can withdraw your participation from this study at any time. There is no need to submit a reason and there will be no consequences to you as a result of withdrawing.

What will be expected of you, the participant?

You, the participant, will be required to fill out a Fibromyalgia Impact Questionnaire Revised (FIQR) questionnaire once a week for 6 weeks prior to treatment intervention.

Participants will attend a clinical massage treatment once a week for 6 weeks, lasting 50 minutes.

A series of stretches will be given and must be completed each day.

The FIQR questionnaire will need to be completed six days after each treatment and returned to me prior to the next one.

You, the participant, will inform the researcher how frequently the self-care exercises were completed.

On completion of the final treatment, an FIQR questionnaire will be required on the sixth day following and returned to me.

What does the initial consultation and research study involve?

Participants will be required to attend a one-to-one telephone consultation to ask any questions about the study, complete the consent form and give brief contact details. The consultation will include a detailed health history, lifestyle information and any fibromyalgia-related questions.

You, the participant, will sign the consent form prior to taking part.

Participants will need to inform the researcher of any previous therapies they have had and how long ago. Participants will need to inform the researcher of any changes to their other therapies or medication (if any) during this study.

Participants will be required to fill in the Fibromyalgia Impact Questionnaire Revised (FIQR) questionnaire once a week for 6 weeks prior to treatment intervention.

Participants will attend treatments once a week for 6 weeks. Each treatment will last for 50 minutes and consist of heat (hot stone treatment), fascial work, a little trigger point work, acupuncture and stretching.

A series of 4 stretches will be sent home with each participant – one for the cervical spine, shoulders, lumbar and hips. These will need to be carried out once each day, at any time. Participants will be given the same each time.

When treatment intervention begins, participants will be required to complete an FIQR questionnaire six days after each treatment and return to me prior to the next one.

Participants will need to inform the researcher of how frequently the self-care exercises were completed.

Following the final treatment, an FIQR questionnaire will need to be filled out six days after and returned to me.

Are there any risks involved?

There is a very small element of risk. If the stretches were over-done, you may cause muscle strain.

What are the potential benefits to you; the participants?

Benefits of these treatments might include a reduction in pain level, the ability to return to most, if not all, daily activities affected by fibromyalgia, an improvement in movement and quality of life.

How the results of the study will be used

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. Communication of the findings may be in the form of all / any of the following: a dissertation, reports in scientific journals, articles in newsletters, and presentation at a conference.

Confidentiality

All data and personal information will be stored securely in accordance with the terms of the General Data Protection Regulation (GDPR), 2018, and will be accessible only by **GAIL DAWE**. After completion of the study, all data will be made anonymous (i.e. all personal information associated with your data will be removed). Your data will be anonymous in any written reports, articles, and presentations of the results of the study.

What to do now you have decided to participate

If you would like to participate, please return a completed consent form to **GAIL DAWE**.

If you have any further questions, please contact **GAIL DAWE** on the telephone number or email address above.

Thank You.

APPENDIX 2



PARTICIPANT CONSENT FORM

Title of study:

Evaluate the Effects of the Jing Method of Advanced Clinical Massage on the Quality of Life in Women aged 40+ Diagnosed with Fibromyalgia.

Name of student: GAIL DAWE

<ul style="list-style-type: none">• I have read the information sheet 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 I have been told)• 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 here.• I agree to take part in this study	
Signed (participant)	Date
Name in block letters	
Signed (parent / guardian / other) (if under 18)	Date
Name in block letters:	
BTEC students contact details (including telephone number and e-mail address): GAIL DAWE – 07824 380794 info@corebody.co.uk	

APPENDIX 3

FIBROMYALGIA IMPACT QUESTIONNAIRE (REVISED)

Last Name:

First Name:

Age:

Duration of FM symptoms (years):

Time since FM was first diagnosed (years):

Directions: For each of the following 9 questions, check the box that best indicates how much your fibromyalgia made it difficult to perform each of the following activities during the past 7 days. If you did not perform a particular activity in the last 7 days, rate the difficulty for the last time you performed the activity. If you cannot perform an activity, check the last box.

The Revised Fibromyalgia Impact Questionnaire

Domain 1 directions: For each of the following nine questions, check the one box that best indicates how much your fibromyalgia made it difficult to do each of the following activities over the past 7 days:

Brush or comb your hair	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Walk continuously for 20 minutes	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Prepare a homemade meal	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Vacuum, scrub, or sweep floors	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Lift and carry a bag full of groceries	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Climb one flight of stairs	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Change bed sheets	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Sit in a chair for 45 minutes	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult
Go shopping for groceries	No difficulty <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very difficult

Domain 2 directions: For each of the following two questions, check the one box that best describes the overall impact of your fibromyalgia over the past 7 days:

Fibromyalgia prevented me from accomplishing goals for the week	Never <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Always
I was completely overwhelmed by my fibromyalgia symptoms	Never <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Always

Domain 3 directions: For each of the following 10 questions, check the one box that best indicates the intensity of your fibromyalgia symptoms over the past 7 days:

Please rate your level of pain	No pain <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Unbearable pain
Please rate your level of energy	Lots of energy <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> No energy
Please rate your level of stiffness	No stiffness <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Severe stiffness
Please rate the quality of your sleep	Awoke rested <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Awoke very tired
Please rate your level of depression	No depression <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very depressed
Please rate your level of memory problems	Good memory <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very poor memory
Please rate your level of anxiety	Not anxious <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very anxious
Please rate your level of tenderness to touch	No tenderness <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Very tender
Please rate your level of balance problems	No imbalance <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Severe imbalance
Please rate your level of sensitivity to loud noises, bright lights, odors, and cold	No sensitivity <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Extreme sensitivity

Scoring: Step 1. Sum the scores for each of the three domains (function, overall, and symptoms). Step 2. Divide domain 1 score by three, divide domain 2 score by one (that is, it is unchanged), and divide domain score 3 by two. Step 3. Add the three resulting domain scores to obtain the total Revised Fibromyalgia Impact Questionnaire score.

Appendix 4

Stress and Chronic Pain Protocol:

(Fairweather & Mari 2015)

In Prone:

- 1 – Prep work over the drape; place both forearms on either side of the client's spine;
- 2 – Double palming down the erector muscles;
- 3 – Work the Shu points on the Bladder channel level with the spinous processes of each vertebra;
- 4 – Fascial work; cross-hand stretches over the back and shoulders; lean in with forearms on shoulders;

Apply wax or medium;

- 5 – Single forearm effleurage down each side of the back;
- 6 – Power effleurage with hot stones on the back;
- 7 – Deeper forearm work through the back and shoulders;
- 8 – Very light trigger point work on the clients' specific areas of pain;

In Supine:

- 1 – Hot stone placement on the centre of the body at the breast bone, solar plexus and belly with your hands over the breastbone and belly stones.
- 2 – MFR tummy sandwich (MFR pelvic transverse plane release)
- 3 – MFR solar plexus sandwich (transverse plane release)
- 4 – MFR leg pulls; MFR arm pulls
- 5 – Work the conception vessel
- 6 – Work the diaphragm and gently strip the intercostals

Moving into the neck:

- 1 – Deeper work to the posterior neck, pressing gently into the posterior cervical muscles
- 2 – Cervical mobilisation
- 3 – Face massage
- 4 – Hold the head and ground

Working the Acupressure Points:

- 1 – GV20 – Governing Vessel
- 2 – Ht 8 – Lesser Mansion

APPENDIX 5

STRETCHES:



Neck Flexion with Side Flexion

Bend your neck to the side by taking your left ear towards your left shoulder. Now tuck your chin towards your chest. Hold the stretch, and relax. You can use your hand to gently assist. This will allow you to feel a stretch at the back and side of your neck.

Hold for 5, repeat once, once daily, 7 times weekly, Both sides



Passive Flexion Arm Lift Full

Use your good arm to lift your painful arm (which should stay relaxed). Take your arm as high as feels comfortable. Stop when you feel pain, and slowly lower your arm. This exercise will help improve your shoulder mobility.

Hold for 5, repeat once, once daily, 7 times weekly, Both sides



Double Leg Back Stretch

Lie flat on your back and bend your knees towards your chest. Hold this position and feel a gentle stretch in your back. If you get any groin pain while doing this exercise, stop and inform your therapist. Relax glutes and legs. Use arm strength to pull knees in to chest.

Hold for 5, repeat once, once daily, 7 times weekly



Hip Flexion Lying

Bend your knee towards your chest. This exercise will mobilise your hip joint and strengthen the hip flexor muscles. You can make the exercise stronger by pulling your knee towards your chest. As your hip becomes more mobile, you should be able to bend it further.

Hold for 5, repeat once, once daily, 7 times weekly, Both sides

Taken from: www.rehabmypatient.com

APPENDIX 6

Nociplastic-based Fibromyalgia Features (NFF)

Items	Yes	No
1. Do you have pain all over the body?		
2. Does the patient have any dominant localized pain? ^a		
3. Is your pain migratory or non-consistent?		
4. Is your pain intensified with physical stress (such as excessive physical activity or cold exposure) or emotional stress?		
5. Do you experience the pain with excruciated or suffering quality?		
6. Do you have disabling fatigue, especially in the morning?		
7. Are there TPs in the manual examination? ^b		

Note: All items were related to problems within the last 3 months.

^a The dominant localized pain is defined as the pain maximally focused over one or two the noncontiguous anatomical body sites including left and right arm and leg, chest, abdomen, upper back, and lower back.

^b The presence of two or more TPs (out of paired trapezius and supraspinatus areas) is considered a positive response.

Abbreviation: TP, tender point.

Taken from:

[Ghavidel-Parsa, B., Bidari, A., Atrkarroushan, Z., & Khosousi, M. \(2021\). Implication of the nociplastic features for clinical diagnosis of fibromyalgia: Development of the preliminary Nociplastic-Based Fibromyalgia Features \(NFF \) tool. *ACR Open Rheumatology*, 4\(3\), 260–268. <https://doi.org/10.1002/acr2.11390>](https://doi.org/10.1002/acr2.11390)