Evaluating the effect of the online Jing method on quality of life in adults aged 38-74 experiencing non-specific lower back pain.

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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 Jing Advanced Massage Training. I also declare that this work is the result of my own investigations except where otherwise identified by references and that I have not plagiarised the work of others".

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Date: 30/03/2025

Abstract

Background

The impact of low back pain (LBP) can be felt in our homes, places of work, and NHS, and shows no signs of abating; with the number of people struggling with LBP annually increasing on both a national and international level. The failings to combat these rising numbers using current biomedical treatment interventions, are most apparent when it comes to persistent LBP, whereby the psychological and sociological components of the pathology are often not met in treatment. This study therefore looks to evaluate the effect of the Online Jing Method, with its focus on the Bio-Psycho-Social treatment of pain, on adults experiencing non-specific lower back pain (NSLBP).

Method

Of those 15 participants recruited online who met the initial telephone consultation and inclusion criteria for NSLBP, 12 participants (3 men and 9 women) completed the within-subject design study. They then received a telehealth pre-intervention consultation. Each participant undertook a 6-week data gathering exercise, filling out the Bournemouth Backpain questionnaire (BBPQ) once a week, which was continued once a week for 16 weeks in total. The intervention lasted 6-weeks and involved participants being sent out a different follow along 30-mins pre-recorded video and educational PDF's each week. Participants also had a live group Q&A Zoom meeting once a week. Closing telehealth consultations were also given once the intervention was over.

Results

This study demonstrated a consistently improving trendline of the study's BBPQ data to show a decrease of 15.4 on the total score, which is considered a significant clinical improvement in LBP.

Conclusion

The positive outcomes achieved in this study when using an online multi-modal approach to treating NSLBP; with a focus on education and patient empowerment using the BPS modal, shows great potential for further future development. However, due to the small sample size of the study, working with a larger cohort across more population specific trials may prove beneficial for further refinement of the method.

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" Nothing in life is to be feared*; it is only to be understood."*

~ Marie Curie

Introduction

The global, national, and regional burden of low back pain (LBP) continues to be the leading cause of years lived with disability worldwide (Chen *et al.,* 2022). The impact of which can be felt deeply throughout multiple levels of our society from work life to home (De Souza and Oliver Frank, 2011). With the number of people affected by LBP increasing annually and estimated to rise to as much as 843 million by 2050 (WHO, 2023), LBP stands out as one of the major public health issues of our time.

Non-specific low back pain (NSLBP) accounts for 90-95% of all cases of LBP (Bardin, 2017) and can interfere with multiple aspects of a person's life; diminishing their mental wellbeing, influencing their ability to work and their productivity, and interfering with many day-to-day functions, which can greatly reduce their overall quality of life (QOL)(WHO, 2023).

With the prevailing biomedical model of healthcare and classical physiotherapy failing to counter the increases in NSLBP (Cuenca-Martínez, Cortés-Amador and Espí-López, 2018), there is clearly a major need to explore and develop alternative pain management strategies to those currently in place. The aim of this study, therefore, is to evaluate the effect of the online Jing method (OLJM) on the QOL of adults experiencing NSLBP pain.

Current Guidelines

Current NHS guidelines for the management of persistent (chronic) LBP in the UK include: a structured exercise programme overseen by someone such as a physiotherapist; manual therapy, including massage and spinal mobilisations; acupuncture; and psychological interventions such as Cognitive Behavioural Therapy (NHS, 2021;Kenny and Tidy, 2016).

Whilst the current scope of treatment options for NSLBP acknowledges the biopsychosocial model for the treatment of chronic pain via independent treatment

modalities (Daren and Forward, 2008), there are still limited treatment interventions being offered to the public combining mind, body, and social support in one place.

The Jing Method

Fairweather and Mari (2015: 4-5) describe The Jing Method as an interdisciplinary treatment approach to chronic pain, fusing Eastern and Western massage practices and threading them through a strong therapeutic alliance whereby clients 'feel heard' and are empowered to take control of their own healing through education and self-help strategies. Fairweather and Mari's (2015: 6) 'combination of modalities' that make up the Jing method can be summarised by H F M A S T:

Table 1 – The Jing method of HFMAST for the treatment of chronic pain (Fairweather, Mari 2015)

• H: refers to the application of heat or cold.
• F: using both direct and indirect fascial techniques.
• M: treating all the muscles, both above and below the affected joint in question, to release aggravating trigger points.
• A: the inclusion of acupressure in treatments.
• S: using a variety of stretching techniques, including: PNF, AIS and joint mobilisations.
• T: teaching client self-help strategies, such as mindfulness meditation, breathwork, self-trigger point with balls, and basic rehab exercises.

The importance of creating a collaborative person-centred treatment approach, so fundamental to the Jing Method, whereby the therapist supports the patient's emotional wellbeing and empowers them to take control of their health, is further supported by (Lebert et al. 2022; Sheppard 2018) and is a cornerstone to this study.

The Biopsychosocial model

The foundation of the Jing Method is that it is rooted in the Biopsychosocial (BPS) model of healthcare. The BPS model recognises that pain, and in particular chronic pain, is not only created in the body as a response to structural issues. In fact, pain is a decided response by the brain to current and previous stressors, learned experiences, belief systems and lifestyle factors (Moseley and Butler, 2015;Lowe, 2023;Varallo et al., 2021; Borell-Carrió, Suchman and Epstein, 2004).

A systematic review of BPS factors for chronicity of individuals with NSLBP pain by Otero-Ketterer et al. (2022) highlights the need for a more in-depth understanding of the 'complex dynamic relationships between BPS factors.' The study's findings were indicative of the importance of a 'multidimensional' approach being implemented when managing individuals with NSLBP with their 'sometimes tenuous relationship with tissue damage' (Lotze, Moseley and Moseley, 2015). Tom et al. (2022), for example, recognise in their systemic review of determinants of QOL with chronic LBP, how in particular, the psychological status of an individual with chronic LBP was a denoting contributor to their QOL. This current study theorises, therefore, that by creating a self-treatment modality, using the OLJM, which is both multi-dimensional in its approach and grounded in the BSP, a greater positive impact on a person's QOL with NSLBP could be achieved.

The implications for our Western healthcare systems, designed around acute biomedical care models, is that they are struggling to improve patient-reported outcomes and reduce healthcare costs. Frustratingly, despite the BPS model offering huge scope for the management of persistent pain presentations such as NSLBP, 'politically powerful acute medical and surgical domains' remain as a barrier to the more widespread of its acceptance (Wade and Halligan, 2017).

Online self-treatment

Since the international COVID pandemic there has been a shift towards working from home and the need for even more flexibility within a worker's daily life. As NSLBP is now considered the leading cause of disability worldwide (Hartvigsen *et al.,* 2018) 'Physical activity and exercise programs could play a role in decreasing the socio-economic burden associated with chronic pain' (Lebert *et al.,* 2022). With the flexible non-location specific nature of an online intervention echoing the current trend in working life, could online treatment modalities such as OLJM help to lessen the disabling burden of LBP on both the NHS and workforces? A randomised control trial by Villatoro-Luque et al. (2023) demonstrates that a mobile app is as effective as delivering a rehab programme as the same exercise program supervised by a clinic. This points towards the potential for dramatic cost reductions for health services, along with easing the impact of time taken off work for attending health care appointments.

That said, this study is investigating more than just the delivery of exercises online, as mental health is an integral aspect of managing NSLBP; the recognition of which, sets the Jing method apart from traditional biomedical therapeutic approaches. Aherin (2023) in her study into OLJM for mental health, and Allen (2021) for academic burn out, show the strengths of the OLJM for improving QOL from a mental health perspective. Preston, (2021) acknowledges an 'overall positive response to online therapy and rehab', for NSLBP in her paper, but also highlights how adherence to home exercises can present a challenge. However, she supports the notion that a good therapeutic alliance (TA), which is fundamental to the Jing Method, can still be built online and can create stronger patient adherence to rehab programmes. Rujipong et al. (2021) also highlights how patients needed a significant amount of knowledge around the causes of pain and pain self-management strategies to successfully implement their self-care practice. This presents the need for a variety of instructional material, provided in different formats, for different learning styles.

Massage, Mindfulness & Mind-Body Interventions for LBP

The prognosis for treating NSLBP with massage therapy alone, demonstrates improvements in pain outcomes and functionality from massage as being only short-term (Tsao,2007; Trivedi et al.,2022; Furlan et al.2015). Whilst other studies including manual therapy as part of the broader Complementary and Alternative Medicine (CAM) cohort; including cranio-sacral therapy, yoga, Pilates, and acupuncture, acknowledge their efficacy for improving pain and disability (Yang et al., 2023;Crawford et al., 2016;Eaves et al., 2015). This supports the role of CAM therapists to orchestrate a positive effect on clients' QOL but represents the need for continued active patient participation in their healthcare journey. Teaching clients self-massage techniques could play a role in facilitating this.

Movement Therapy for LBP

A recent 'very robust' randomised trial in the Journal of Physiotherapy of 100 people with NSLBP (Turci *et al.,* 2023) theorised that 'Perhaps the nature of exercise is not important other than it means the patient is not receiving passive treatments or restricting their movement;'. Shipton (2018) further supports the idea that movement programmes that focus on improvement in function are paramount to managing chronic LBP, but that the type of physical intervention is based primarily on patients' preferences and the therapists experience.

These studies highlight the importance of helping patients to find movement and self-treatment strategies that work for them as an individual, and not presenting them with cookie cutter approaches that could potentially set them up for failure through lack of engagement. By offering a variety of interventions for each movement goal, as per graded exposure (George and Zeppieri, 2009), this study gives online participants options regarding how to move in a way which is right for them.

Education and pain science

We can encourage patients to engage in self-treatment and movement strategies for managing their LBP long term by arming them with an understanding of how pain is created and why it exists (Hernandez-Lucas *et al.,* 2022)). Phenomena such as pain catastrophising and fear avoidance mechanisms known as Kinesiophobia 'might play a significant role in enhancing pain-related disability and the pain intensity in individuals with chronic lower-back pain' (Varallo *et al.,* 2021).

Both Varallo et al. (2021), and Lotze, Moseley and Moseley, (2015) discuss the important therapeutic role managing patients' beliefs and cognition to pain plays in interdisciplinary pain management interventions. With BPS pain rehabilitation now taking preference over conventional pain treatment and management. Barbari et al. (2020) also recognise the most effective interventions for long term behaviour modification and compliance with exercise as a combination of pain science education, graded exposure, and multimodal interventions.

Modalities such as the OLJM are part of this new paradigm shift towards BPS pain rehabilitation and could play an important role in patient empowerment and sustainable health outcomes with NSLBP. This would have a positive knock-on effect in our greater society including reduced pressure on the NHS and improved workplace productivity. The current push in the research landscape towards finding treatment strategies that implement the BPS model, is gaining momentum. However, there is still a need for future research around BPS rehabilitation outside of a one-to-one therapeutic setting and around how to 'conceptualise personification' (Ceulemans *et al.,* 2024) within a group therapeutic environment.

The evidence presented so far suggests that multimodal approaches to treating non-specific lower back pain are necessary for tackling its increasing burden on our societies. Online modalities offer the opportunity to further develop patients' education around pain science and BPS factors, than may not be possible to do in a clinical setting due to time restraints. With research supporting both the ability of TA to be built online and the potential of online rehab programmes, the OLJM may offer an alternative for improving the quality of life in adults experiencing back pain.

Method

Ethical approval was received for the following study, evaluating the quality of life in adults aged 38-74 experiencing NSLBP, from Jing Advanced Massage Training (See Appendix A). A group of 15 participants with NSLBP were recruited via social media and business mailing for an online-based study, of which 3 dropped out in the control phase. The 12 participants who completed the study were from a diverse employment demographic and geographical location across the whole of the UK: 9 participants were female and 3 males. Each participant received a telephone call to explain the study and discuss their suitability before joining. All participants gave written, informed consent (See Appendix B)

NSLBP for the purposes of the study was defined as:

Table 2: NSLBP inclusion criteria

LBP having been experienced for 3 months or more.
LBP that could not be contributed to a specific disease or systemic pathology such as Fibromyalgia, MS, or a current Cancer diagnosis.
Those with a severe injury that had occurred within the past 6 months, as such cases may require a more individualised rehabilitation approach specific to their trauma.
Those who had undergone surgery in the past year.
Pregnant ladies or ladies 1-year post-partum could also not participate, due to their unique needs that would not be met for the purpose of this intervention.

The inclusion criteria required that participants' LBP was interfering with their QOL on some level. The study was particularly interested in recruiting those with NSLPB, who may have tried other treatment methods of healing their LBP, but to no avail. All the participants agreed not to make any changes to their lifestyle that could impact upon the study throughout the duration of the study e.g., changes to medication and starting to work with new healthcare practitioners to treat their NSLBP.

This was a within group study design, which is a statistically powerful research intervention for smaller sample sizes. Participants completed the Bournemouth Back Pain questionnaire (BBPQ) for 6 weeks prior to the commencement of treatment to establish their level of back

pain and effect on their QOL (See Appendix D). The BBPQ was chosen due to its focus on the effects of NSLBP on activities of daily living. The questionnaires were submitted every Monday over the six-week control and following six-week intervention period. They were also submitted at week 16 of the study.

Towards the end of the control phase, an online consultation was carried out with each member of the study group to begin building a therapeutic alliance. This was repeated once the intervention stage was completed.

Throughout the 6-week intervention phase, participants were emailed course content, every Monday morning with the lessons of the week. Each week followed a 5-pillar structure, which embodied the Jing method adapted for an online educational format, as outlined below:

Table 3: The 5-Pillar system for the self-treatment of persistent pain

Educate: Education around pain science, personal considerations within the BPS model of understanding pain, the mind-body connection. *1 factsheet focusing on a different aspect of pain science.*
Embody: Gentle mindfulness and down-regulation exercises to bring you back home into your body: including the use of heat, acupressure, breath awareness and self-massage. *Part 1 of a 30 min pre-recorded video*
Evolve: Evolution of your mind-body awareness and your bodies capacity to move with ease, using mindful mobilisations, self-MFR and accessible stretches. *Part 2 of a 30 min pre-recorded video*
Empower: Rebuilding confidence and strength in the mind and body with resistance band and body weight exercises. *Part 3 of a 30 min pre-recorded video*
Enable:

Enable yourself to live your best life through lifestyle modifications and strategies. Enable those around you to discover pain-free living. *1 lifestyle focused worksheet*.

Participants were expected to have read all material and practiced the video once before attending a live group Q&A and coaching session in the middle of the week. Participants were then asked to revisit all content once again before the next week's new lessons were sent out. They were also asked to report back as to how many times they had practiced the videos (See Appendix E).

(To view the full summary of the online treatment intervention please see the appendix F)

Results

Figure 1: BBPQ combined study average mean totals.
Whole combined group and questions showed a 15.4 mean improvement of total score from week 1-16

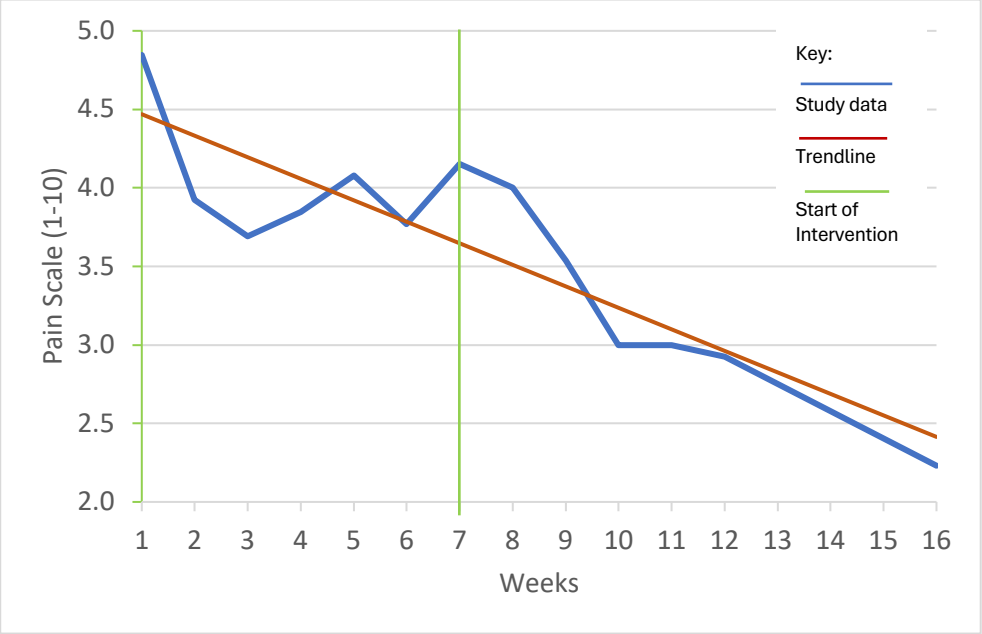

Figure 2: Change in mean average low back pain each week.
Whole group mean showed a 1.9-point drop in pain by week 12 of the study. The mean continued to decrease to a 2.6 drop by week 16.

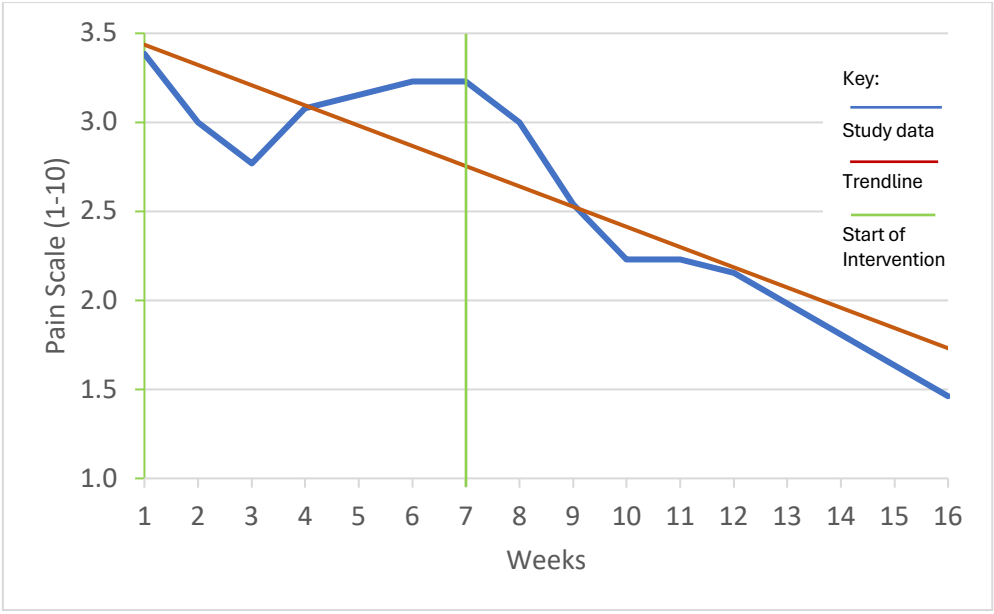

Figure 2: Effect of LBP on recreational, social, and family activities.
Whole group mean showed a 1.2-point drop in interference with activities by week 12 of the study. The mean continued to decrease to a 1.9 drop by week 16.

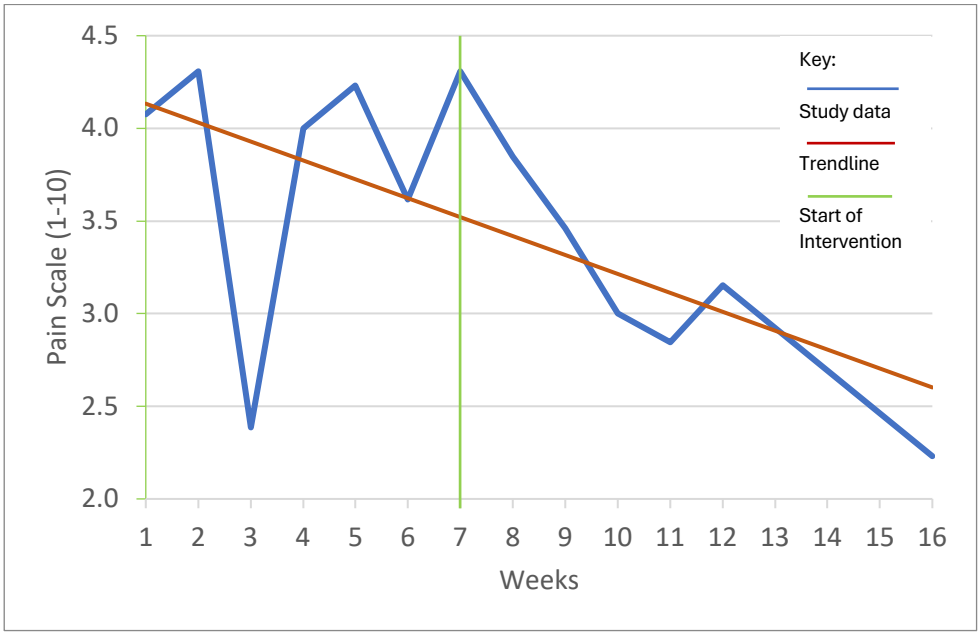

Figure 3: Negative impact of LBP on work.
Whole group mean showed a 1.9-point drop in pain interference with work by week 12 of the study. The mean continued to decrease to a 2.2 drop by week 16.

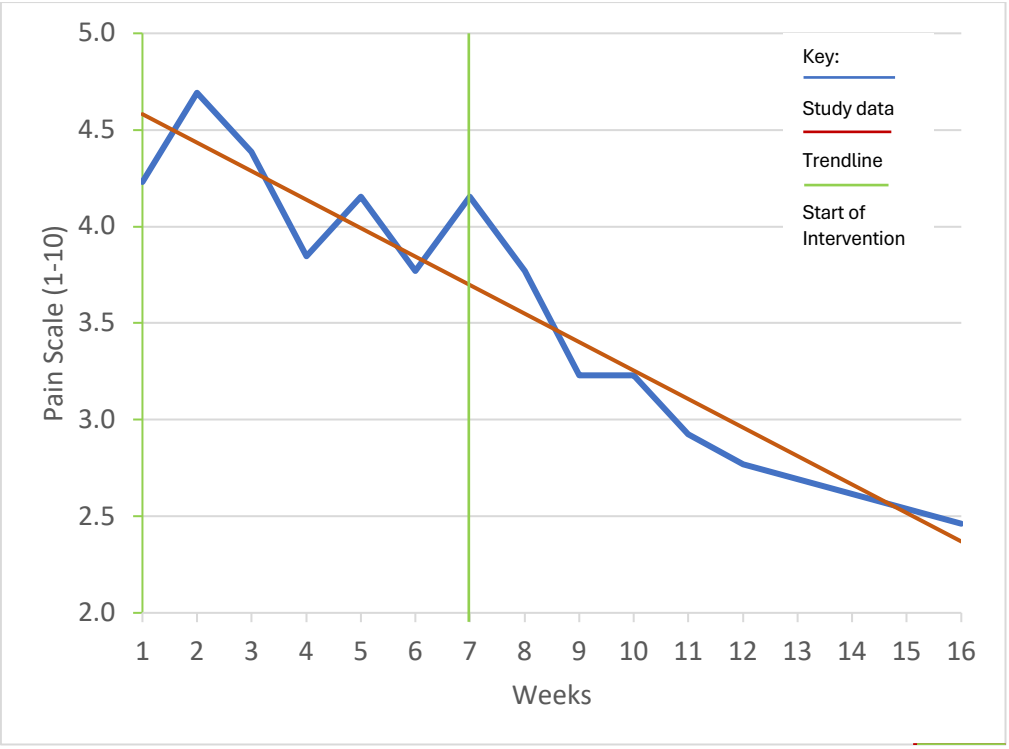

Figure 4: Ability to control LBP on their own.
Whole group mean showed a 1.9-point drop in inability to control pain by week 12 of the study. The mean continued to decrease to a 2.2 drop by week 16.

The first 2 weeks of the intervention sees a slight Increase in participant's pain. However, there is a rapid and sustained decline in pain from around week 9 onwards, which continues declining all the way to week 16.

The participants sense of ability to control their LBP, mirrored the declining trend of their pain. Both, reporting on how much their social activities and work were affected by their NSLBP, followed a similar trend to the decline in pain in the intervention period.

All five of the above figures show a consistent improvement in results after the intervention finished at week 12, leading into week 16.

The anomaly in Figure 3 week 2, can most likely be attributed to this part of the data being gathered in the summer holidays, when many participants were off work and relaxing on Holiday.

Discussion

This study, evaluating the effect of the OLJM on adults experiencing NSLBP, proved highly effective in reducing patients LBP and improving their quality of life using a multi-modal online treatment program. It managed to achieve a distinct change as the intervention progressed, with a consistently improving trendline of the study's combined data to show a decrease of 15.4 on the total score (see Figure 1). Bolton, (2004) Indicates that a 13-point total score on BBPQ is associated with a significant clinical improvement in LBP.

The study's multi-modal intervention showed great potential for being an effective treatment strategy for persistent pain. The OLJM, further adapted into the 5-pillar educational approach, was a suitable tool for such a modality, with its focus on the BPS treatment of chronic pain. This supports the growing body of evidence which promotes the use of online programs and telehealth as a viable alternative for managing and treating chronic pain (Parkinson, Mackie and Parrott, 2021; Villatoro-Luque et al.,2023; Cui et al., 2023). This is building on the work of the likes of Jones-Morris, (2021) and Williams (2021) who had already demonstrated the efficacy of the hands on Jing Method for the treatment of NSLPB in their studies.

Traditional physiotherapy exercises typically have a very poor adherence rate. Shahidi et al., (2022) state that 'the majority of individuals prescribed an in-clinic exercise-based rehabilitation program are non-adherent' with self-reported time spent on home exercises varying widely from 15-70%. This study shows the potential for working online with, not only traditional physiotherapy exercises, but also more holistic interventions that reflect the BPS model of pain, such as: self-massage, acupressure, mind-body awareness exercises, pain science education and lifestyle interventions. It supports the notion that patients can learn to self-regulate their pain with therapeutic techniques that parallel those offered in a clinical massage setting (Villatoro-Luque *et al.,* 2023b). This was also demonstrated in the studies into the OLJM by (Allen, 2021;Aherin, 2023). Importantly, it highlights the benefits of layering pain education, therapeutic alliance and a multi-modal treatment approach when managing patients NSLBP, as impressed upon by Lorimer Moseley and Butler (2015).

Pain re-education

This study, of which pain-science was a corner stone component, supports the work of Lotze, Moseley and Moseley, (2015) who emphasise the importance of 'reconceptualizing' pain in modern pain rehabilitation.

For content to be presented over a six-week online program, was not only part of the Jing Method, but also necessary to the overall study method; as participants took time to engage with the new concepts being presented to them and to begin to reframe their pain, as was argued by (Rujipong *et al.,* 2021) . The benefit of an online intervention in the context of pain science is that it gives participants more time to digest the topics than would normally be available to them in a clinical setting, as supported by Barbari et al., (2020). This is reflected by the trends in the data, which saw a 63% drop in pain after 3 weeks of the study treatment intervention, which then consistently continued to drop from then on out. In fact, Cui et al., (2023) go so far as to say that not only do remote digital interventions show no significant differences in outcomes when compared to in-person physiotherapy; but that a significantly lower dropout rate was observed in the digital group compared to the conventional group. This study theorises that this could be due to the more flexible nature of online programmes, which are non-location specific, and which allow participants to engage with educational content at a time which suits them.

There was a clear relationship in the study between client's understanding of pain science with their ability to manage their pain and reduce their LBP. The structure of the online approach was to build and layer education and therapeutic approaches, so that participants could embody and practice stages to have a cumulative benefit. An approached backed up by other studies (Adenis et al., 2023; Hernandez-Lucas et al., 2022).) This can best be seen in the drops in data at around week 9, when participants began gaining fresh insights into their unique pain presentation. This understanding was apparent in the shifting dialogues participants were having around their pain in the weekly live Q&A sessions. The data implies that this had a knock-on effect in their greater QOL with ability to participate in social activities and productivity at work. We can ascertain from these findings that understanding pain combined with movement and mindful therapeutic self-practices are much more effective

than any one of these elements stand-alone (Hernandez-Lucas et al., 2022;Trivedi et al., 2022).

Interestingly even those 25% study participants who were experiencing life crisis such as grief and custody battles, still reported better understanding their triggers and connections between their LBP and stress by the end of the intervention. They felt better equipped to manage their LBP when life circumstances had settled down again, due to the education they had received on the study, despite pain levels remaining high in that moment due to stress. This outcome is not reflected in the BBPQ data and presents the challenges of evaluating the NSLBP outcomes where complex BPS factors are so heavily intertwined with their pain experience.

Could longer term pain outcomes and positive impact on QOL prove to be better when equipping patients with such multi-model tools and knowledge? Clients feedback on empowerment, despite not yet being fully out of pain, would Imply yes! This is supported by the data that shows continued decreasing trend in pain and improvement of QOL reported by all participants after the intervention had finished at week 16.

Therapeutic alliance

It is clear from this study that TA can still be built online, as supported by (Preston, 2021; Sheppard, 2018). Elements that contributed to building a strong online TA included: the opening and closing 1-2-1 consultations and the style of the videos, which participants reported finding personable, engaging, and accessible. With one participant commenting that 'it was like you have been here in my front room with me every week'. This strong TA was present in clients final feedback forms whereby 64% of participants reported a 5 out 5 results in response to being asked if they felt supported throughout the online course (intervention) and 36 % a 4 out of 5.

Overall, there was a high level of engagement with the study's content and a consistently reported adherence of twice a week to the home exercises across the group. This shows great potential for the 5-pillar system in a climate which sees low adherence to home exercises

(Shahidi *et al.,* 2022). Participant feedback attributed their engagement to the multi-modal layering of information and use of different medias for different learning styles. They reported finding the videos entertaining and the written content novel, engaging, yet easy to understand. Giving them whole new perspectives on their pain experience.

That said, attendance to the live group Q&A live sessions were consistently low throughout the whole intervention, with most participants reporting challenges around attendance, whereby time commitment afterwork was often touted as a stressor and an obstacle. This highlights the major issue when asking the public to take a more active role in managing their own healthcare, as self-care often drops to bottom of the list of priorities in busy lives. It also highlights the challenges when working with disassociated members of the public, who have very different work-life patterns and needs. Perhaps, fortnightly live sessions instead of weekly, would place less pressure on future course participants timetables and give them further flexibility around lesson consolidation.

Some of these problematic factors might be mitigated by working with group specific representations of the population e.g., office workers from the same company, NHS workers, teachers etc. whereby commonality of themes may run throughout their LBP presentations and peer support may prove easier in group work. Having a designated time agreed to practice the videos and attend the live sessions in work hours would potentially relieve these problems if used in a corporate wellbeing scenario.

Healthcare cost saving

That the online program didn't need to rely on 1-2-1 in person treatments to have a positive therapeutic effect, promises potential healthcare cost savings for patients, the NHS and employers alike. Cost saving for NHS and improvement in productivity in workforces are attractive carrots to be dangled in a climate that see's the government providing over £12m of funding 'to unlock the potential of digital technologies to support the delivery of care' (NHS England, 2024). The government recognises the efficiency and effectiveness of digital interventions to relieve pressure on the system, with increased workforce productivity and accessibility to care being touted as some of the many benefits (NHS England, 2024). No

wonder there is such a drive for innovation, at a time that currently sees 12 million workdays lost every year to back pain in the UK, accounting for one of the most common reasons for absence from work, (Unison, 2025).

Improvements in the study method

Some participants reported that the video software used was glitchy when trying to rewind videos to specific points. More advanced software designed specifically for online courses would help to get rid of this issue and promote the ability for participants to revise specific parts of the content as needed. With such upgraded software weekly lessons could be tracked with times viewed and patient progress.

Ceulemans et al. (2024) highlight how BPS rehabilitation for chronic low back pain needs 'conceptualization on how to personalize' such interventions to integrate them into clinical practice. For example, one client admitted to not being able to get up and down off the floor, meaning they couldn't do large sections of the videos. This ability, therefore, needs to be included in inclusion criteria for this online program. Whilst the online videos tried to offer as many variables for personalisation as possible, scope for a secondary program for those with more extreme mobility and fitness restrictions, could be developed, as discussed by George and Zeppieri, (2009).

Limitations with the Study

The small sample size of the group, with only 12 participants completing the study, presented a limitation of the study. It would be useful to run the study with various groups and to track the longer-term outcomes of QOL over the course of the preceding year. Positive outcomes for NSLBP have considerably lower markers than for acute LBP (Otero-Ketterer *et al.,* 2022). This indicates that whilst this study's data saw, what some might perceive as, subtle shifts in participant's QOL, the results are still significant (Bolton and Breen, 1999).

The complexity of persistent LBP and its entanglement with BPS factors make relying on questionnaires such as the BBPQ complicated. Aherin, (2023) recognised this is her study

“[T] here are inherent limitations to using self-report measures” such as an individual’s inability to recognise or report a true state of stress (Epel et al., 2018, p. 5).

Conclusion

The effectiveness of this study into the OLJM for the treatment of NSLBP, which showed a + 50% decrease in perceived pain using the BBPQ, will comfortably add to the growing body of research regarding online therapeutic interventions. Research around the longer-term benefits of online therapeutic interventions is still in its infancy. But with the new government looking towards technology to help solve some of the demands put on NHS and workforces through chronic conditions such as NSLBP, it seems there’s a real demand for investigating online strategies further.

Whilst there is no denying that 1-2-1 patient-therapist interactions still seem to yield the greatest TA and positive outcomes, it is clear from this study that strong outcomes can still be achieved online. Online group health coaching interventions do appear to offer alternatives to an already overburdened NHS. However, how to personalise therapeutic practices in a varied group dynamic with different BPS markers, still poses a challenge for future online health developers to overcome.

The ability of pain science to deeply support a multi-modal treatment approach, shows great potential for improving the QOL in those experiencing NSLBP. Perhaps an either-or approach, therefore, is limiting by nature? Rather, online interventions could be used as an adjunct to support and develop the work started by clinicians in the treatment rooms. Using online multi-modal programs, rooted in self enquiry, and understanding, to help reduce return healthcare visits and time spent off work, through continued patient empowerment.

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APPENDICES

Appendix A

Completed & Signed Ethical Approval

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

Jing BTEC Research Ethics Form

BTEC Level 6: Professional diploma in Advanced Clinical and Sports Massage

Section 1: to be completed by student

Student's name:	Emma Wall
Student number:	PE31570
BTEC Year-group:	2023-2025
Date of application:	18/04/24
Student e-mail address:	oceanflowtherapies@gmail.com
Title of research project:	**Evaluating the effect of the online Jing method on quality of life in adults aged 38-74 experiencing non-specific lower back pain.**

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.?		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. The Bournemouth back pain questionnaire		

Section 3: Research premises

Where is your research being undertaken? Online intervention, carried out in location of client's choice, with the most likely being their own home.	
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?

Via my newsletter and the newsletters of a few other people I know in the MSK and wellness industry, Instagram reels and posts and Facebook posts, both on my business Facebook page and shared to other groups that I'm a member of.

Section 5 Outline your project procedure

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

The study will evaluate the quality of life in those experiencing lower back pain by using the Jing method adapted for an individual to do at home. This study uses a within subject design.

There will be an initial contact and conversation with participants to ensure they meet the inclusion criteria and understand the research study and sign a consent form to take part.

Weeks 1-6: participants required to fill out the Bournemouth Backpain questionnaire once-a-week on a Monday, which they will return to me digitally by the end of the day.

Participants will then take part in an online consultation prior to starting the intervention on a pre-arranged time.

Weeks 7-12: a 6-week online intervention Tue-Mon.

- Clients will be given access to a pre-recorded video of approximately 30 minutes and accompanying worksheets every Tuesday, which they can do at any point throughout the week before the Friday Zoom.
- Mid-study-week they will be expected to join a live zoom Q&A every Friday 6:30 pm-7:10 pm, to discuss any issues with that week's learning and ask questions related specifically to the topics of the week.
- Participants will be expected to repeat the video at least one more time that week after the Zoom meeting and before the next set of materials arrives on a Tuesday.
- They will continue to fill out and digitally submit their questionnaires every Monday.

The online intervention will follow **5 pillars of pain-free living (Educate, Embody, Evolve, Empower, Enable),** a system created by myself to easily break down and showcase The Jing Method in a home learning setting.

- Videos will constitute a follow-along format, starting with a mindfulness activity or mini acupressure treatment, then a section in self-massage & MFR, followed by stretching and strength training. (**Embody, Evolve, Empower)**
- Printable resources will contain education around pain science to read before doing the video class; and self-care activities such as journaling, to look at after having done the video. (**(Educate, Enable).**

At a pre-organised time, over the final weekend of the intervention, participants will once again have a one-to-one online consultation with myself to check their progress.

At week 16 participants will fill out the questionnaire one last time, to check the longevity of the effects of the treatment intervention. They will also be asked to share any feedback with me about their experience over a closing telephone call.

Section 6: Describe what your participants need to do

Participants are required to respond to initial contact via email and a telephone call if needed to:

- Check they meet the inclusion criteria.
- Have the study explained to them so they can give consent to take part in the study. Collect information required for the consultation process.
- Participants are required to inform the researcher of any medication or other treatment interventions they are receiving for back pain throughout the 12 weeks of duration of the study.

Throughout the study

- Weeks 1-6, Participants are required to fill in and return The Bournemouth Backpain questionnaire once a week on a Monday for 6 weeks with no intervention.
- Before starting with the online component of the course, all participants will be required to attend an online one-to-one consultation with myself, which will happen the week directly before the intervention. A consultation will also be done at the end of the online course component of the study, which will happen over the last weekend of the study.
- Weeks 7-12, participants will receive a new set of online course material once per week on a Tuesday morning, for the duration of 6 weeks.
- Participants will be required to read the **Educate** worksheet first. They will then be expected to do the follow along video with components of **Embody, Evolve, Empower,** at least twice throughout the week. After having done the video the first time, they will then read the **Enable** worksheet and consider the activity.
- Participants will be expected to join the live Zoom in the middle of every week on a Friday and contribute with any questions or thoughts that they may have about the **current week's learning**. Participants will be expected to respect the confidentiality of other members of the study and show consideration and respect around issues of sensitivity.
- Every Monday, at the end of the project's week, each participant is required to fill in the Bournemouth backpain questionnaire and return it digitally to the researcher prior to the next set of learning materials being sent out.
- The participant will inform the researcher each Monday how many times they performed the

Video that week and confirm that they have read all accompanying worksheets and considered any extra activities.

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?

- Participants reserve the right to change their name and keep their video turned off in the live zoom sessions.
- Participants are asked to respect the confidentiality of other participants and to show consideration and respect around sensitive issues.
- Data held will be in accordance with the General Data Protection Regulation (GDPR)
- Information on initial signup form informing participants that their information will not be available to third parties.
- Assurance that details will not be seen by anyone else.
- Their names will be replaced by numbers in the study so they will be anonymous.
- Participants will be added to the Ocean Flow Therapies mailing list with permission only.
- There is a slight risk that the exercises and activities suggested by the intervention may cause a participant's back pain to worsen. In such a case participants are asked to refrain from the aggravating action(s) or activity and seek advice of how to proceed in the group Zoom.

Section 8: Inclusion and exclusion criteria

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

- people experiencing non-specific lower back pain, defined by the World Health Organisation as when it 'isn't possible to identify a specific disease or structural reason to explain the pain'. (WHO, 2023)
- Adults aged 30+
- Have experienced non-specific LBP for 3 months or more.
- Those that consider their back pain to be affecting their quality of life

The study will exclude:

- Those with a diagnosis of a specific disease, or systemic pathology such as Fibromyalgia, MS, or a current cancer diagnosis.
- Those with an injury that has occurred within the past 6 months, or those with a structural issue such as a confirmed diagnosis of a herniated disc within the last year.
- pregnant ladies or ladies 1 year post-partum.
- Those who have undergone surgery in the past year.

Section 9: Student declaration:

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

Student's handwritten signature:

_____

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

Print Name: **Emma Wall** **Date:**

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 / NO 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 / NO 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 / NO 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 / NO I am confident the participants' confidentiality will be preserved.

YES / NO I consider that any risks involved to the student, the participants, and any third party are minimal.

YES / NO 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: ..... date: .....

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 B

Jing Consent Form

PARTICIPANT CONSENT FORM

Title of study: Evaluating the effect of the online Jing method on quality of life in adults aged 38-74 experiencing non-specific lower back pain.

Name of student: Emma Wall

	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. • 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 understand that online sessions may not be recorded		
I understand the online sessions might involve other participants and I		

will respect the confidentiality of the group and not share information with others		
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): **Emma Wall** **Tel no: 07480 939652** **Email:**oceanflowtherapies@gmail.com		

Appendix C

Ocean Flow Therapies Consultation Form

Ocean Flow Therapies Online Consultation Form (with Clinko)

Presenting complaint
Add body chart +
Complaint history: When, where, how, how long?
What makes Better/worse?
Medical history
Psychosocial & Yellow Flags
Pain scale 1-10
ROM & Special Tests
Treatment Summary
Clinical evaluation
Self-care advice
Treatment and rehab plan moving forward

Appendix D

Bournemouth Backpain Questionnaire

Bournemouth Questionnaire for Low Back Pain:

The following scales have been designed to find out about your Low Back pain and how it is affecting you. Please answer ALL the scales by circling ONE number on EACH scale that best describes how you feel:

1. Over the past week, on average how would you rate your Low Back pain? No pain **0 1 2 3 4 5 6 7 8 9 10** Worst pain possible

2. Over the past week, how much has your Low Back pain interfered with your daily activities (housework, washing, dressing, lifting, reading, driving)?
No interference **0 1 2 3 4 5 6 7 8 9 10** Unable to carry out activities

3. Over the past week, how much has your Low Back pain interfered with your ability to take part in recreational, social, and family activities?
No interference **0 1 2 3 4 5 6 7 8 9 10** Unable to carry out activities

4. Over the past week, how anxious (tense, uptight, irritable, difficulty in concentrating/relaxing) have you been feeling?
Not at all anxious **0 1 2 3 4 5 6 7 8 9 10** Extremely anxious

5. Over the past week, how depressed (down-in-the-dumps, sad, in low spirits, pessimistic, unhappy) have you been feeling?
Not at all depressed **0 1 2 3 4 5 6 7 8 9 10** Extremely depressed

6. Over the past week, how have you felt your work (both inside and outside the home) has affected (or would affect) your Low Back?
Made it no worse **0 1 2 3 4 5 6 7 8 9 10** Made it much worse

7. Over the past week, how much have you been able to control (reduce/help) your Low Back pain on your own?
Completely control it **0 1 2 3 4 5 6 7 8 9 10** No control whatsoever What have you done?_____

_____

Patient Name:_____ Date:_____

Appendix E

End of intervention feedback forms

.

I've invited you to fill in a form:

LBP Course Feedback

Thank you for participating in my study. I hope you have learnt a lot from the experience and feel more empowered around managing your lower back pain than before you started.

I'd love to hear your feedback so I can keep improving the online course content and logistics. Please fill this quick survey and let me know your thoughts.

Name (optional)

Overall how satisfied were you with the online course? *

1 2 3 4 5

Not very Very much

On average how many times a week did you practice the video content? *

- Once a week
- Twice a week
- Three Times a week
- Four or more times a week
- Other:

How useful do you feel the live 1-2-1 consultations at the beginning and end of the course were? *

1 2 3 4 5

Not very Very

How useful do you feel the live weekly group coaching sessions were? *

1 2 3 4 5

Not very Very

Did you feel supported throughout the course and with your online treatment journey? *

1 2 3 4 5

Not very Very much

Any comments around the live online sessions & consults?

How satisfied were you with the 5 Pillar approach *

1 = Very dissatisfied 5 = Very satisfied

	1	2	3	4	5	N/A
Educate						
Embody						
Evolve						
Empower						
Enable						
All Combined						

Which elements of the pdf's did you find most interesting/useful? Why?

Which elements of the videos did you find most interesting/useful? Why?

Which elements of the pdf's & videos did you find least interesting/useful or challenging? Why?

Do you have any further feedback around how the content was delivered? (Order of information, ease of use, layout, accessibility, breakdown of ideas...)

How much of the course content & learnings do you think you will continue to implement into your daily life moving forward? *

1 2 3 4 5

Not very much Loads of it

How relevant and helpful do you think the whole course package was for your personal presentation of lower back pain? *

1 2 3 4 5

Not very Very much

Are you feeling more empowered around understanding and managing your lower back pain moving forward? *

1 2 3 4 5

Not very much Very much so

Appendix F

Online Lower Back Pain Course Programme (Study Intervention)

	Educate (pdf 1)	**Embody** (video)	**Evolve** (video)	**Empower** (video)	**Enable** (pdf 2)
Week One: Down the back	The Bio-Psycho-Social modal of pain. The 5-Pillar approach to managing persistent pain.	Somatic tracking mindfulness exercise. Heat therapy for pain relief & relaxation. Witnessing sensations as a passive observer.	Pacing your movement & working within a comfortable intensity. Pelvic tilt variations/ Cat Cow.	Spinal extension variations. Keeping all degrees of motion available in the spine. Steps for deepening spinal extension.	Weekly pain tracker chart. Tracking your personal experience with lower back pain.
Week Two: Down to the Bottom	Fabulous Fascia: Understanding what fascia is, the role of fascia in the body, myofascial lines, how unhealthy fascia can contribute to Lower Back Pain, and how to keep fascia healthy.	Introducing the Chinese meridian lines. Acupressure points for LBP: KI1, KI3, SP6. Building deeper internal awareness (interoception).	Self MFR into Erector Spinae with balls. Myofascial back line/ Bladder meridian TCM. Self MFR into SI Joint and Glute Max.	Engaging and strengthening the backline. Bird Dog. Alternate Superman. Childs pose variations as counterpose.	Mini movement breaks. Walking for lower back pain. Mini movement break ideas and motivation sheet.
Week Three: Into the sides	Issues in the tissues or pain in the brain. Understanding pain as a top-down phenomena. The multiple factors that contribute towards the creation of pain.	Breathing space into the side body. Self-massage of the QL muscles & Obliques.	Mobilising external/internal hip rotation. PNF stretches for External & Internal Hip Rotators.	Clam shells for the hips. Side-lying abductor lifts with resistance band. Side plank variations.	Healthy distractions – The power of un-focusing on your pain.

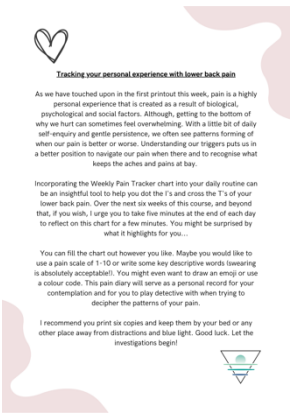
Week Four: The Deep Front	Kinesiophobia explained. Why we might develop fear of movement.	Waking up the diaphragm with the breath. Self-MFR for the Deep Front Line & the stomach muscles with a Pilates ball. Abdominal massage and tapping.	Iliopsoas (hip flexor) stretch with gentle spinal extension. Half Happy Baby.	Strengthening the Psoas. Leg swings to free up the hip.	Sleep and chronic pain. Healthy sleep interventions.
Week Five: In the Middle	Myth busting around chronic lower back pain.	Jaw massage. Self-MFR for the jaw with tennis balls. Lions' breath to release stress in face & jaw.	Thoracic mobility with closed clam shell twists and an open leading arm. Hands behind head rib cage opening.	Strengthening the postural muscles and mid back with - hand weights, long resistance band, or cans of beans! Dynamic core exercises.	30 day back pain challenge
Week Six: Putting it all together	(pdf 1) Building your own self-care programme. (pdf 2) Lower Back pain Rehab example. (pdf 3) My own programme blank printable.			Becoming your own therapist. Closing words for the course.	Carving the path for pain (less) living. Enabling others by sharing what you've learnt with your family, friends, and peers.

Props needed	Computer, pen & notebook	Wobble cushion (optional), Small Pilates ball, 2 x tennis ball in a sock, Heated wheat bag or HWB.	2 x tennis ball in a sock, a yoga block or cushion.	Small loop resistance bands, A cushion	Access to a printer

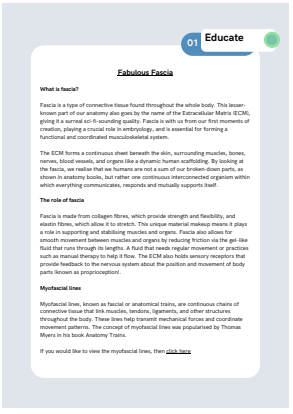
Appendix G

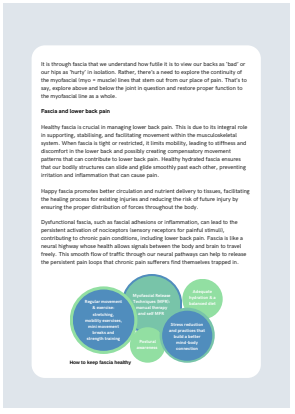
Online Lower Back Pain Course PDFs Weeks 1-2

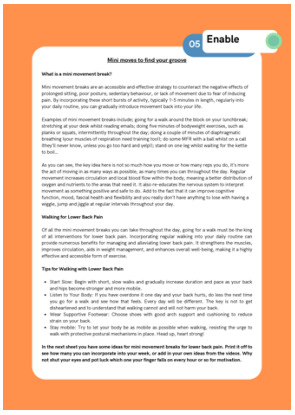
Week 1 online course pdfs and pintables



Week 2 online course pdfs and pintables

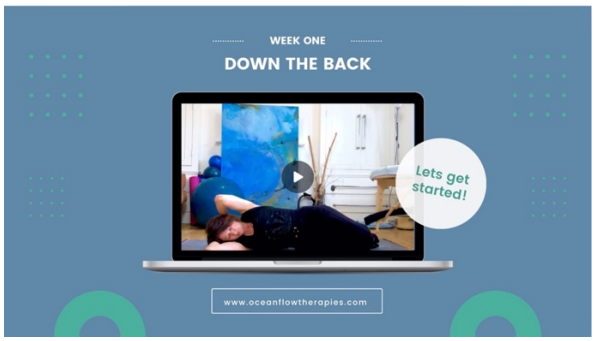


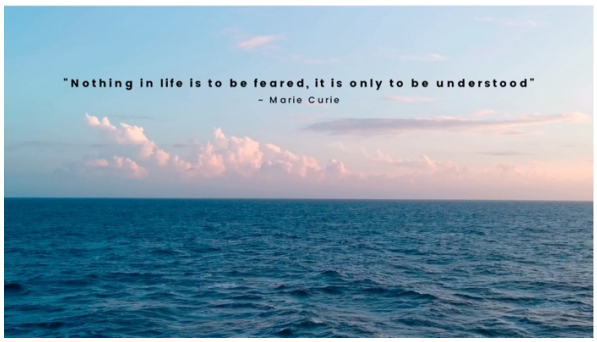


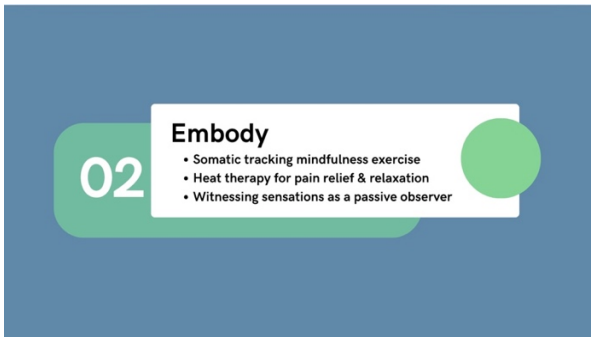


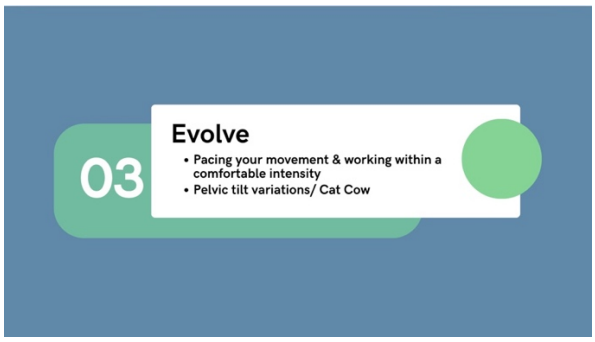
Appendix H

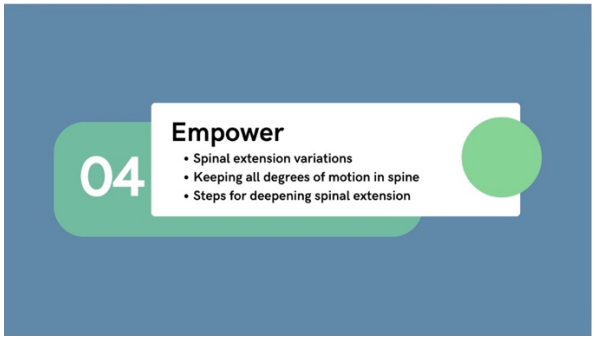
Example Snapshots of week 1 video content for online course intervention (Each week's content was different, as laid out in the course programme).










04
Empower
• Spinal extension variations
• Keeping all degrees of motion in spine
• Steps for deepening spinal extension


OCEAN FLOW
THERAPIES

Appendix I

Inter-control group comparative throughout the 16-week study, highlighting the link between BPS factors and NSLBP.

Table 4 Group comparison of Q1

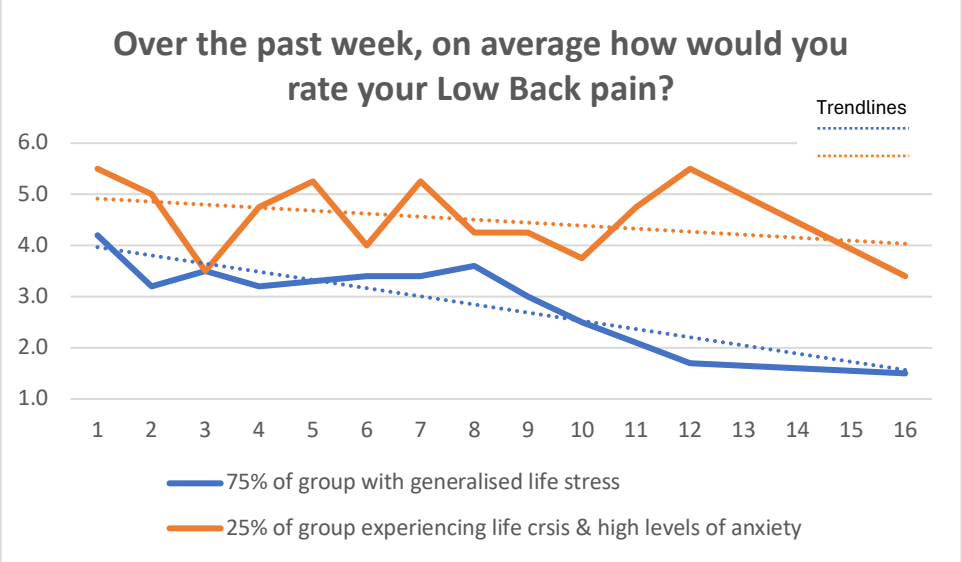


Table 5 Group Comparison of Q3

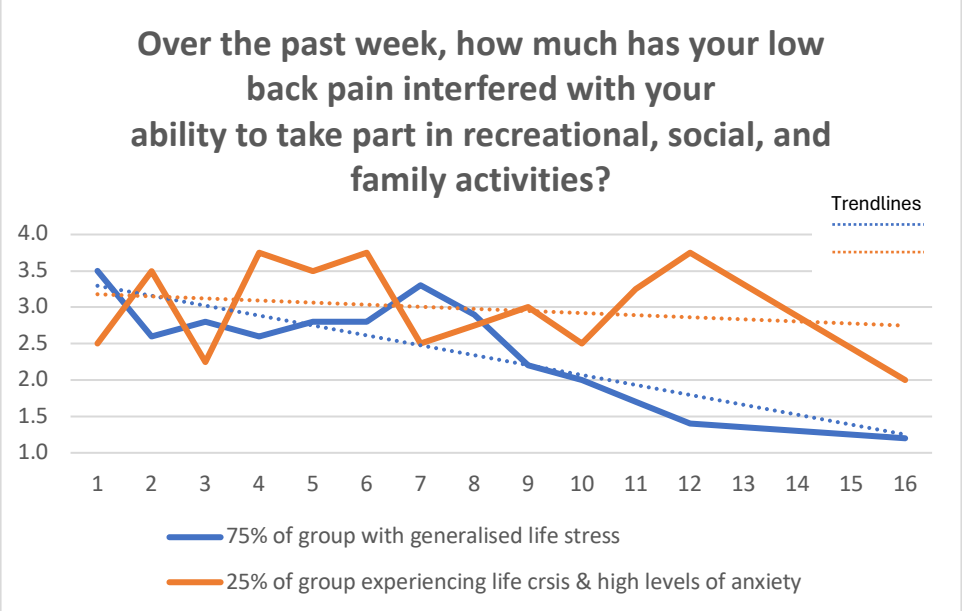


Table 6 Group comparison Q6

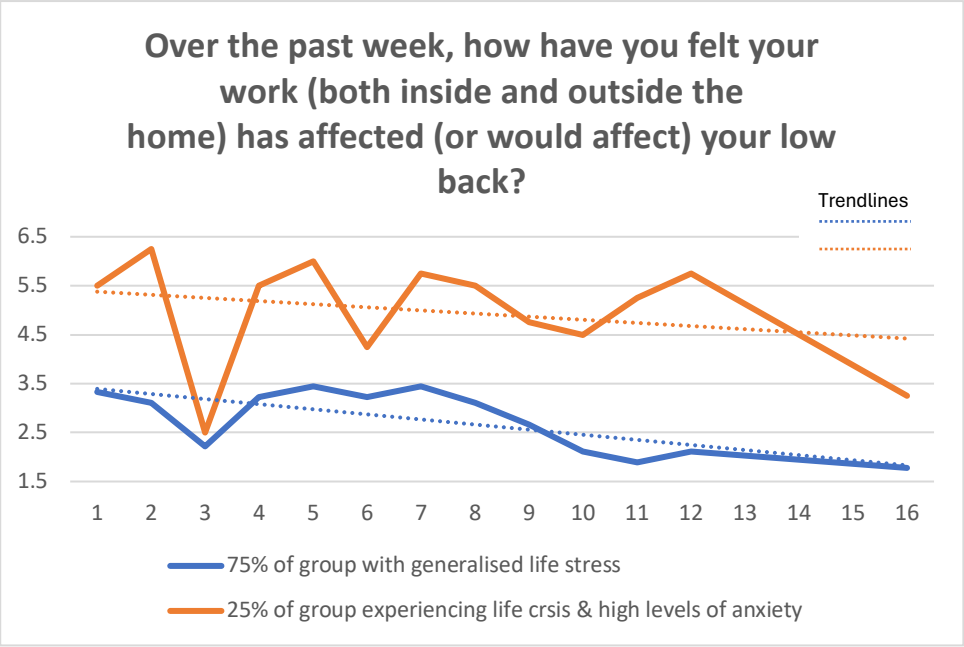
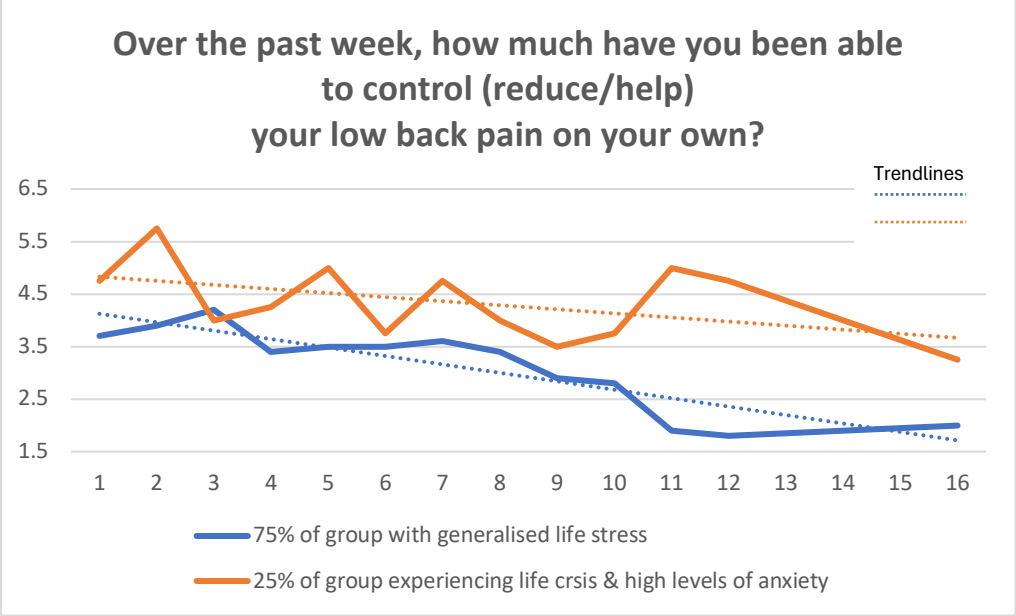


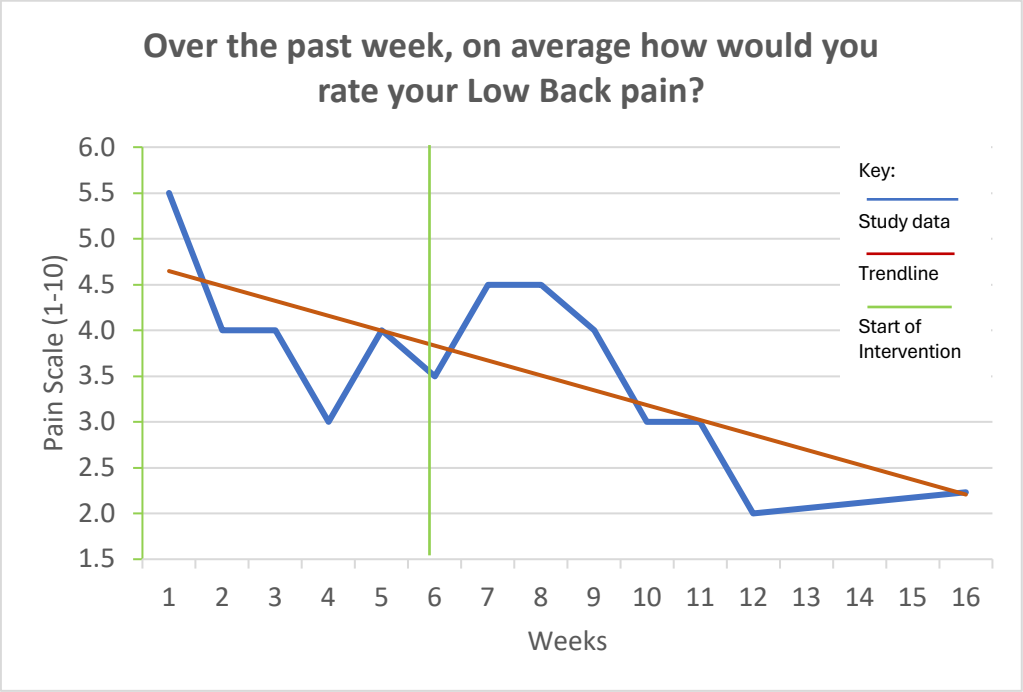
Table 7 Group Comparison Q7



Appendix J

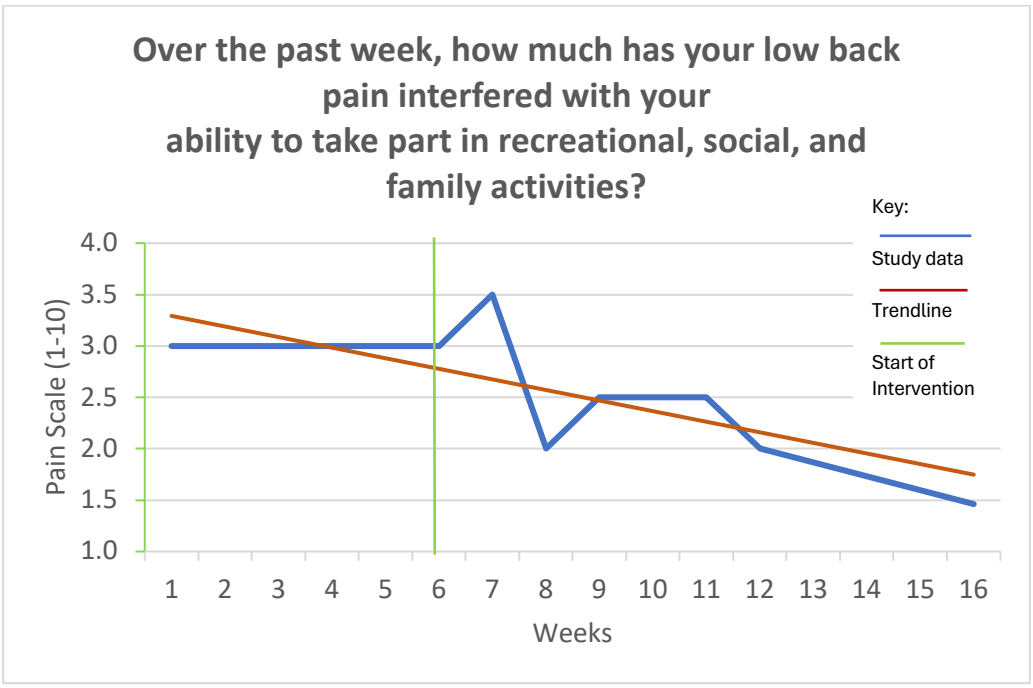
Median scores of whole study control group

Table 8 median data for whole group Q1



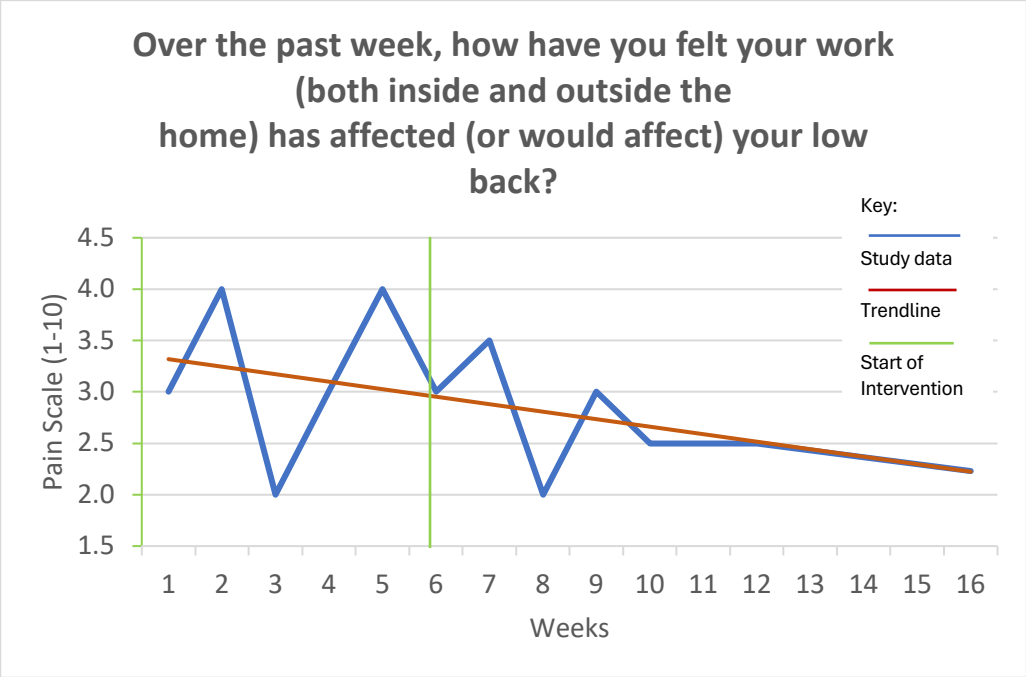
Whole group median showed a 3.5 point drop in pain by week 12, changing to 3.3 by week 16.

Table 9 Median data for whole group Q3



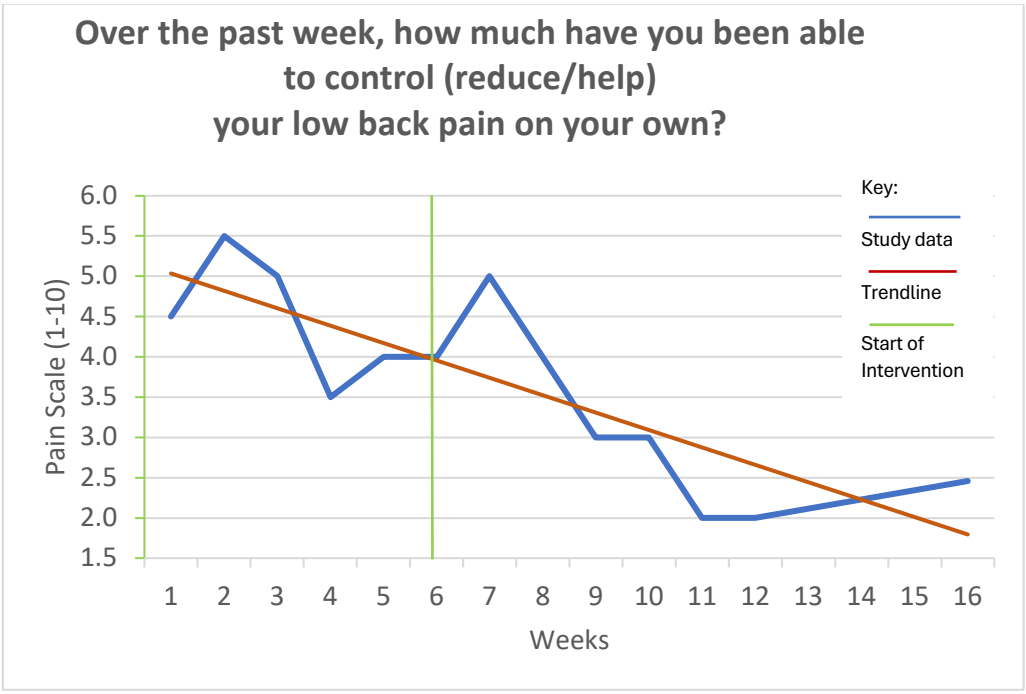
Whole group median showed a 1.5-point drop in interference with activities by week 12, changing to 2 by week 16.

Table 10 Median data whole group Q6



Whole group median showed a 2-point drop in pain interference with work by week 12, changing to 2.3 by week 16.

Table 11 Median data whole group Q7



Whole group median showed a 3.5-point drop in inability to control pain by week 12, changing to 3 by week 16.