

Reconnecting the Mind and Body: A Pilot Study of Developing Compassion for Persistent Pain

Short title: Developing Compassion for Persistent Pain

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Abstract

As an alternative to the more typical cognitive behavioural approach to pain management, a novel pain management group based on the principles of compassionate mind training was developed for a particular sub-group of patients. Participants were patients of a community pain clinic, who were invited to participate in this alternative approach to pain management. The eight-week Compassing in Pain Groups included psychoeducation around persistent pain, the underlying principles of compassionate mind training, practical exercises such as diaphragmatic breathing, followed by a series of compassionate imagery exercises and group discussions. Both quantitative and qualitative analyses were undertaken to gain further insights into the usefulness and efficacy of this approach. Firstly, descriptive statistics indicated that participants reported lower scores for pain-related anxiety and depression upon completion of the groups. Participants also reported higher scores for self-kindness and self-compassion, pain willingness and activity engagement. Secondly, qualitative data was collected through audio-recorded reflective group discussions at the end of the final session, which were analysed using interpretative phenomenological analysis. Findings from the qualitative analysis suggested that participants experienced themselves and their pain differently over the course of the group due to self-reflection, self-acceptance and the development of new skills leading to a new found sense of wholeness, integrating their current experiences of pain and past selves. Implications and recommendations are discussed.

Key words: Persistent pain, self-compassion, parasympathetic nervous system

Reconnecting the Mind and Body: A Pilot Study of Developing Compassion for Persistent Pain

Persistent pain, also known as chronic pain, is classed as such when pain has persisted for longer than three months⁴. Persistent pain is a universally recognised and common difficulty for many people, with an estimated 1.5 billion people worldwide experiencing some form of persisting pain. Further, approximately 3-4.5% of the global population experiences neuropathic pain¹⁰, where often damage or disease has affected the somatosensory nervous system. Persistent pain is thought to impact the lives of one in five people in Europe¹ and has a great impact on quality of life. People experiencing persisting pain report higher levels of depression, anxiety, social isolation and stress than the general population^{7,8,12,22}.

Pain management programmes (PMPs) based upon cognitive behavioural (CBT) principles are recommended as the treatment of choice for people with persistent pain, where there is evidence of significant impact upon quality of life, physical, psychological and social functioning². Psychological methods that promote “acceptance, mindfulness and psychological flexibility” are also encouraged by the British Pain Society (2013 p.8). It is noteworthy that these are also core principles of compassionate mind training (CMT)⁹. Compassion can be understood as an awareness or experience of suffering within oneself and others, and a commitment to relieve distress⁹.

The National Health Service (NHS) community pain clinic involved in this study has routinely collected outcome data for the purposes of monitoring and evaluating the established CBT-PMP. Over time, the analysis of group data has suggested clinically significant improvements in pain-related disability and distress, which are maintained at 12-month follow-up. However, individual case reviews highlighted a group of high functioning *strivers* who constantly battle to maintain arduous schedules whilst struggling to adjust to living with pain. This group of people generally benefit from participating in the CBT-PMP

approach, although have a higher risk of post-PMP relapse, specifically in relation to higher levels of depression and fatigue. CBT-PMPs are based upon the fear avoidance model of pain^{15,20,21} and encourage participants to appropriately increase activity levels from a low baseline. However, this approach may exacerbate pain related difficulties where a person's main coping strategy is to continue to maintain inappropriately high levels of activity, despite the pain they are experiencing.

Thus, a new Compassion in Pain Group (CIPG) was developed specifically to target this group of *strivers* and help them pace their activity levels, improve their self-care and develop self-compassionate coping strategies. The rationale for developing this new CIPG drew on existing literature suggesting that self-compassion has been found to be significantly linked with the ability to accept the presence of pain⁵ and that further research exploring pain acceptance within a community setting is needed¹¹. Further, it was recently suggested that there is a need to understand the “therapeutic utility” of self-compassion for people experiencing persisting pain¹⁶ [p.2354]. Consequently, it was hoped that teaching this group of people techniques focusing upon compassion for themselves might enhance their ability to manage their persistent pain through compassionate understanding, personal insight and acceptance. Specifically, the authors anticipated that increasing self-compassion would be a moderating factor for pain-related distress, in that high self-criticism would drive pain-related distress and pain as a result of over-activity. Therefore, increasing self-compassion should allow greater pacing and less over-activity-related pain.

Method

Participants

Participants were invited to partake in a CIPG instead of the usual CBT-PMP if their psychological assessment suggested they were highly self-critical, fighting against their pain

to maintain high activity levels and using a range of coping strategies based on increasing functioning rather than suitable pacing and self-care. Within pain management services, this presentation is often referred to as a *boom and bust* pattern. Across the two CIPG groups, eight participants provided a full set of pre- and post-group measures and six participants offered verbal feedback through audio-recorded reflective group discussions at the end of their last session.

<INSERT Table 1. Characteristics of the participants>

Ethical Considerations

Following discussions with the relevant manager for research and development within the hospital in which the intervention was conducted, it was considered that NHS research committee approval was not necessary. Instead, participants were consulted as to the possible uses of their feedback about the sessions. Following this discussion, participants were asked to sign an information and consent form if they were agreeable to the use of their quantitative and qualitative data being used for service evaluation, development and publication purposes. Within the information sheet and consent form, participants were provided with information about the aims of the study, the boundaries and anonymity of their participation, how the data would be stored and how it might be used (e.g. service development and publication), and how they could access a summary of the analyses.

Procedure

An eight-session pilot CIPG programme was developed, drawing upon the principles of Compassion Focused Therapy (CFT) and the practical training strategies of CMT⁹. It was adapted for working in the context of persistent pain, emphasising the neurobiological and

evolutionary importance of compassion to managing pain. This was achieved through psychoeducation around the nature and impact of the sympathetic nervous system and parasympathetic nervous system in relation to psychological health and pain, followed by practical exercises to promote experiential learning. The overall course content followed that of Table 2.

<INSERT Table 2. Structure of CIPG>

Descriptive Statistics

The pre- and post-intervention measures administered ($n=8$; Table 3) were standard pain and mood measures often used within pain management services to monitor the effectiveness of a number of pain rehabilitation pathways. In addition to these typical measures, the Self-Compassion Scale (SCS¹⁶) was administered for the participants of the CIPG to explore how the intervention influenced their perception of their own self-kindness.

<INSERT Table 3. Accessible Summary of Measures>

Interpretative Phenomenological Analysis

Finally, in order to ensure the voices of the service users were heard and accurately informed the findings of this study, in-depth qualitative data was collected through audio-recorded reflective group discussions after the final group sessions ($n=6$), which offered nuanced perspectives from the participants' first person accounts of their experiences through an interpretative phenomenological analysis (IPA). IPA aims to explore the participants' cognitive and emotional responses to their experiences and acknowledges that participants develop interpretations of experiences based upon meaning making processes¹⁷. Therefore, it was considered that an IPA approach would be a particularly appropriate process of analysis

as participation in the group itself was hoped to lead the participant to reflect upon their cognitive and emotional reactions to their pain experiences. Additionally, IPA is an explorative form of analysis and is commonly used for facilitating understanding around current phenomena¹⁸. Further, self-compassion as a construct involves considering oneself non-judgementally, being mindful of one's own difficulties and seeing oneself as part of the collective human race¹³. Therefore, IPA and the use of reflective focus groups was highly relevant for this study, which sought to explore participants' experiences of the CIPG individually and collectively.

Accordingly, the recordings of the reflective groups were transcribed verbatim and analysed¹⁹. Once the first author had transcribed and coded the data, conversations around the developing themes were held with the second author, in order to aid further interpretation and depth to the analysis. Once the final superordinate themes had been identified, the transcripts were re-read and the emerging themes reviewed to ensure the superordinate themes captured the emerging themes at both the individual and group levels.

Results and Findings

The findings of this study indicated that once participants had completed the CIPG, they reported lower scores for pain-related anxiety and depression (Table 4). Additionally, participants reported higher scores for self-kindness and self-compassion, pain willingness and activity engagement. Therefore, it is suggested that as the participants from this study became increasingly self-compassionate, they adopted a different approach to their pain management, which positively influenced their emotional wellbeing and reduced their perception of pain.

<INSERT Table 4. Pre- and post-intervention measures for both CIPG groups>

Despite the relatively small number of participants in terms of deducing meaning from the data reported in Table 3, some interesting trends emerged. For instance, the greatest variance amongst the participants related to their reports of their emotional wellbeing, such as scores for depression (Fig. 1), anxiety and pain willingness. However, there was comparatively little variance in terms of self-kindness and perceived disability. There was a noticeable increase in activity engagement, despite the persistence of their pain and the mean score for perceived disability remaining fairly stable. Tentatively, these data may suggest that a small increase in self-kindness might encourage much greater activity engagement despite the perception of disability (Fig. 2). These findings are further supported by the current literature in that beliefs about pain, rather than pain intensity, are more influential¹⁴. The findings of this study indicate that beliefs about oneself may also be powerful. The observable stability on the pain disability scores may be due to an increased acceptance around experiencing pain, as a result of being in a group of people also experiencing persistent pain and the role of acceptance in CMT. Crucially, self-kindness had a negative relationship with pain, as reported by the VAS (Fig 3), which suggests the CIPG approach was beneficial for the purposes it was designed for. Although progress was not linear, the figures illustrate some important relationships found within the data that warrant further consideration and exploration. Aspects of these processes were discussed throughout the qualitative analysis.

<Insert Figure 1>

<Insert Figure 2>

<Insert Figure 3>

The IPA analysis¹⁹ led to the development of three superordinate themes, which are discussed in this section. All participants contributed to each of the three themes, which

originated from 60 emerging themes that were interpreted from the initial notes and the 187 preliminary emerging themes.

Theme 1: Longing for the Forgotten Me and Facing Oneself - *you've been like that for so long, you've forgotten what it felt like before* (Elsie¹)

This first theme encapsulates the intrapersonal process participants described experiencing as they engaged with the CIPG. The group format adopted a biopsychosocial approach to pain and the personal accounts illustrate how connecting the mind and body was a first step. For instance, as Elsie explained: *"I hadn't realised, like... the important connection between the mind and the body at all"*. A frequent discussion within the groups centred on how thoughts and feelings influenced the body and the cyclic experience of tension or pain triggered anxiety and vice versa. With this connection in mind and increased awareness of psychological and physiological processes working together, the participants reported that they understood the use of the key techniques, such as the diaphragmatic breathing, which participants suggested encouraged them to try to sooth themselves:

my mind is just all over the place but I do notice it and if I can nip it early on, I've just stopped going from there to there [low arousal to high arousal] very quickly and I have been able to control it.

Elsie

Similarly, Pocahontas also commented that *"I think all of it [the course] has made me more aware... I've learnt a lot coming here"*. This process of learning strategies to understand oneself was a strong code within the data.

However, with greater awareness and understanding came many personal challenges. For instance, during the multiple-self work, participants reflected upon how their anxious-

¹ Participants chose their own pseudonyms

self, angry-self, critical-self and emerging compassionate-self had formed over their lifetime, which clearly raised some difficult memories for some. For example, Lynn described: *“I’ve had some things come back to me that I’ve had to ask the family ‘did that really happen?’ because I’ve buried it so deep I was doubting whether it was a real event.”* Correspondingly, Chloe explained: *“I felt quite low sometimes [after the group] ... when you come away and you’re digesting everything we’ve done.”* Merry reflected that *“you’re gonna see sides of you that you didn’t know you had and that may possibly be helpful because... that’s when we’re starting to understand.”* Although the multiple-self work appeared challenging, most participants also said it was most helpful overall in providing them with further options for choosing how to respond to pain.

In summary, the participants developed awareness around how their persisting pain influenced them emotionally, which helped participants understand the psychological impact of persisting pain. Interpretatively, on a meta-level, participants were then able to consider why and how their minds had responded to pain in certain ways in the past and how they had coped with these psychological challenges.

Accordingly, codes emerged through the data such as *‘burying’*, *‘shutting down’* and *‘forgotten-self’*, which the reflection exercises and multiple-self work appeared to uncover. For instance, when reflecting on this process, Lynn explained: *“It’s not always by choice though is it, the burying it, it’s just your mind does as a natural protection system”*. Another important code within the data was that of *‘forgetting to protect’*, which appeared to relate to both mind and body forgetting or numbing, as a dual process, to help the participants cope with their pain experiences: *“I forgot what it felt like to have a normal body and I guess it’s just this other thing that’s taken over you and you long to feel like you’ve felt before, you do get to forget what’s normal.”* (Elsie). Furthermore, Lynn went on to say that: *“you take for granted that things happened in the past and it’s only when you start looking at them and*

analysing them that you realise that... there's another side that you bury and hide away from". Consequently, as participants appeared to consider how pain influenced them, they developed a greater sense of the parts of themselves that had been forgotten, which was described as a mind (forgetting) and body (numbing) separation process.

As the participants moved through this process of rediscovery and reconnection, they described enhanced acceptance of their vulnerability. Sky explained how her son had found her crying after one CIPG session and she explained to him: *"yeah, it were just a weird day, I had to face myself and it were weird"*. Following a discussion about what was meaningful for the participants from their perspective, Merry suggested that: *"making us look at who we've been and who we really are and not the person we put on every day"*; to which Lynn added *"what's made us into that person"*. Interpretatively, most of the participants described a process through which they had historically re-built their sense-of-self away from their pain related experiences, using this separation as a coping strategy and striving as a way to maintain this separation. However, the cost of this separation was very high and unsustainable, leading to periods of *bust*, when participants had to accept the reality of the impact of their pain, which was described as causing a great deal of exhaustion, anger and sadness. To conclude, the compassionate imagery work appeared to help the participants re-build their sense of self once more, to accommodate their pain experiences and vulnerabilities, but not as to hold pain at the centre of all they were and did. As Lynn reflected: *"what's made us like that and I think that's... that's something we've all hidden from that, we've buried it that's why this week has been a real open door"*.

Theme 2: Pain is Pain, Although Lighter Now: foundations, core skills and soothing the self-talk - “*when you’re in so much pain your body’s tired, your brain’s tired, it kind of winds it up*” (Merry)

The construction of pain and the participants’ relationship to pain were central themes within the data. However, throughout the data was a sense that the techniques taught throughout the group helped participants alter their approach and perceptions of their pain. For example, Elsie stated: “*I just feel like my body is lighter now and can move easier*”. Merry discussed how she had become increasingly aware of how her fears had influenced her pain experiences over time: “*Mine was fears, I used to have these awful fears because of what happened to me and I was so close to dying and everything... I was frightened*”. Similarly, Elsie discovered that her anxious-self was very closely connected to her pain: “*I’ve realised that I’ve got a massive fear of it [pain] happening.*” During one of the group reflections, the participants explored how the CIPG had influenced their approach to pain management. The importance of the group setting appeared continually important for the participants in terms of developing a shared compassionate understanding, even if the participants had not yet developed a complete and integrated understanding of their individual experiences, as Pocahontas suggested: “*it’s different talking to people who have... people who are in pain kind or it’s different because they understand in a different way, I guess.*” Many of the participants talked about the isolation that experiencing persistent pain can lead to and how they had enjoyed being a part of a group of people who understood. This experience of being *one of the group*, rather than *isolated and alone*, appeared to facilitate the process of acceptance around their pain and that of pain experiences in the group.

In relation to exploring what had worked, participants identified that finding new techniques to try was important because they had previously found change very difficult. For instance, as Lynn said: “*we’d have carried on as we were before and I was getting to the*

point where I knew I needed something different". With the new techniques introduced, which were not centred on striving to cope but rather self-kindness and soothing, the participants appeared to find alternative ways to manage their pain. For example, Elsie explained how: *"When I've had the pain now, I have done the breathing straight away, just go with it ... I have felt as though it [the pain] hasn't risen like it would have done and I have felt more in control"*.

Similarly, the meditation, breathing and safe place imagery appeared to be key skills that the participants reported they could practice at home, which meant they could choose not to focus on pain: *"Well your mind can go one of two ways I think, when you're in bed because there's nothing else going on, so you focus on the pain, so you're shifting your focus by meditating"* (Lynn). Changing one's focus was mentioned by most of the participants at various stages. Finally, the implementation of these new skills appeared to reduce a lot of the pain related anxiety for many participants, who spoke about how *"the fear"* (Merry) could exacerbate the pain, as Elsie explained further: *"It's all just felt really out of control for years, whereas I feel like I've got some control back because that's what's scary about the pain, like not understanding why it's coming"*. Equally, Pocahontas stated that: *"I just feel a bit more empowered and in control, I really look forward to coming to the sessions, I don't know what ummm don't know, I guess it's just getting that control back. That's a big thing."* When participants discussed their compassionate-selves, there was a sense that their soothing compassionate-self could sensitively take control back from the pain, which was very different to the aggression of the critical-self towards their pain that many of the participants had previously struggled to manage. Within the compassionate self-talk, participants discussed new perspectives such as *"no one is perfect"*, *"it will be ok"* and *"good enough"*.

Theme 3: A Tough but Manageable Struggle - *"I could see the benefits, but to start with it's quite tough"* (Chloe)

All the participants who completed the programme reported they had found value in undertaking the course, although it had, at times, been a struggle. As Merry reported, *“it’s well worth to do it, but like you say if you can engage a 100% in it then, you’ll get a lot out of it”*. Further, Sky reported: *“it makes me feel good.”* Individually and collectively, the participants described how the process of taking part in the group helped them consider some of their current difficulties in a new light, which influenced their relationship with their pain. As Pocahontas explained, *“I just felt I’d dealt with stuff and then realised when I came here, well actually I’ve just been ignoring it”*.

Specifically, the process posed a number of challenges: *“I actually got upset the last time [previous session]”* (Sky). Further, Lynn explained how her increased emotional awareness influenced how she perceived and related to others: *“you feel quite vulnerable like you could quite easily be dragged back into it”*. Most of the participants discussed how they had talked to their family members and close friends about their experiences through the group, as they felt their relationship to themselves and with their pain change. Some also recommended that future participants of the group had information about how the group may make them feel: *“these sorts of things might happen so not to be alarmed by it, it’s just the process you go through”* (Merry). As mentioned in theme one, most of the participants found that the multiple-selves work uncovered memories and past difficulties; for instance, Lynn said, *“there are times when I’ve literally burst into tears and I’ve not exactly known why it’s happened but I’ve just thought the process of what to work through”*. Pocahontas explained how she found the process new and challenging: *“I found the last two sessions hard as well because I guess I found it quite hard to even think about... to bring them [multiple-selves] up, I don’t know it was just a bit... yeah!”* Therefore, the processes of rediscovery and reconnection the participants described were emotionally challenging at times, although

reported as ultimately helpful for the participants in their journey to find new means of managing their pain.

Despite the challenges participants reported, they continued to engage with the process and use the new strategies they had learnt, which may have been in-keeping with their overall striving style. Pocahontas explained how: *“CBT just felt like I was being given information and it was good and I could apply it but it didn’t give me any new skills whereas this kind of... has given us like a wide range of things”*. Interpretatively, participants discussed new ways of thinking around difficulties and their altered perspective towards themselves and their pain. Therefore, these new ways of thinking may have been as important a skill to learn as the practical exercises undertaken.

Finally, as Merry described, *“It’s really good, you’ve given us everything but its left us open now and that’s...it’s the end”*. The concept of feeling open seemed connected to acceptance and vulnerability, whilst retaining warmth and resilience. The participants who completed the group were keen to engage in further CMT work, which was reportedly due to finding something that worked, wishing to see fellow group members again and support with a similar ethos as opposed to striving to get better at CMT or close the “open doors” (Lynn). In summary, although participating in the group posed many physical and psychological challenges, the participants persevered with a sense of growing compassionate resilience, accepting of vulnerability and inquisitive awareness, which are more aligned with the ethos of CMT than self-critical striving.

Concluding Discussion

The findings indicate that a specifically tailored CIPG showed clinically significant improvements regarding pain-related anxiety, depression, activities engagement and pain willingness. Increasing self-kindness was also linked to a reduction in perceived pain. The

findings of this study support previous empirical findings in that just as depression and anxiety have been found to be significant predictors of pain management elsewhere^{1,23}, the current study demonstrated how a reduction in pain-related anxiety and depression was linked to a decrease in reported pain experiences and an increase in activity engagement and pain willingness. Furthermore, previous research has suggested that self-compassion and persistent pain acceptance are significantly correlated⁵, which this study would further support as both pain acceptance in terms of pain willingness and activity engagement noticeably increased as did self-compassion and self-kindness. Therefore, self-kindness had a negative relationship with pain.

Additionally, Carson, et al.³ concluded from their empirical study that loving-kindness meditation practices for lower-back pain could reduce their participants' reported pain, anger, and overall emotional distress. The authors recommended that such an approach could be beneficial for other people experiencing persisting pain also. Elsewhere, it has been found that mindfulness exercises are helpful in replacing the fear of low-back pain with acceptance and compassion to enhance wellbeing⁶. The current study adds to the existing literature with a nuanced perspective of how participating in a specifically tailored CIPG can enhance the wellbeing of people with a range of persistent pain conditions.

Implications for Theory and Practice

The findings of the current study indicate that it is essential for the foundation theory and skills of the CMT approach to be learnt before undertaking imagery practices.

Participants explained that they would perhaps not have tried some of the exercises without the psychoeducation around why the CMT approach could work for them neurobiologically and psychologically. Within a context of persistent pain, describing the physiology of compassion was reported as very important to the participants as they discussed how they needed to understand why the approach may help, seemingly to have faith that the struggle

would be worthwhile. Additionally, when the participants reflected on their experiences, they identified that they needed the diaphragmatic breathing and grounding mindfulness practice to help them cope with challenging memories and emotions that emerged throughout the latter imagery exercises. Therefore, breathing, mindfulness and safe place imagery appeared core techniques that the participants were able to draw upon to make the multiple-selves imagery effective and manageable. Importantly for multidisciplinary practice, the psychoeducation and techniques that the participants reported being most useful could be delivered by a range of allied healthcare professionals, which could make a CIPG approach a practical and accessible alternative to CBT-PMPs.

Furthermore, the process of rediscovery and reconnection could only occur once participants had remembered and recognised the parts of themselves that had been shut down, detached or forgotten due to the pain. Only then could wholeness be re-established. Consequently, the group sessions needed to be staggered over the weeks to allow for the digestion and reflection processes that the participants explained had been so important. Finally, all the participants who completed the CIPG expressed their sadness that the group had come to an end. As facilitators, the authors were also conscious of the “open door” that had been spoken of by many participants. Accordingly, monthly drop-in sessions were arranged for the participants, which they have since reported finding very helpful. Most of the participants expressed an interest in further CMT to sustain and develop their existing skills.

Strengths and Limitations

The obvious limitation in this study is the relatively small sample size for clinical research and thus only descriptive statistics could be explored in terms of quantitative results. However, an appropriate number of participants took part for an in-depth IPA study¹⁷ and the qualitative material certainly adds a new nuanced perspective to the existing pain management literature. There are two levels of bias within the study as only those

participants who completed the course provided both quantitative and qualitative feedback. Additionally, the feedback was provided to the service providers and authors of this paper, therefore, there was limited impartiality and experimental distance between the participants and researchers. Despite these biases, precautions were taken on the part of the authors to ensure an inductive analysis and standardised pre- and post-assessment procedures were undertaken to reduce interpretative bias. The qualitative feedback provided also suggests the participants felt able to provide constructive criticisms and feedback to develop the existing programme for future participants of the GIPG. Consequently, due to the ideographic nature of IPA and the rich personal reflections of participants' experiences, there is a degree of theoretical generalisability to the findings of this study¹⁹, although much more research in this area is required to understand more about the underlying processes associated with persistent pain, group interventions and CMT strategies in community clinic settings.

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Figures

Figure 1. Relationship illustration of an increase in self-compassion and decrease in reported depression

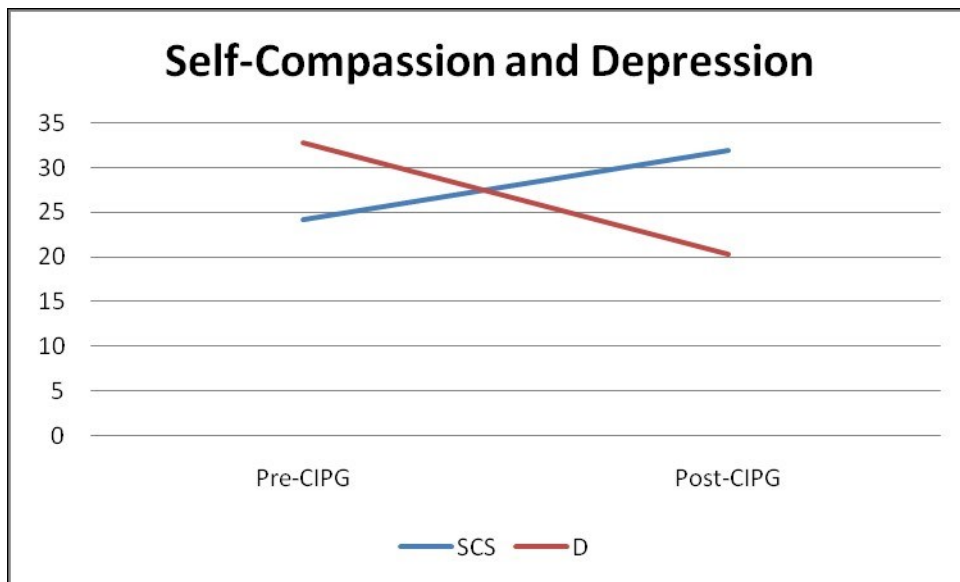


Figure 2. Relationship illustration to show an overall increase in self-compassion and enhanced activities engagement

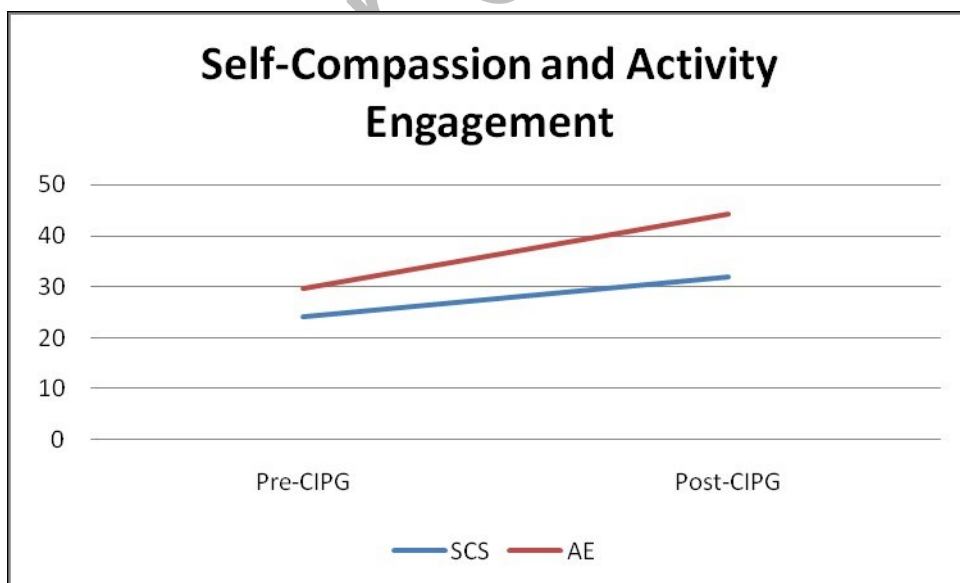
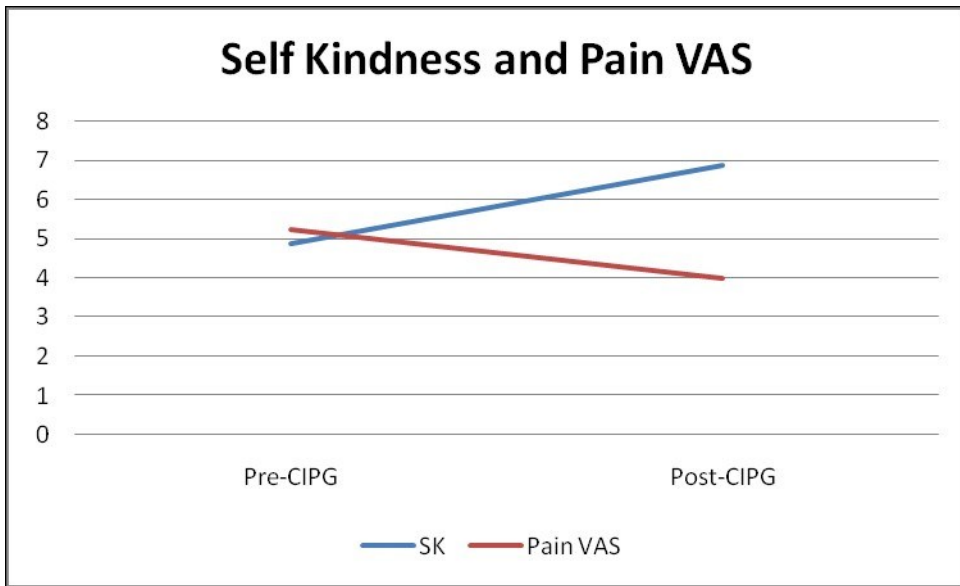


Figure 3. Relationship illustration of increased self-kindness and perception of pain



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Table 1. Characteristics of the participants

Pseudonym	Age band	Identified pain related condition	Pre-intervention Visual Analog Scale for Pain (VAS Pain) Score
Chloe	30-39	Chronic lower back pain	5
Lynn	50-59	Multiple Sclerosis with neuropathic pain	6
Merry	50-59	Persistent pain and fatigue secondary to an auto-immune condition	9
Sky	50-59	Fibromyalgia	8
Mark	40-49	Multiple Sclerosis with neuropathic pain	4
Pocahontas	20-29	Chronic pelvic pain	4
Elsie	50-59	Chronic pelvic pain	2
Rachel	30-39	Fibromyalgia	4

Table 2. Structure of CIPG

Session No.	Session Content
1	Psycho-education: persistent pain & the evolution of compassion, nature's soothing system
2	Circular relationship between stress and pain, behavioural techniques diaphragmatic breathing, relaxation
3	Pacing activity, role of listening to body and self-care in preventing burnout
4	Mindfulness, breathing and awareness, compassionate body scan
5	Compassionate imagery, soothing rhythm breathing, safe place
6	Compassionate companion and compassionate self-imagery
7	Development of multiple selves and maintaining our compassionate self
8	Compassion for the critical-self imagery and ending reflections

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Table 3. Accessible Summary of Measures

Chronic Pain Acceptance Questionnaire (CPAQ)	Includes 2 sub-scales measuring perceived: engagement with activities despite persistent pain (AE); willingness to tolerate pain in pursuit of values (PW)
Pain Anxiety Symptom Scale (PASS)	Measures 4 aspects of an anxious reaction to pain: cognitive, physiological, behavioural and emotional
Visual Analogue Scale (VAS)	A self-report measurement based on scaling one's experiences of physical pain
Roland Morris Disability Questionnaire (RMDQ)	Measures impact of pain upon perceived functioning / disability
Centre Epidemiological Studies for Depression (CES-D)	Explores self-reported experiences of depression
Self-Compassion Scale (SCS) and Brief Self-kindness Scale (SK)	Self-rated scales designed specifically to measure how self-compassionate people consider themselves to be

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Table 4. Pre- and post-intervention measures for both CIPG groups

	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Measure	CES-D	CES-D	CPAQ-AE	CPAQ-AE	CPAQ-PW	CPAQ-PW	SCS	SCS	SCS
Group									
Mean	32.75	20.38	29.63	44.36	22.75	25.38	24.14	31.93	
Standard Deviation	9.63	12.40	9.09	10.01	11.35	9.88	8.03	10.44	
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	
Measure	SK	SK	RMDQ	RMDQ	PASS	PASS	VAS	VAS	
Group									
Mean	4.86	6.86	11.25	11	36.71	27.57	5.25	4	
Standard Deviation	2.19	2.12	6.63	5.32	16.83	11.57	2.31	2.39	