CALLUM GRAY BSc Hons

EXPERIENCE OF COMPASSION-BASED PRACTICE IN INDIVIDUALS WITH PERSISTENT PAIN

Section A: Experience of Mindfulness-Based and Compassion-Based Interventions for Individuals with Persistent Pain

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Section B: Experience of Compassion-Based Practice in Mindfulness for Health for Individuals With Persistent Pain

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A thesis submitted in partial fulfilment of the requirements of
Canterbury Christ Church University for the degree of
Doctor of Clinical Psychology

APRIL 2022

SALOMONS INSTITUTE
CANTERBURY CHRIST CHURCH UNIVERSITY

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I would like to thank the participants who dedicated their time and effort in taking part in this research study by sharing their experiences.

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Summary of the MRP Portfolio

Section A: conducted a meta-synthesis of qualitative studies that focus on the experience of mindfulness-based and compassion-based group interventions for people with persistent pain conditions. Clinical and research implications are discussed, considering gaps and limitations in the existing evidence base. This informs areas that will benefit further research, such as the experience of compassion-based practices in standardised MBIs for persistent pain populations.

Section B: presents a study using Interpretative Phenomenological Analysis to explore the experience of participants with persistent pain engaging with compassion-based practices in a Mindfulness for Health programme. Eight participants from four groups participated with semi-structured interviews following the programme. Participants described perceived positive changes and difficult experiences during the compassion-based session, and they related these to their present and past experience of compassion. Implications for facilitating Mindfulness-based interventions, clinical practice and further research are discussed.

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Section A:

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Abstract

Purpose of the study: Research suggests that Mindfulness-based interventions (MBI) and compassion-based interventions (CBI) can help alleviate both the intensity of pain and the interference that pain has in people's lives. However, there is both theoretic and empirical literature suggesting that people with persistent pain might experience challenges when engaging with these interventions. Therefore, this review aimed to explore the experience of participants with persistent pain on MBIs and CBIs.

Design and methods: qualitative studies on the experience of group-based MBIs or CBIs were included where the participants' primary presenting problem was persistent pain. Studies were searched from PSYCINFO, Cochrane Library Databases, MEDLINE and appraised using the Critical Appraisal Skills Programme [CASP].

Results: out of the 728 studies identified, ten met inclusion criteria. Overall, study quality was variable and the meta-synthesis produced six central themes: (1) living with persistent pain, (2) understanding the programme, (3) group processes, (4) difficulties or distressing experiences, (5) perceived benefits, and (6) challenges of maintaining positive change.

Implications: there are both perceived positive changes and challenging experiences in participants. There were clinical implications, including the importance of focusing on group processes to address difficult experiences, reduce drop-out and support positive change. Due to the bespoke versions or non-specific approach of interventions, future research would benefit from exploring standardised MBIs and CBIs adapted for persistent pain.

Introduction

Persistent Pain

Pain is a complex multifaceted experience involving affective, sensory, and cognitive components (Moseley & Butler, 2015). Persistent pain is typically associated with pain that lasts for longer than twelve weeks despite treatment (Treede et al., 2015) and often includes pain that is severe and enduring enough to affect how people manage their daily life (Nicholas et al., 2019). ‘Persistent’ and ‘chronic’ pain are used interchangeably in literature, where ‘persistent’ pain is a more recent label less associated with the perception of incurable illness than ‘chronic’ (Turk & Okifuji, 2001).

Persistent pain is the predominant form of distress that leads people to seek healthcare (Todd et al., 2018), though, typically, people are not only searching for pain relief but because of its emotional distress and interference in their life (Ehde et al., 2003; Gatchel, 2004). Accordingly, people with persistent pain are reported to be four times more likely to have anxiety or depression, are more likely to self-report poor health, and have more difficulties in employment than those who do not have a pain condition (Gureje et al., 1998).

The treatment of persistent pain is dominated by access to a range of pharmaceutical medication (Tauben, 2015), which have been criticised for the incidence of unwanted effects (e.g. Furlan et al., 2006), addiction, higher mortality rates (Binswanger et al., 2013), and the pharmaceutical industry’s role in prescribing behaviours (Cohen, 2006). Therefore, pain management has increasingly taken a biopsychosocial approach to persistent pain (Bevers et al., 2016), where services are arranged for multidisciplinary assessment, treatment, and support for service-users (Kamper et al., 2015). Together with medical and allied health, a diversity of psychological interventions has been implemented in pain management services

(Roditi & Robinson, 2011), with a recent emphasis on mindfulness-based approaches (Chiesa & Serretti, 2011).

Mindfulness for Pain

Mindfulness is a Western interpretation of the traditional Buddhist term 'sati', deriving from Zen, Vipassanā and Tibetan meditation techniques (Nisbet, 2017), and can be understood as a metacognitive skill of self-regulating attention and nurturing a relationship to one's own experiences with curiosity and acceptance (Brown & Ryan, 2003), which is popularly summarised as "t*he practice of purposely bringing one's attention in the present moment without evaluation*" (Kabat-Zinn, 2003).

Whilst most interventions for persistent pain explicitly aim to reduce subjective pain experience, Mindfulness targets pain-related distress (Reiner et al., 2013). Mindfulness practice has been theoretically compartmentalised in two distinctive processes, including 'focused attention' (Lutz et al., 2008), which aims to promote cognitive control and detachment from affective distress (MacLean et al., 2010), and is a prerequisite to 'open monitoring' (Lutz et al., 2008), described as a "*moment-to-moment non-evaluative awareness*" (Wallace, 2006). Zeidan et al (2011) theorised that focused attention may modify the elaboration of nociceptive information into pain, whereas open monitoring impacts negative evaluation of pain, which otherwise leads to habitual patterns that worsen pain intensity, such as pain catastrophizing (Zeidan et al., 2011). Mindfulness's practice of 'acceptance' is also integral in attending to avoidance strategies and efforts to control pain, which are recognised as maintenance factors of persistent pain (Crombez et al., 2012).

Research has grown increasingly interested in mindfulness-based interventions (MBIs) (Goldberg et a. 2017; Kabat-Zinn, 2003). Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 2003), Mindfulness for Health (MfH; Burch & Penman, 2013) and

Mindfulness-Based Cognitive Therapy (MBCT; Segal et al., 2002) are the most widely used MBIs used for persistent pain populations and have been studied extensively in healthcare settings for alleviating physical and psychological distress (Gu et al., 2015). MBSR and MfH are closely related eight-week group-based programmes involve meditative practice and mindfulness theory, and are aimed at equipping people to manage stress and anxiety more effectively, with MfH focusing more on health-related distress and disability. MBCT is also an eight-week group-based programme aimed at reducing the recurrence of depression in persons by integrating MBI with features from cognitive-behavioural therapy (CBT) (Segal et al., 2002).

There is a good evidence base for MBIs use in persistent pain populations for reducing pain intensity (Reiner et al., 2013), pain sensitivity (Grant et al., 2011), as well as improving quality of life and psychological well-being, and reducing pain interference in daily living (Chiesa & Serretti, 2011). Integral to MBIs is the element of compassion. For example, MfH includes self-compassion meditation (Open Heart), compassion towards others (Connection meditation) and compassion-based theory (three regulation systems model) (Gilbert, 2009). Accordingly, an increase in self-compassion has also been widely reported in MBSR and MBCT (Birnie et al., 2010; Kuyken et al., 2010; Rimes & Wingrove, 2011; Shapiro et al., 2007), which has been implicated in the reduction in self-report pain and the processes involved with reducing pain-related distress (Wren et al., 2012).

Compassion and compassion-based approaches

Compassion stems from the Latin word “compati”, meaning “*to suffer together with*”, and has been widely associated with feeling for a person who is suffering and the motivation to alleviate that suffering (Goetz & Simon-Thomas, 2017; Strauss et al., 2016). Compassion is integral to Buddhist philosophy, described as “*an openness to the suffering of others with a* *commitment to relieve it*" (Lama & Thupten, 1995). Accordingly, MBSR and MfH incorporate 'Loving-kindness' and 'Open Heart' meditation respectively as a compassion-based practice derived from translations of traditional Buddhist meditation Mettā, translating to benevolence and accepting all parts of oneself and others (Buddharakkhita, 2020). It has been suggested that Mindfulness lays the foundations on which compassion can develop (Beddoe & Murphy, 2004; Neff, 2003), in that mindful awareness of one's own inner experience of suffering is necessary in nurturing and an understanding of shared human experiences of suffering, hence the inclusion of mindfulness practices in many compassion-based approaches (Tirch, 2010).

A widespread method for promoting compassion is Compassion-Focused Therapy (CFT), introduced into healthcare by Gilbert (2000) as an intervention to promote self-supporting inner voices in those experiencing high shame and self-criticism. CFT involves strategies used to help foster compassion for self and others, typically developing compassionate motivation, sensitivity and distress tolerance through the practice of appreciation exercises, mindfulness and compassion focused imagery exercises (Gilbert, 2000). CFT's theoretical underpinnings incorporates Buddhist philosophy in its understanding of compassion within the evolutionary model, where compassion is a motivational system evolved to regulate negative affect (Gilbert, 2005). This is surmised in three affect regulation systems: (1) a threat-focused system that promotes safety-seeking behaviours, (2) an affiliation-focused system that inhibits defensive behaviour to enable a state of safeness, and (3) the drive system that fosters an intention to notice and seek safeness in self and others. Pain is understood as a response to perceived danger or threat rather than nociception alone, where it's maintained by interacting biopsychosocial mechanisms that sustain the body's sense of "danger-in-me" (Moseley & Butler, 2017), and the strategies used to control or avoid this danger (safety-seeking behaviours). "Danger-in-me" is hypothesised to involve complex neural representations developed over a person’s life, which drive physiological and psychological pain responses (threat-focused system), which can be alleviated by “safety-in-me” representations (affiliation-focused system). Therefore, CFT has clear targets of reducing the triggers and maintenance patterns of the threat-focused system, whilst assisting individuals to nurture their affiliation-focused systems.

CFT has been implemented independently or as practices more broadly defined as compassion-based approaches. Research into compassion-based approaches adapted for group settings has covered a wide range of mental health conditions, suggesting favourable treatment acceptability and reduced depression (Leaviss & Uttley, 2015; Kirby et al., 2017) and a systemic review of compassion-based interventions for long-term physical health conditions reported benefits in acceptance of the condition, improved emotional regulation skills and reduced feelings of isolation (Austin et al., 2021).

Mindfulness and Compassion

Mindfulness and Compassion have previously been researched together (e.g. Raab, 2014) and they have a degree of cross-over in their operational definition, namely their focus on turning towards pain with acceptance in the hope of reducing pain-related distress. Within compassion-based approaches, mindfulness is included as a skill that is necessary to develop towards compassion (Neff, 2003), compassion differs from mindfulness in including self-soothing and one’s reflection on the difficulties shared amongst humans relating to mortality and inevitable suffering (Gilbert, 2015).

Acceptability and experience of MBIs and compassion-based approaches

While research suggests that MBIs and compassion-based approaches help alleviate subjective pain and reduce pain-related distress, there are also emerging findings on drop-out of persistent pain participants in MBIs (Malins et al., 2020) and theoretical and empirical literature indicating why participants may experience challenges engaging with mindfulness and compassion. Persistent pain is associated with a high prevalence in self-criticism (Sündermann et al., 2018; Tunks et al., 2008) and social experiences of shame and stigma (Osborn & Smith, 1998), which are factors that have been reported to impact both engagement and positive outcomes (Wakelin et al., 2021). Persistent pain populations also have higher reported attachment difficulties (Davies et al., 2009) and Gilbert (2009) cautioned how compassion-based approaches can lead to drop-out for those with attachment difficulties, not solely because of the difficulty in nurturing the affiliative system, but also because the programmes might elicit difficult memories of attachment experiences and the absence of being cared for. This may explain studies reporting initial distress from loving-kindness practice (Fredrickson et al., 2008), in-session barriers to meditation (Barnhofer et al., 2010), and difficulties with maintaining practice (Crane et al, 2010). Therefore, as there are factors unique to the persistent pain population, it is necessary to understand their experiences whilst engaging with the compassion-based programmes.

Rationale for Review

There is emerging research into the experience of participants with persistent pain conditions engaging with MBIs and compassion-based group programmes. Qualitative research into the experience of interventions is helpful not only in uncovering often overlooked potential adverse experiences (Britton et al., 2021; Lutkajtis, 2018), but can also uncover the nuance or diversity of experiences (see Braun & Clarke, 2019; Charmaz & Henwood, 2017; Tuffour, 2017).

To date, there have been no comprehensive reviews on the experience of persistent pain participants in MBIs and compassion-based group programmes. There exists a review of participants with chronic health conditions experience and outcomes from compassion-based approaches. However, whilst the review included pain conditions, conclusions could not distinguish findings specific to pain from those of the long-term conditions included (Austin et al., 2021). Similarly, within mindfulness literature, there exist reviews of experiences in mental health conditions (Wyatt et al., 2014) and a meta-ethnography of experiences across populations (Malpass et al., 2012) and a narrative review for long-term conditions (Carlson, 2012). However, the existing research into challenges experienced in mindfulness-based and compassion-based practice cannot be generalised from research into other populations because of the absence of pain, which is a core component of the experience of a person with persistent pain.

Aim and scope of review

Therefore, this review aims to conduct a meta-synthesis of qualitative studies that focus on the experience of mindfulness and compassion-based group interventions for people with persistent pain conditions.

The criteria for persistent pain adopted was those listed in ICD-10 (Treede et al., 2015) as non-malignant pain lasting longer than three months. There is no universal consensus on what constitutes a pain condition, and many long-term conditions are associated with pain, but it is understood that whilst the pain is often debilitating, within some health conditions pain exists in a complex clinical symptomatology where it is not the primary experience, and the following conditions were therefore excluded in this review: irritable bowel syndrome (Talley et al., 1991), diabetes (Calcutt, 2002), multiple sclerosis (Clifford & Trotter, 1984), and malignant pain (Edwards, et al., 2019). However, pain is understood as the principal clinical symptoms in osteoarthritis and rheumatoid arthritis (McDougall, 2006) and fibromyalgia (Clauw, 2014), and pelvic pain conditions such as Provoked Vestibulodynia (Henzell et al., 2017), which were included in the review.

Therefore, this review explored the persistent pain population and their experience of group-based interventions MBIs, CFT and programmes that primarily implemented a mindfulness or compassion-based approach (e.g. mindful awareness training). Acceptance and Commitment Therapy (ACT) is a widely used approach in pain management, which incorporates elements of acceptance and present awareness and has been included in previous reviews (Veehof et al., 2016) however, it is not included in this review due to not having a primarily mindful or compassion-basis and its conceptual differences (Hayes et al., 2009).

Method

Literature search

The search strategy was informed by the SPIDER (sample, phenomenon of interest, design, evaluation, research type) framework, which is a tool used to promote rigour in reviews of qualitative and mixed-method research (Cooke et al., 2012). Three domains were identified for the search strategy:

- Sample – adults with a non-malignant persistent pain condition
- Phenomenon of interest – experience of mindfulness or compassion-based group intervention
- Research type – qualitative research design

Terms were searched in PSYCINFO, Cochrane Library Databases, MEDLINE on September 12th, 2021 with no data limits. Preliminary searches were conducted to inform the terms used in the final database search, which were combined with ‘AND’ function (*Table 1*). The Boolean operator ‘AND’ was used to combine unrelated terms and ‘OR’ was used to ensure that a term related to mindfulness and compassion-based group interventions. The truncation symbol (*) was used to widen the search and minimise the risk of studies being missed due to alterations of terms used. The search was limited to include only peer-reviewed journals, English language, and articles published within the year range inception of database to September 2021. Terms 'persistent' and 'chronic' are used interchangeably within literature to define pain that endures more than twelve weeks, often associated with arthritis, fibromyalgia, and back pain (*NHS Inform*, July 2021).

Table 1

Search terms used in the systematic search

Search topic	Specific terms used
Intervention	mindful* OR mindfulness-based OR MBCT OR MBSR OR MBI OR MBP OR compassion* OR CFT OR metta OR loving-kindness OR self-compassion
Population	pain OR fibromyalgia OR arthritis OR back
Methodology	qualitative OR experience OR phenomenology OR thematic analysis OR IPA OR grounded theory OR narrative analysis OR discourse analysis OR conversational analysis OR content analysis OR acceptability OR focus group

Inclusion and exclusion criteria were organised to target papers that investigated the experience of MBIs or compassion-based group programmes in persistent pain populations (*Table 2*). Qualitative research terms were used to manage the search strategy and include qualitative peer reviewed papers. Named mindfulness-based approaches were included to minimise the complexity over definitions of mindfulness (Mikulas, 2011), focusing on programmes that adhered to mindfulness teaching as defined in Crane et al. (2010) and criteria set in Crane et al. (2017).

The process followed PRISMA (Moher et al., 2015) (*Figure 1).* Titles and abstracts were screened for relevance and reference sections of retrieved studies and previous reviews were searched for additional relevant publications. Duplicate articles were removed, and all remaining study title and abstracts were screened for relevance. Where initial screening was not clear, further review of full texts and reason for exclusion have been included.

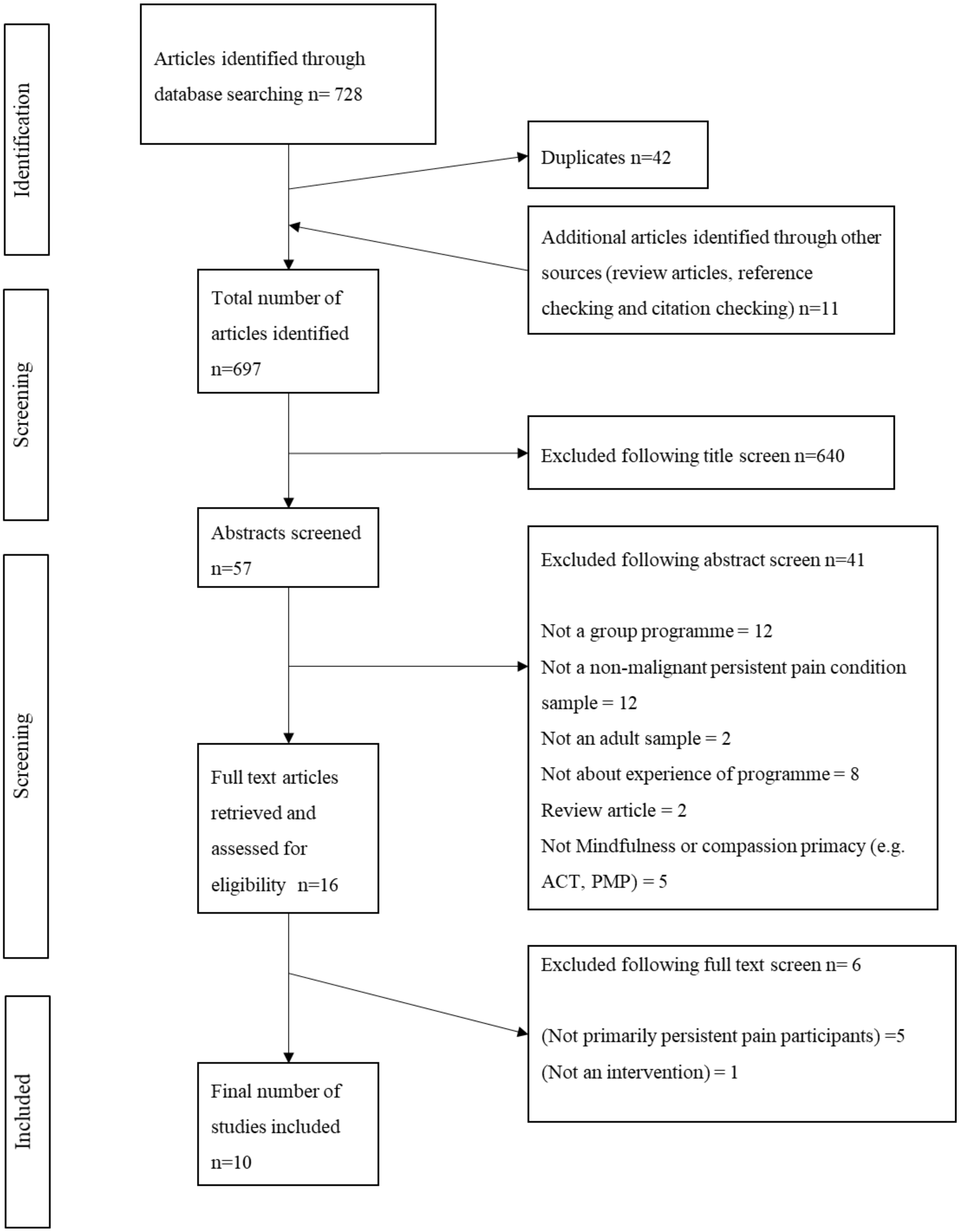
Table 2

Inclusion and exclusion criteria for literature search

Inclusion	Exclusion
Publication involved group programme that was primarily mindfulness-based or compassion-based Participants primary presenting problem was a persistent pain condition (including chronic/persistent pain, fibromyalgia, pelvic pain, osteoarthritis, and rheumatoid arthritis Studies were included if participant group if wider pool, but possible to present/disaggregated the relevant participants Research aim was focused on the experience of the intervention and/or practice with a qualitative methodology Peer reviewed English language publications	Pain management programmes or Acceptance and commitment-based programme Malignant pain or pain associated with multiple scelerosis, irritable bowel syndrome, diabetes Self-help, self-study or online interventions Programme for young persons (<18 years) Participants with a learning disability or developmental condition (e.g. Autism Spectrum Condition)

Figure 1

Flow-chart representation of systemic literature search based on PRISMA guidance (Moher et al., 2015)



Data Extraction

Characteristics from the selected articles were entered into a table (*Table 3*). All data identified as results were extracted digitally and imported into NVivo 12 software for qualitative analysis, as outlined in Thomas & Harden (2008).

Quality appraisal

The assessment of quality in qualitative research varies across the wide range methods and their different of philosophical underpinnings (Carroll et al., 2012). The author conducted all the reviewing using the Critical Appraisal Skills Programme [CASP] (Long et al., 2020) (Appendix A) (Table 3), a tool for appraising qualitative research used in other meta-synthesises (Malpass et al., 2009). The CASP checklist has a strong methodological focus, considering appropriateness of research questions and their design, sampling, and data collection (Leung, 2015). In addition to methodology, the CASP examines issues of ethics, researcher reflexivity and the study's clarity and contribution in clinical and research contexts.

Meta-synthesis

The metasynthesis approach is used to both summarise multiple qualitative research investigations and generate new interpretations of research findings (Finfgeld-Connett, 2010). Thomas and Harden's (2008) procedure of thematic synthesis were followed. This involved applying the process of thematic analysis, which can be used to synthesise a variety of qualitative research methods (Braun & Clarke, 2006).

The review followed the recommended six stages of thematic synthesis: 1) defining the research question, the subjects, and the types of studies to be included; 2) identifying and selecting the studies; 3) assessing the quality of the selected studies; 4) analysing the studies, identifying themes, and translating themes between the studies; 5) generating the themes of the analysis and structuring the synthesis; 6) writing the review (Lachal et al., 2017).

Bracketing interviews were conducted to explore how the researcher's personal and professional experiences lead to bias and assumptions that influence thematic analysis (Beech, 1999; Hamil & Sinclair, 2010). Reflections from the bracketing interviews are detailed in Appendix N, where the author reflected on their own identity and how this can support the phenomenological process and also hinder in areas of blindness. To address these issues, it was important that the author critically evaluate their positionality. An example was the lived experience of disability and how this can manifest in how and what is shared or understood in the interview process. For disability, this included asking questions rather than assume a shared understanding in interviews, naming difference in interviews (e.g. "*I acknowledge that we have similarities and differences in our identity, including disability and "ableness". I set the intention for this interview to be a place where you feel confident to share experiences that we may not share.")*, and reading literature on disability studies to identify areas for development in my awareness of lived experience of disability (Davis, 2016). NVivo 12 software package provided a clear audit trail of the emerging themes and their development, which were discussed between researchers.

Coding text and developing descriptive themes

The data were analysed inductively by the author, with sections of the textual data identified and assigned descriptive codes through a line-by-line coding process. This process generated initial codes, which were compared and grouped into central themes. The central themes were assigned codes that summarised the initial codes and this process was organised into sequential orientated structure. Generation of themes adhered to the selected studies' findings, whilst generating new understandings relating to the review question. Due to a variation of study quality, the relative contribution of each study to final themes and recommendations were examined.

Results

10 papers met the inclusion criteria (*Table 4*). All papers were published in English between 2008 and 2021. All participants were adults with a persistent pain condition, with one study sampling older adults (>65 years). Six studies used MBIs, including MBSR, MBCT and meditation awareness training. Four studies used compassion-based approaches, with one including additional psychoeducation. Three studies used in-depth or semi-structured individual interviews as their main source of data, five used focus groups or reflective groups and two studies used programme diary entries of participants. There was a range of when data was collected from participants in relation to their participation in programmes, where all studies interviewed participants following completion of the programme, either at the final session or up to fifty months after completion. Limited information was provided across papers on ethnicity of participants.

Table 4

CASP criteria and study quality rating

Criteria	**Example Study strength**	**Good**	**Good**	**Good**	**Good**	Moderate	Moderate	**Good**	**Good**	Poor	Moderate
		Bawa et al. (2021)	**Van Gordon et al 2016**	**Moore & Martin 2014**	**Hawtin & Sullivan 2011**	**Kerr, Josyula, Littenberg 2011**	**Morone et al 2008**	**Parry & Malpus 2017**	**Gooding, Stedmon, Crix 2020**	**Penlington 2019**	**Luiggi-Hernandez et al 2018**
Aims	Explicitly stated aims/objectives of research	Yes	yes	Yes	yes	yes	Yes	yes	yes	Yes	yes
Methods	Appropriate use of qualitative methods	Yes	yes	Yes	yes	yes	Yes	yes	yes	unclear	yes
Research Design	Justification of specific research design	Yes	yes	Yes	yes	unclear	unclear	yes	yes	Yes	unclear
Sampling	Appropriate sampling strategy, description of recruitment	Yes	yes	Yes	yes	yes	Yes	yes	yes	unclear	yes
Data collection	Appropriate description of data collection methods	Yes	yes	Yes	Yes	unclear	unclear	unclear	yes	Unsatisfactory	yes
Reflexivity	A critical examination of researcher's own role and bias	Yes	unclear	Unclear	Yes	unclear	unclear	yes	unclear	unclear	unclear
Ethical issues	Evidence of approval by an appropriate body	Yes	yes	Yes	Yes	yes	Yes	yes	yes	unclear	unclear
Data analysis	Adequate and in-depth description analysis, sufficiently rigorous data analysis	Yes	yes	Yes	Yes	yes	unclear	unclear	yes	unclear	yes
Findings	A clear statement of the findings, discussion of evidence, credibility, integrity	Yes	yes	Yes	Yes	yes	Yes	yes	yes	unclear	unclear

Table 3

Main characteristics of the included studies

Author (year)	Sample size, age range (mean), % female	Country	Research topic and aims	Data collection	Population details	Group intervention	Method of analysis
Bawa et al., (2021)	23, _ (_), 87%	Scotland	To explore the experiences of patients with chronic pain who took part in a mindfulness programme.	Face-to-face interview	Non-malignant chronic pain of at least three months duration, receiving regular prescribed medication for pain; most common pain condition was osteoarthritis	MBSR	Interpretative phenomenological analysis
Van Gordon et al., (2016)	10, 29-64 (50.8), 90%	England	To explore whether following participation in a mindfulness-based intervention, patients with FMS report experiencing changes in (i) how they experience and relate to their illness and (ii) their attitudes towards societal participation, work and unemployment.	Face-to-face interview	English speaking FMS professional diagnosis, not undergoing changes in psychopharmcology type or dosage, or diagnosed with neurological disorder	Mindfulness meditation awareness training	Interpretative phenomenological analysis
Moore & Martin (2014)	17, 34-79 (54.6), 82%	Austalia	To conceptualise chronic pain patients' perceived benefits of an MBCT programme	Face-to-face interview	Chronic pain, no inclusion/exclusion criteria used to be 'clinically representative of sample'	MBCT	Thematic and comparative analysis methodology
Hawtin & Sullivan (2011)	5, (_)	England	To examine the experiences of mindfulness training for five adults living with rheumatic disease.	One focus group	Professional rheumatology diagnosis	MBSR	Interpretative phenomenological analysis
Kerr et al., (2011)	7, _ (31), 100%	England	To investigating chronic pain participants' descriptions of changes experienced over	Participant diaries	Chronic pain participants undefined	MBSR	Grounded-theory

			multiple time points during mindfulness programme				
Morone et al., (2008)	27, 69-78 (74.3), 52%	USA	To explore the effects of mindfulness meditation on older adults with chronic low back pain	Participant diaries	Older adults with chronic low back pain	MBSR modelled mindfulness meditation	Grounded-theory
Parry & Malpus 2017	8, 30-59 (_), 25%	England	To explore chronic pain participants' experience of novel compassion in pain programme	Reflective groups of six	Chronic pain (lower back, MS with neuropathic pain, auto-immune condition, FMS, chronic pelvic)	CFT informed 8 weekly sessions	Interpretative phenomenological analysis
Gooding et al., (2020)	4, 47 - 76 (_), 25%	England	To explore chronic pain participants' experience of compassion-focused therapy group	Semi-structured interviews	Neuropathic pain, persistent lower back pain, FMS	12 week CFT	Interpretative phenomenological analysis
Penlington 2019	57, 18+ (_), 70%	England	To explore chronic pain participants' experience of compassion-focused therapy group	Survey	Chronic pain (lower back, shoulder, FMS)	9-week mindfulness and loving kindness	Inductive thematic analysis
Luiggi-Hernandez et al 2018	25, 65+ (76.6), 60%		To investigate dominant themes present in the experiences of older adults applying mindfulness and meditation to cope with chronic lower back pain	Four focus groups	Aged over 65, MMSE > 24, functional limitations from chronic lower back pain	8 week mindfulness-based programme	Thematic analysis

Study quality

Study quality was assessed and summarised in Appendix B, with a CASP summary by criterion in *Table 3*. Papers were evaluated based quality and relevance by organising the selected literature as either KP (a key paper that is conceptually rich and could potentially make an important contribution), SAT (a satisfactory paper), ? (where relevance to the synthesis is not clear), or FF (a paper that has fatally flawed methodology) (Dixon-Woods et al., 2007). There is no unanimous criteria for inclusion and exclusion of themes in literature (Braun & Clarke, 2006). Themes were deemed not valid and not included if data was not present in at least one KP or SAT, or if they emerged in only one paper due to characteristics specific to that paper alone (e.g. a bespoke adaptation to the intervention).

Table 4

CASP summary by criterion

Example	Quality assessment of studies										
	Met criterion =										🟩
	Partially met criterion =										🟨
	Did not meet criterion										🟧
	(N papers)										
Explicitly states aims/objectives of the research	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 11
Appropriate use of qualitative methods	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 10	🟨 1
Justification of specific research design	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 8	🟨	🟨	🟨 3
Appropriate sampling strategy, description of recruitment	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 10	🟨 1
Appropriate description of data collection methods	🟩	🟩	🟩	🟩	🟩	🟩	🟩 7	🟨	🟨	🟨 3	🟧 1
A critical examination of researcher's own role and bias	🟩	🟩	🟩 3	🟨	🟨	🟨	🟨	🟨	🟨	🟨	🟨 8
Evidence of approval by an appropriate body	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟨	🟨 2
Adequate and in-depth description analysis, sufficiently rigorous data analysis	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 8	🟨	🟨	🟨 3
A clear statement of the findings, discussion of evidence, credibility, integrity	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩 9	🟨	🟨 2

Aims and method

The selected studies clearly described their research aims and justified their use of qualitative methodology. One exception (Penlington, 2019) had unclear justification for the methods, however, was still judged as suitable for this review.

Research design

Most studies provided satisfactory justification for the specific research design, where partial descriptions that were not deemed satisfactory may be explained by publishing constraints. The use of diary entries in Kerr et al. (2011) and Morone et al. (2008) for grounded theory studies may have influenced the researchers’ ability to guide the analysis, which cannot be further elaborated as it would in interview settings. Where thematic analyses were used, this tended to be from papers with less detail (Penlington, 2019), where IPA and grounded-theory papers tended to include information on more detailed in-depth analysis of the process.

Sampling and participants

Most papers relied on convenience sampling. This approach risks selection bias by only including those who have completed the intervention and are willing and able to participate, which may lead to a tendency of including participants who feel positive towards the intervention (Etikan et al., 2016). One paper included qualitative interviews on drop-out participants and diary entry studies included those who disengaged, which was helpful in addressing this potential sampling bias. Diversity in sample demographics was present, including age, socio-economic status, and education. However, across the papers there was limited discussion on the potential influence of this on data There is literature on experiences of pain and receiving healthcare across lifespan and age-related conditions (Gibson &

Lussier, 2012), seeking healthcare as a minoritized individual (Gerdle et al., 2004), the availability of external resources in people from lower socio-economic status (Bonathan et al., 2013) and the capacity to engage with didactic material in those with limited past education (Köppen et al., 2018). There was also unsatisfactory information on participant ethnicity and consideration of how these approaches are received across different cultures and religions, where teaching may complement or conflict with previous cultural backgrounds (Fuchs et al., 2013). Without consideration on these factors could impact the generalisability of research and overlooking of factors that could have influenced individuals' experience in the group and of the intervention.

Studies varied from those with minimal exclusion criteria, who cited the importance of including a representational sample, and those who excluded based on serious underlying or red flag illnesses, significant recent change in medication or current drug use, mental health distress (e.g. psychiatric illness), cognitive capacity (in over 65's) risk of harm to self or others, non-English speaking or English illiteracy, and unable to give informed consent. These criteria are important in identifying data that can be generalised for the pain population engaging with the interventions, and data that could be related to significant co-morbid condition or barriers. Where exclusion criteria were not implemented, there was minimal discussion of ethical considerations, such as clinical risk.

Methods

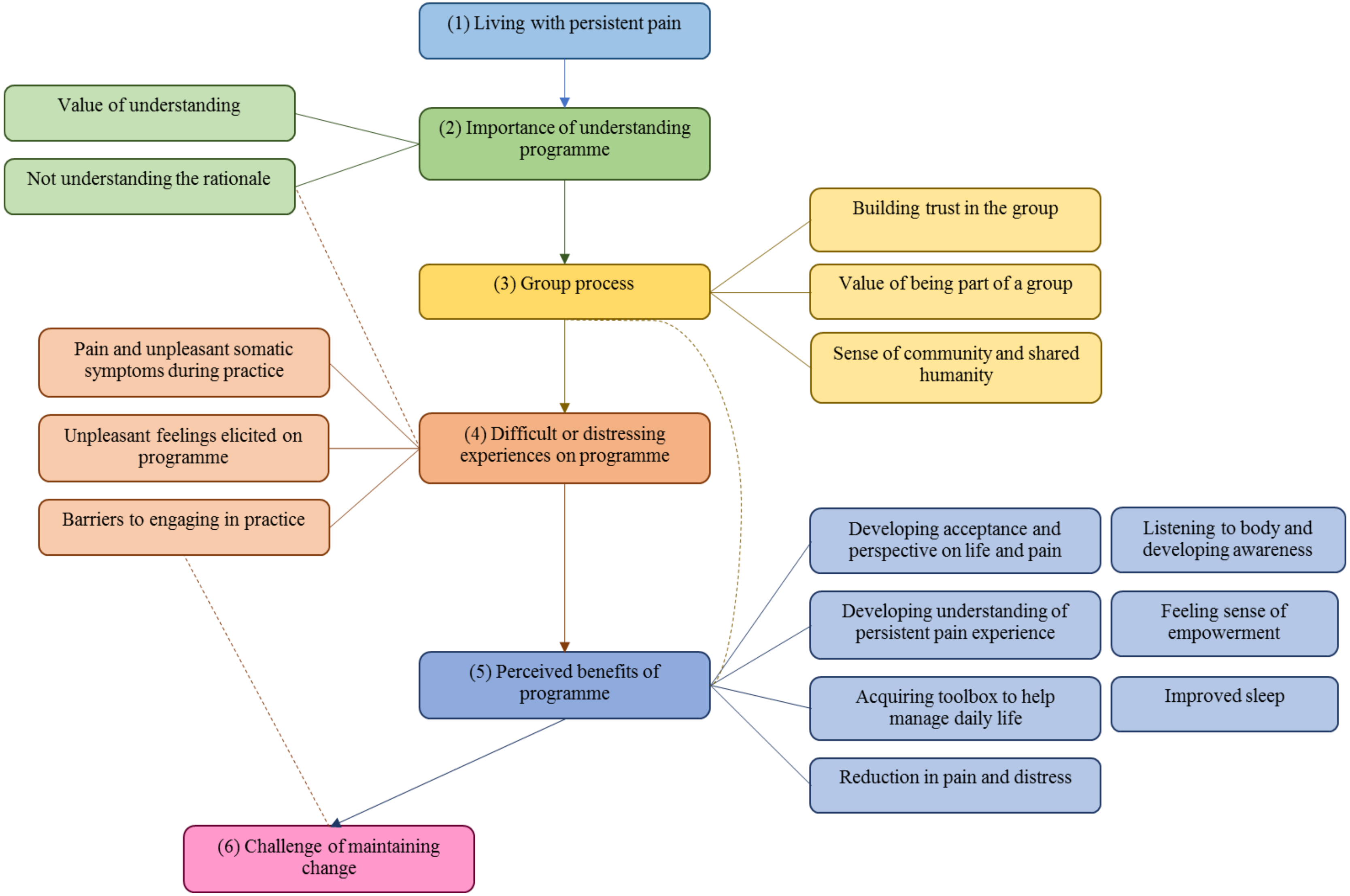
Overall, few studies had sufficient reporting on reflexivity, with minimal examination of the role as a researcher and potential bias to data analysis, despite authors often including stakeholders or facilitators. Reflexivity is central to qualitative analysis of data (Shaw, 2010), with bias in interpretation integral to IPA (Clancy, 2013), thematic analysis (Braun & Clarke, 2017) and the process of developing grounded theory (McGhee & Marland, 2007). Although there was limited reporting on reflexivity, there may have been restrictions and limitations imposed by publications (e.g. journal article word limits) meaning that there was not space to report all that was done.

Intervention

There could be difference between practitioners and the delivery of programmes. Whereas MBSR and MBCT are standardised training programmes with supervision and accreditation criteria, some authors have suggested there is a potential impact of pre-existing beliefs on programme delivery, especially regarding personal investment into Buddhist or secular interpretations (Williams & Kabat-Zinn, 2013). The compassion-based approaches were bespoke programmes based on pre-existing CFT groups (Gilbert, 2005), which enabled adaptations to meet the needs specific to the sample. However, both MBIs and compassion-based studies discussed varying programme structures, with different amounts of pain education, psychoeducation, and group discussion, and the balance between didactic and responsive facilitation across studies. All these factors could influence the generalisability of research findings across the same and different related programmes.

Figure 2

Thematic map, including themes (numbered) and sub-themes, identified by colour.



Themes

Six central themes relating to the experience of participants on programmes were inductively developed from the analysis (*Figure 2*). Themes were organised in a structure that reflected the order in which themes were presented, where (1) living with persistent pain relates to participants' description of their lived experiences prior to programme, followed by (2) understanding the programme and (3) group processes. Difficulties or distressing experiences (4) preceded perceived benefits (5), as literature has suggested that participants often experience adverse or challenging experiences prior to positive change or otherwise drop-out from the programme (Baer, 2009). Ultimately, challenges of maintaining positive change (6) included studies that collected data after a delay following completion of the programme. The themes that individual papers contributed to is listed in Appendix C, and Appendix D presents a table displaying papers that contribute to each theme, with Appendix E including exemplary quotations for each theme.

1. Living with persistent pain

The theme 'living with persistent pain' detailed the participants' pain-related experiences prior to the programme, including examples of shame in interpersonal relationships or negative social evaluation related to their pain condition. Pain-related disability and exclusion was evident from examples of exclusion from activities they would do if it weren't for pain (Van Gordon et al., 2015) or watching others "*enjoying themselves*" whilst they were left out (Bawa et al., 2021). Whilst the theme detailed some of the psychological distress relating to pain, some accounts suggested that participants were not necessarily aware of the extent of the pain-related distress they were previously experiencing, until after the programme (Parry & Malpus, 2017), which was linked to the normalising of this pain-related disability at the time (Van Gordon et al., 2015).

Living with persistent pain was understood to be integral to the subsequent themes, as it detailed the participants' baseline symptoms of pain and distress, and context prior to the programme to which change is relative. This theme was referenced in all but two of the papers, with Kerr et al. (2010) and Penlington (2019) not including information about how participants had described their prior life.

2. Importance of understanding the programme

Seven studies included data on how participants recognised a process by which they came to understand the rationale of the programme after initial uncertainty or apprehension.

Value of understanding

For many of the completers, there was an acknowledgement that the purpose of mindfulness practices did not make sense at first (Bawa et al., 2021), especially citing "*focusing on the pain*" and how this could be counter-intuitive for those who had previously been avoiding parts of their body where they locate unbearable pain. Some participants described their previous expectations to "*find the answer to pain and fix it*" (Moore & Martin, 2014), which contrasted with the process of 'acceptance'. However, within these accounts there was evidence of how they learned or became "*acquainted"* (Luiggi-Hernandez et al., 2018) with mindfulness or compassion, which was often described as an experiential process and essential to benefitting from practices and the motivation to apply learning out of the group setting.

Not understanding the rationale

Some participants' difficulty with understanding the rationale did not resolve. Sitting with unanswered questions was found in participants who dropped out; "*In my head I kept thinking [quieter speech starts] "Why? [quieter speech ends] Why are we doing this? Why are we* *doing this?" [....] Even if it didn't connect maybe with the pain side of it at the time, if she'd still, maybe explained exactly WHY we were doing this, maybe it would have encouraged me to keep going"* while another was described as reacting badly to a psychologist who '*implied a perception that pain is all in the mind.*" (Bawa et al,. 2021). Moore and Martin (2014) also described participants' '*paradox'* in a conflict between '*attempts not to think about pain*' and '*increasing their focus on pain*'. For participants who did not understand the purpose of the programme, there were links with not only dropping-out, but distressing or unpleasant experiences during practices and barriers to connecting to the group or feeling a sense of shared humanity, as their experiences were marked by isolation and critical inner dialogues (Bawa et al., 2021).

3. Group process

Factors involving the process of being in a group as part of the intervention, the importance the group held for participants and feelings of shared experiences were discussed in six of the studies. This included descriptions of how participants perceived the group across its duration and their changing relation towards it.

Building trust in the group

Some participants described a pattern of building trust within the group, where they were initially apprehensive to disclose in discussions and but, with time, became more confident to talk openly about personal experiences. However, some participants noted that by the time they'd become confident sharing, the group had ended. For example, one group in Gooding et al. (2020) noticed a pattern described initial group conversations as "*quite humorous, light-hearted*" and a process "*that took longer than in previous groups for participants to communicate the emotions they felt about their pain*" (Gooding et al., 2020). However, this subtheme is limited by including only two papers.

Value of being part of a group

Five of the papers reported participants describing the value of being in a group for the intervention and how this facilitated processes within individuals and as a group. Some participants held the group and facilitators at paramount importance (Gooding et al., 2020), a feeling of being there *'for the same purpose'* (Bawa et al., 2021), and of not being '*isolated and alone*' but with other pain sufferers who understand their experiences (Parry & Malpus, 2017). One paper noted the change in how participants felt towards the group in the use of pronouns, where *"this had changed since in the group he would often refer to the common 'we' when describing his experiences"* (Gooding et al., 2020) and how "*the group understood the difficulty of having chronic pain, which brought a sense of camaraderie*" (Bawa et al., 2021).

Sense of community and shared humanity

Closely related to the value of being in a group were the feelings of shared human experiences, which differ in extending compassion and belonging beyond the group to the persistent pain population or humanity. Therefore, this theme reflected experiences of "shared humanity" in compassion-based therapy, where there develops an understanding of shared suffering and connection with wider community. This was described in five papers and as a process that *'developed in the group over time'* (Bawa et al., 2021), where compassionate understanding of shared humanity was perceived as being nurtured by belonging to a group, rather than relying on one's own understanding of their own experiences (Parry & Malpus, 2017). This in turn was understood to facilitate a wider perspective and compassionate understanding of others beyond the group (Van Gordon et al., 2015).

4. Difficulties or distressing experiences on programme

Seven studies detailed adverse experiences that participants encountered, which either led to participants disengaging or were understood as a challenging process before a participant's perceived positive change. There was a range of distress and barriers to engagement, where some of the experiences were recognised as relating to 'not understanding the rationale. Two of the four papers contributing included participants who dropped-out, describing distress that led to disengagement rather than distress that preceded perceived positive change.

Pain and unpleasant somatic symptoms during practice

Physical discomfort was described during practice, with a range of somatic responses most often reported early in practice and relating to turning towards pain and discomfort rather than relying on habitual patterns on avoidance (Bawa et al., 2021). This was evident in early meditations as *'The body scans [faster speech starts] which I found very difficult on my own, [faster speech ends] [....] I've got used to, if you like, putting it to one side, and dealing with it, it was bringing it [pain] to the front again, and in a way, making it worse'* (Bawa et al., 2021). Somatic distress were often accompanied by psychological distress, often portrayed as evaluation of experiences, such as *"I felt kind of gross and fat while focusing on my abdomen and pelvis"* (Kerr et al., 2010). Unpleasant experiences were related to drop-out, such as *'drain[ing] me for the rest of the day'* (Van Gordon et al., 2017) and '*increased tiredness and pain after the group sessions that may have led ... [participants] to drop out*' (Bawa et al., 2021).

Unpleasant feelings elicited on programme

Psychological distress was most often described early in the programme, with feelings of '*anger and frustration*' relating to the experience of pain and disability (Bawa et al., 2021) and ‘*trouble focusing’* (Kerr et al., 2010). Some participants also described difficult concerns prior to sessions, with questions such as “*how am I going to be able to sit still with my eyes closed for two hours”* (Van Gordon et al., 2017) and participants being left with difficult emotions after sessions, such as feeling ‘*low*’ and *‘quite vulnerable’* (Parry & Malpus, 2017).

Barriers to engaging with practice

In addition to difficult experiences, some participants described the challenge of engaging with programme or with the meditations advised for home practice. For example, a participant explained that “*balancing the need to care for others with caring for oneself was sometimes a challenge”*, and this would relate to difficult emotional experiences of *“guilt around taking time for themselves to do the practices*” (Bawa et al., 2021). Pain-related distress was also recognised as a barrier, with a participant explaining that “*sometimes depression gets the better of me”* (Moore & Martin, 2014).

5. Perceived Benefits of Programme

All studies reported some perceived benefits from the programme for some participants, which included a range of changes associated with mindfulness and compassion, to more instrumental uses of practices learned during the programme. Both pain and pain-related distress, such as sleep and mood, were reported to have improved for some participants.

Developing acceptance and perspective on life and pain

The theme of pain acceptance was raised in all but one of the articles, with descriptions of a change in perspectives on pain and life, indicating a broader change in wellbeing rather than in pain symptoms or interference. Participants often defined a self both before and after the programme, including the behaviours that were associated change, such as contrasting how they respond to pain flare-ups or pain-related disability with an accepting perspective rather than being what could be described as a ‘reactive’ one (MacBeth & Gumley, 2012). Acceptance of pain was also associated with the acceptance for a need of change, and for these participants, attending the programme was part of a process of accepting the need for change and “moving on*”* rather than being stuck in previous state and resenting it (Moore & Martin, 2014), with a participant describing “*the minute I let go of the anger, that was the time I started to grow, so yeah, that was a big moment in my life’* (Moore & Martin, 2014).

Listening to body and developing awareness

Similarly, an awareness of the body in the present was described in all but one of the papers. Some participants described ‘*greater clarity, focus and objectivity*’ (Kerr et al., 2010) from meditative practices, where participants were discovering ways to develop greater awareness of their experience. This included connections between their bodily sensations and psychological well-being, and taking a metacognitive stance (Van Gordon et al., 2015).

Developing understanding of persistent pain experience

Seven papers reported some participants describing a change in their understanding of their persistent pain experience, which developed from experiential learning through meditation (Parry & Malpus, 2017) and didactic learning described in Good et al. (2020). There were no clear distinctions between participants in MBIs or compassion-based approaches, as both reported individual experiential learning and didactic or educational learning that was related to their personal experiences.

Feeling sense of empowerment

The theme of empowerment was described in both direct references to empowerment and descriptions of reversing the power dynamic with pain (Parry & Malpus, 2017), such as feeling “*a sense of control*” in oneself (Moore & Martin, 2014), the confidence of having “a *tool, a skill, to be able to deal with things that are normally too uncomfortable or too frightening for me to deal with*" (Parry & Malpus, 2017), and re-engaging in activities they had stopped due to pain (Luiggi-Hernandez et al., 2018). This suggested a wider change facilitated by the interventions, extending from reducing pain interference to feelings of confidence that people had towards pain and its continuation beyond the programme in life changes (Bawa et al., 2021; Kerr et al., 2010). Empowerment was also present in opposition to barriers, where one participant descried the realisation that "*actually I am entitled to have this space, I need this time and space*" (Bawa et al., 2021).

Reduction in pain and pain-related distress

Perceived benefits were more widely associated with well-being, perspective and mindfulness or compassion related traits,. Studies also reported participants describing explicit reduction in pain and pain-related interference. These were expressed in clear definitive descriptions *"I'm definitely noticing that there is less pain now"* (Van Gordon et al., 2015) associated with practice. Participants reported a change in their pain experience, where pain was reduced or absent at time of interview. Reductions in pain-related distress or interference were also described, with *"less depression*" or *"smiling more"* (Hawtin & Sullivan, 2011), bodily change of feeling "*lighter now"* (Parry & Malpus, 2017) and reduced anxiety (e.g., Luiggi-Hernandez et al., 2018). Where some participants did not describe changes in their pain, there were descriptions of managing better; "*I still have the same back pain but am coping with it much better*" (Morone et al., 2008). Reduction in pain was, however, not isolated from wider changes associated with the programme, as described in Bawa et al. (2021) as *"I'm not as tense as I was, which means I'm maybe not as sore as I was […] so, it's more about how the pain was in my head*, which suggested global changes in being less '*tense*', connections with the pain experience, and realisations about the role of their '*head*'. Similarly, in Van Gordon et al. (2015), a description of change is associated with taking a metacognitive stance: *"Everything becomes black and a struggle. It's different though when I practise meditation. It's like I'm a spectator"*.

Acquiring toolbox to help manage daily life

Eight papers reported participants explaining that the programmes had offered them skills or tools to implement during their daily lives to manage or reduce pain or pain-related distress. This was described as "*using pain relief during everyday events where they experienced pain"* with lists of examples where they recognised pain flared up (Luiggi-Hernandez et al., 2018). Some participants described its routine use as "*I always do breathing now to help me through the day"* where there were tangible benefits described as *"keep me calm with my day to day anxiety"* (Penlington, 2019). In response to increases in pain, participants reported *"when I've had pain now, I have done the breathing straight away"* (Parry & Malpus, 2017) and in tandem with bodily awareness *"Upon first signs of pain, I stop and meditate"* (Morone et al., 2008).

Improved sleep

Some participants described improvement in their sleeping patters, including better quality sleep "*like the mattress commercial – sleeping on a cloud*" (Morone et al., 2008) and using techniques to help getting to sleep "*I meditate just before going to bed"* (Van Gordon et al., 2015) and the importance of sleep on the quality of their life as: "*sleeplessness was harming my quality of life in every aspect, and I am grateful I no longer have the problem. It has made a huge difference in my life"* (Morone et al., 2008).

6. Challenges of maintaining positive change

Five of the papers collected data after a delay following completion of the programme, reporting on difficulties or barriers that some participants faced maintaining perceived positive changes experienced during the intervention. There were descriptions of a pattern of reducing efficacy and practice (Moore & Martin, 2014) and the change of environment, from a scheduled group to the uncertainty of life afterwards without the group (Gooding et al., 2020). Some participants identified necessary traits to maintain positive change, such as discipline (Moore & Martin, 2014), but also the barriers, such as what's going on in their lives (Moore & Martin, 2014) and losing the supportive context of the group (Van Gordon et al., 2015).

Discussion

This review sought to synthesise and appraise qualitative literature on the experience of MBIs and compassion-based approaches for persistent pain populations. Overall, MBIs and compassion-based approaches were found to contribute across themes in a similar pattern, supporting the credibility of themes and subthemes. However, it is difficult to judge when data saturation of themes has been attained, or the required data needed to uncover exceptions (Wray et al., 2007). It is important to be tentative in the conclusions drawn from some themes, namely 'building trust in the group, which included only one key paper and one satisfactory paper.

All but two studies included the theme of 'living with persistent pain', with a high degree of consistency in how participants described their lives with pain and its associated distress and disability. Within these descriptions was the felt shame, which reflected the 'self-with-pain' (Smith & Osborn, 2007), that participants described in their self-identity prior to the programme, which is consistent with examples in literature on concerns with being perceived as being a burden to society (Smith & Osborn, 2007), and frequent experiences of being ignored or devalued (Arnold et al., 2008).

Interestingly, the importance of the group seemed central to many participants and served to alleviate many of the experiences of ‘living with persistent pain’. Factors such as going through the practice and change as a group were identified, however, most studies reported the importance of participants finding common experiences with other pain sufferers, which may have broken down barriers of shame and stigma they experience. This reflects literature on the value held by participants with persistent pain and the benefits of being with others with pain conditions (Farr et al., 2021).

The overlap of themes suggests a significant coherence between experiences across studies and the development of traits of acceptance, awareness, and shared humanity, which may reflect significant similarities in the operational definition of mindfulness and compassion (MacBeth & Gumley, 2012). However, MBIs do not explicitly aim to nurture shared humanity, suggesting that there may be processes of people with persistent pain meeting in a group that facilitate this change. Consistent with literature, both approaches described wider changes to the person and their well-being (Chiesa & Serretti, 2011) and this change was related to developing a sense of empowerment, where the power dynamic between the person and their pain was reversed and pain was no longer interfering or disabling as it previous was to the person. Literature suggests a link between mindful and compassion attributes and pain interference, where the programme aims to reduce the impact of the pain through how one responds to the subjective experience (Kabat-Zinn, 2003), minimising pain-related suffering (Burch & Penman, 2013). This is hypothesised to reduce pain intensity, hence the interventions’ indirect impact on subjective pain. Additional to wider changes was the application of mindfulness and compassion-based practices that could be used to address pain in-the-moment, which related to empowerment in bringing people the confidence to manage flare-ups in the moment. These skills-related benefits contrasted with broader changes in attitude and perspective, however, it is not mutually exclusive in that practice is inherently linked with the ethos of the approaches. Though it was not included in the meta-synthesis, an evident difference between programmes was the inclusion of psychoeducation and pain education, where present awareness accompanied a didactic approach of informing participants on the persistent pain and applying these in a bespoke manner to group experiences. However, the presence of pain-education was reflected on in themes that focused on developing awareness of the self and a metacognitive awareness of the self-with-pain.

There was a diversity of positive and unpleasant experiences, and studies that did not report on adversity may have omitted asking the necessary questions (Britton et al., 2021). Adverse experiences ranged from somatic symptoms to psychological distress, which was sometimes linked with participants not understanding the rationale of programmes and their expectation or attempts to ‘fix’ or ‘find solutions’ to the pain, consistent with biomedical understanding and treatment of pain (Cohen & Quintner, 2010). This barrier to engagement was exemplified in participants finding the process of meditation counter-intuitive, such as turning towards pain, which may link with the contrast MBIs and compassion-based approaches have with habitual patterns of avoidance (Crombez et al., 2012). Difficult or distressing experiences could be a normal and important part of the programme, as literature has suggested that adverse experiences may precede, or even facilitate, positive change (Farias et al., 2020). This was indicated by some participants, who in their adversity or initial apprehension, went through a process of experiential learning in how the approach addresses previously unhelpful responses to pain. Similar to previous literature, where this process of understanding was inhibited, the studies suggested that there was a risk of drop-out, especially in those who have queries that remained unanswered (Malins et al., 2020). However, such inferences are limited due to most research designs not being predominately process orientated.

Clinical Implications

There is evidence suggestive of the prevalence of shame in participants, which manifested in vigilance to negative social evaluation and self-criticism. Achieving positive change appears to be more challenging for those with self-criticism (Carvalho et al., 2019) and developing acceptance of pain (Costa & Pinto-Gouveia, 2011), which is reflected in the experiences of participants who dropped out as being socially isolated, having self-critical responses to distressing experiences and not feeling connected to the group. The drive to achieve positive social status by attempts to control how the pain is perceived and strategies control one's own pain is the goal of avoidance strategies and self-critical perfectionist patterns common in people with persistent pain (Kempke et al., 2014), yet these goals impact processes of acceptance and the adjustment and pacing necessary to effectively manage pain (Depue & Morrone-Strupinsky, 2005). In contrast, participants who described positive change often cited a process of pain acceptance and self-compassion that was facilitated by belonging to a group and a sense of shared humanity, which is consistent with literature (Crombez et al., 2012; Wren et al., 2012). This suggests the importance of attending to group dynamics and reaching to socially isolated members of a group to dismantle shame and isolation, rather than a focus predominately on strategies reduce subjective pain or outcomes tied to positive social evaluation.

It is important that facilitators are aware that difficult experiences may precede or facilitate positive change. Therefore, where appropriate, attending to these difficult experiences could help frame distress as part of this process rather than participants disengaging or feeling isolated with difficulties that might be perceived as failure. This might include emotional distress elicited by upsetting memories or current suffering, but also the dissonance of going from a previous bio-medical conception of pain to a psychologically-informed understanding. This paradigm shift to a biopsychosocial understanding might confront participants with contradictions, for instance, the importance of attending to one's pain rather than try to remove it, the primacy of reducing pain-related distress rather than pain intensity, and the absence of a clear "cure" or "fix" to pain that has no target biomarkers.

However, focusing on the group has several important barriers, including group duration, time to develop trust in the group and the risk of deterioration following its termination due to participants falling back into unhelpful patterns following the programme. Participants also face the challenge of investing and learning in the interventions' contrasting philosophical approaches to the biomedical model of illness and pain, which was linked towards numerous dropouts. Yet, initial worsening of pain experience or discomfort in the group did not necessarily lead to negative outcomes and clinicians may benefit from being aware of the risk of participants being isolated with distress rather than understanding that this could be part of a process to meaningful change.

Although MBIs and compassion-based approaches acknowledge that their outcomes have a broader focus on well-being and changes in lifestyle, it is important that clinicians recognise self-reported change in pain intensity, pain-related distress, and pain interference evident in many participants. Despite some changes being attributed to mindful or compassion-related changes in acceptance, awareness and perspective, participants also benefited from a skills-based change and feelings of empowerment that the 'tools' they acquired could be used to manage pain.

Research Implications

This review suggests that current research lacks critical appraisal of researchers' role in studies and reflexivity, which highlights the importance of high-quality research that accounts for these potential biases to interpreting results. With the diversity of research methods, researchers may want to consider the influence of different data collection methods and how best to include participants who disengage or otherwise do not opt-in to research interviews on collecting both positive, neutral, or negative experiences on programmes.

Further research would benefit focusing on process models in people with persistent pain, allowing researchers to uncover changes of experience during programmes and longitudinally to allow an understanding of sustained positive change or deterioration. Demographic variables such as social GRACES (Burnham, 2018), pain condition and pre-existing relationships with healthcare services would be valuable factors to consider when understanding participant experiences. Process models could also help uncover the nature and barriers to developing traits associated with positive change, such as acceptance, mindful awareness, and self-compassion, and how these relate specifically to the persistent pain populations.

Considering the recent research on potentially distressing experiences in meditation, it is encouraging that some studies in the review explored experiences both pleasant and unpleasant, and their potential link to disengagement. However, whereas these experiences have been identified, there remains limited research on how these experiences are understood and how they contribute to change in people with persistent pain. Therefore, future research could explore parts of MBIs and compassion that might be particularly challenging for persistent pain populations. Similarly, although some interventions did included bespoke pain specific teaching and there is some evidence suggesting the beneficial inclusion of pain-specific material in such programmes. However, this welcomes research into the experience of standardised MBIs and compassion-based programmes specific for persistent pain.

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CALLUM GRAY BSc Hons

Section B:
EXPERIENCE OF COMPASSION-BASED PRACTICE IN MINDFULNESS FOR HEALTH FOR INDIVIDUALS WITH PERSISTENT PAIN

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Abstract

Purpose of the study: Research indicates that acquiring compassion is an integral part to positive outcomes to Mindfulness-based interventions (MBI), yet there is both theoretic and empirical literature suggesting that people with persistent pain might experience challenges when engaging compassion-based practices. Mindfulness for Health is a standardised MBI for people with persistent pain and health conditions. This study sought to explore the positive, neutral and difficult experiences of compassion-based practice and meditation for participants in Mindfulness for Health programmes.

Method and Design: A qualitative design using Interpretative Phenomenological Analysis was applied to explore how participants understood of the experience of compassion-based practice and the meaning they gave to it. Eight participants who had completed the Mindfulness for Health programme from four separate groups were interviewed about their experience.

Results: Five master themes were identified ‘turning away from self-with-pain’, ‘self-with-pain experienced as shameful’, ‘facilitating change’, ‘turning towards self-with-pain’, and ‘accepting self’. Participants identified both perceived positive changes and difficult emotional experiences during the meditation practice, which they related to the context of compassion in their past and present life.

Conclusions: developing compassion is an important part of Mindfulness for Health, which is salient for participants as both a challenging and potentially valuable experience. Acquisition of mindfulness skills, supporting group dynamics and modelling compassion are understood as helpful in overcoming personal barriers and challenging experiences.

Introduction

Persistent Pain

Persistent pain is the most prevalent form of distress that leads people to seek healthcare (Todd et al., 2018), affecting between 8% to 11% of the general population worldwide (Andrews et al., 2018). Persistent pain and chronic pain are used interchangeably in literature, where ‘persistent’ is a more recent label used to describe pain that lasts for longer than twelve weeks despite treatment (Treede et al., 2015) and is severe and enduring enough to affect how people manage in their daily life (Nicholas et al., 2019). Sensory, cognitive and affective factors are involved in a person’s experience of persistent pain (Moseley & Butler, 2015) and those who seek healthcare support are usually not only seeking pain relief, but also support with the interference and emotional distress it causes (Ehde et al., 2003), such as depression and anxiety (Gureje et al., 1998).

Treatment for persistent pain is focused not only on pharmaceutical pain relief (Tauben, 2015), but also multidisciplinary interventions aimed at considering biopsychosocial factors surrounding the person and their experience of pain (Bevers et al., 2016). Within the approaches adopted by medicine and allied health professionals, mindfulness-based interventions (MBIs) have recently been developed to help alleviate pain and pain-related distress, with the view of educating and equipping people to better manage their persistent pain conditions (Chiesa & Serretti, 2011).

Mindfulness-based interventions for pain: Mindfulness for Health

The empirical support for MBIs use in the treatment of persistent pain is growing, especially regarding Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 2003) and Mindfulness-based Cognitive Therapy (MBCT; Segal et al., 2002) for physical and psychological distress (Gu et al. 2015). Within these MBIs, Mindfulness is understood as a metacognitive skill of self-regulating attention and nurturing a relationship to one's own experiences with curiosity and acceptance (Brown & Ryan, 2003). This has been popularly summarised as 't*he practice of purposely bringing one's attention in the present moment without evaluation*' (Kabat-Zinn, 2003), which is a process that is taught through meditative practice, mindfulness theory, and the encouragement to apply mindfulness practices in daily life. Mindfulness for health (MfH; Burch & Penman, 2013) is a more recent MBI deriving closely from MBSR as an eight-week programme that focuses on alleviating psychological suffering related to health conditions and persistent pain, where psychological suffering is understood as a "secondary" to the "primary" experience of physical pain and ill-health. MfH is a standardised approach, where facilitators are required to undergo accredited teaching and on-going supervision to promote treatment fidelity and that material remains grounded in Mindfulness.

There is a growing evidence base suggesting that MBIs reduce pain intensity (Reiner et al., 2013) and pain sensitivity (Grant et al., 2011) in persistent pain populations. Theoretically, the mindfulness meditations focus on changing sensory, cognitive, and affective factors relating to subjective experience of pain (Brown & Jones, 2010; Grant & Rainville, 2009), where increased attentional capacity in meditators are thought to help modify the elaboration of nociceptive information into pain (Zeidan et al., 2011). In addition, acceptance and non-judgemental evaluation are theorised to reduce negative evaluation of pain, which otherwise lead to 'secondary suffering'. This includes habitual patterns that worsen pain intensity, such as avoidance strategies, pain catastrophizing, psychological distress and physiological responses to threat (Crombez et al., 2012; Zeidan et al., 2011). This theory has been supported by neuroimaging studies that have reported changes consistent with the targets of mindfulness (Grant et al., 2011; Zeidan et al., 2019).

Although Mindfulness is integral to MfH, mindfulness is taught predominately in the first five sessions, while the sixth and seventh sessions develop to include elements associated with compassion-based understanding of suffering and meditations that foster compassion. This process is reflected in the structure of MBSR and, accordingly, research on MBSR has reported increases in self-report self-compassion (Birnie et al., 2010; Kuyken et al., 2010; Rimes & Wingrove, 2011; Shapiro et al., 2007) and the role of compassion in positive outcomes (Gu et al., 2015; Keng et al., 2012).

Compassion in Mindfulness for Health

Deriving from the Latin word ‘compati’, meaning “*to suffer together with*”, compassion is widely associated with feeling for a person who is suffering and the motivation to alleviate that suffering (Goetz & Simon-Thomas, 2017; Strauss et al., 2016), which has been described as *“an openness to the suffering of others with a commitment to relieve it*” in Buddhist philosophy (Lama & Thupte, 1995). Mindfulness and compassion have a degree of cross-over in their clinical application, namely in their focus on turning towards pain with acceptance in the hope of reducing pain-related distress. Where compassion extends from mindfulness is in the feelings of care for the person suffering and an understanding that suffering is a shared human experience (Neff & Dahm, 2015). Within MBIs, mindfulness is understood as necessary to facilitate the development of compassion, where Tirch (2010) hypothesised that mindful awareness of one’s own inner experience is necessary to foster compassion for the self-with-pain. Accordingly, in MfH, mindful meditations precede the compassion-based ‘loving kindness’ and ‘open heart’ meditations, which are presented with an educational component on the three emotion regulation systems model originating from compassion-focused therapy (Gilbert 2000).

The experience of compassion in MfH for people with persistent pain

While compassion is recognised as a central component in MfH, there is emerging research on distress experienced in compassion-based practice (Fredrickson et al., 2008), in-session barriers to meditation (Barnhofer et al., 2010), difficulties with maintaining engagement (Crane et al, 2010), and treatment adherence in persistent pain populations on MBIs (Malins et al., 2020) suggesting that some participants might experience barriers, challenges or adverse experiences with compassion-based practices in MBIs. This connects with the theoretical reasons and empirical research that offer some understanding as to why participants with persistent pain drop-out of MBIs. Firstly, studies suggest that participants often experience increased distress before more meaningful positive change in MBIs, which can be influenced by on-going mental health distress (Farias et al., 2020). Persistent pain populations are vulnerable to heightened mental health distress, including self-criticism (Tunks et al., 2008), which has been linked with poor treatment adherence and outcomes in MBIs and compassion-based interventions (Wakelin et al., 2021). Additionally, Gilbert (2009) discussed how compassion-based interventions can elicit difficult memories of attachment experiences, such as the absence of being cared for, interpersonal traumas and grief in exercises such as loving-kindness practice (Fredrickson et al., 2008). This might reflect a population who have been reported as having twice the rates of disorganised attachments than in the general population (Davies et al., 2009). In the absence of a secure-attachment with a caregiver, Mikulincer and Shaver (2005) theorized that a person might have difficulties internalising compassion towards themselves and, therefore, be unable to self-soothe from the distress elicited by difficult memories during such meditations.

Rationale

Potentially distressing somatic and psychological experiences have been historically overlooked in MBI research (Lutkajtis, 2018), which might result from participants not sharing these experiences with services and in research that is not asking the necessary questions (Britton et al., 2021). However, qualitative research into the experience of interventions can be helpful in exploring the nuance and diversity of such experiences, both positive, neutral and adverse (Braun & Clarke, 2019; Charmaz & Henwood, 2017; Tuffour, 2017).

As discussed in Section A of this thesis, previous research on the experience of persistent pain participants participating in compassion-based interventions is limited by study quality, piloted bespoke programmes and research questions and findings that did not explicitly addressing potential adverse experiences (Chapin 2014; Gooding et al., 2020; Parry & Malpus). There is more extensive qualitative research on MBIs for persistent pain (Hawtin & Sullivan, 2011; Kerr et al., 2011; Luiggi-Hernandez et al., 2018; Moore & Martin, 2015; Morone et al., 2008; Van Gordon, 2016), with recent studies designed to explore adverse experiences (Bawa et al., 2021). However, none of these studies cover the experiences of compassion-based practice. Furthermore, the existing research into challenges experienced in compassion-based meditation has been not been with people experiencing persistent pain and so cannot be assumed to transfer to this population.

Therefore, the current study aims to explore the experiences of participants of MfH with persistent pain during the compassion-based session, including the compassion-based meditation (“open-heart meditation”), their perception of how they manage both pleasant and difficult experiences and how they perceive these experiences to relate contextual factors.

MfH is chosen as a standardised approach based on evidence-based MBIs specifically for people with pain and health conditions.

The study aimed to address the following questions:

- What are the positive, neutral and difficult experiences of participants during the compassion-based session?
- Where participants have encountered difficult experiences, how do they talk about managing these experiences?
- What is the individual's perception of how their context interacts with their experience of compassion-based session?

Method

Design

The study aimed to understand the experiences of participants, a qualitative approach was adopted (Harper & Thompson, 2011) and more specifically Interpretative Phenomenological Analysis (IPA). IPA is designed to explore the meaning that individuals describe to explain their experiences, whilst minimising the overt influence of scientific theory or psychological models (Smith et al., 2012). One's relationship to compassion can be conceptualised as self-to-self, self-to-other and other-to-self relating (Gilbert, 2010; Neff, 2008), which reflects IPA as a relational model of enquiry, focusing on how individuals relate to their experiences as an individual, in relation to their environment and in response to their perception of how others relate to them (Eatough & Smith, 2009). IPA has been used extensively with persistent pain populations (Smith, 201) and its use informed the interpretation of participants' experience of compassion and pain within the programme and its wider relevant experience within their lives (Harper & Thompson, 2011).

Participants

A purposive sampling approach was chosen to target persons relevant to the study's aims (Smith et al., 2012). Eight participants were recruited from four groups, which is in line with guidance for a doctoral thesis using IPA (Larkin & Thompson, 2012). The Participants were recruited from four separate MfH delivered by Breathworks accredited pain management service (Health & Community Services) (Breathworks-mindfulness, retrieved February 2022). Inclusion criteria are listed in Table 1 and a summary of the participants' demographic information is provided in Table 2. Limited demographics are included to maintain confidentiality. Four participants were in their forties, three in their fifties and one in their sixties. All participants were White British, with one participant British-Romanian participant. One participant had physical disabilities associated with cerebral palsy, which has not been listed with the details to maintain confidentiality. The criteria for persistent pain adopted by the service match those listed in ICD-10 (Treede et al., 2015), which was reflected in the sample.

Table 1

Inclusion and Exclusion Criteria

Inclusion	Exclusion
1) Capacity and willingness to provide informed consent	1) Significant on-going risk to self or others, as assessed by the assessing

	clinical psychologist at the pain management service
2) Aged eighteen or above	2) Participants who were terminally ill or have a dementia diagnosis
3) A primary concern relating to persistent pain condition (duration exceeding three months)	3) Participants who do not have capacity to consent
4) Ability to communicate and literacy in English	4) Participants who did not complete the session including the open-heart meditation
5) Completed six to eight sessions of the MfH programme	
6) Had completed the programme within the prior six months	

Table 2

Participant Demographic Details

Pseudonym	Gender	Relevant pain-related information
Beth	Female	Migraine and neuropathic widespread pain
Claudia	Female	Migraine related pain, neck pain
George	Male	Abdominal pain, lower-back pain
Laura	Female	Headache pain, previous cancer, Sjogren’s syndrome
Maria	Female	Previous primary brain tumour, Fibromyalgia
Martha	Female	Lower-back pain

Pauline	Female	Myalgic Encephalomyelitis, Fibromyalgia
Susannah	Female	Musculoskeletal pain, Dysesthesia

Recruitment and procedure

Participants were made aware of the research in the initial MfH session and were approached as a group at their final session, where they were offered participation information (Appendix F) and contact details to find out more, if they were potentially interested in participating (Appendix G). Informed consent was obtained for all participants (Appendix H). The interview was a 45-60-minute semi-structured interview to be flexible in discussion of diverse experiences relevant to the project (Appendix I). Interviews were conducted individually in person, with one participant interviewed on Microsoft Teams. Trust policy and guidance was followed for the safe storage of audio-recording and transcripts on a password-protected, encrypted drive, with personally identifying data removed or replaced with codes for all written transcripts.

Intervention

MfH is an accredited eight-week MBI specifically developed for long-term pain and health difficulties, comprising mindfulness theory, meditative practice and discussion about the meditation experience. Sessions were delivered by Breathworks accredited staff, including a Consultant Clinical Psychologist, Consultant Physiotherapist, Clinical Nurse Specialist and Assistant Psychologist. Participants were given weekly guidance on home practice and mindfulness related “habit releasers”. The group ran eight 2 ½ hour weekly sessions over a nine-week period. The service ran two groups at a time, four times a year. Participants were recruited from four groups over a six month period. Participants accessed the MfH following a multidisciplinary assessment (medicine, psychology, physiotherapy, and occupational therapy) and attendance to a pain education day informed by Explain Pain

(Butler & Moseley, 2013). The compassion-based meditation is the ‘open-heart’ meditation, that is presented in week six (Appendix K) with the three regulation systems model (Appendix L). Other compassion-based meditations included “acceptance and self-compassion meditation”, which focuses on acceptance of the unpleasant an developing a tenderness to suffering, and the “connection meditation”, which extends compassion towards others and humanity. These meditations were included in the wider context of developing compassion throughout the programme, with specific focus on the “open heart” meditation as a practice for specifically developing compassion towards all of one’s experiences.

Semi-Structured Interview

The interview schedule was developed using existing clinical experience and literature in Mindfulness, Compassion and persistent pain. The interview scheduled was piloted with a research consultant with experience in mindfulness before it was finalised. The researcher was external to the service, which helped facilitate a safe environment and minimise social desirability bias in responses concerning treatment, where there could be negative repercussions of disclosure.

Ethical Considerations

Ethical approval was sought and obtained through the Health & Community Services Research Ethics Committee (Appendix J). Online interviews were offered to minimise time and travel commitments, however, most participants opted to meet in person with necessary COVID-19 infection control measures. The research was conducted in accordance with the BPS code of ethics and conduct (BPS, 2009) and a risk assessment was completed in service for each participant as required by the service (Appendix M) Personally identifying data was removed or replaced with codes for all written transcripts.

Position of the Researcher

To support the integrity of qualitative research, researchers are advised to engage in reflexive analysis, which involves reflecting on the potential influence of their own experiences on interpretation of the data (Finlay, 2006). The researcher assumed a critical realist stance for this study (Maxwell, 2012), which holds ‘pain’ and ‘compassion’ within an ontological realist position, whilst acknowledging a form of epistemological constructivism and relativism. The researcher is a dual British French, white male who is training to become a clinical psychologist. The researcher has previous experience using mindfulness and compassion-based approaches in clinical settings and has developed an interest into the relationship between compassion and pain from both a professional interest and personal experience with persistent pain. The research was mindful of differences in gender, disability, sociocultural background and age during analytic process and interpretations in participants’ accounts (Davis, 2016; Smith et al., 2009).

Data Analysis

Transcripts from the interviews were completed by the researcher, which included the researcher listening to the audio recording once prior to transcription, during transcription, and once following transcription, to promote accuracy and familiarisation with data. Pseudonyms and the anonymising of personal data ensured confidentiality for participants.

Interview transcripts were analysed using IPA and its principle of ‘double hermeneutic’, following guidance outlined by Smith et al. (2009). This involved a line-by-line examination of the emergent themes, which were developed through careful repeated reading of individual manuscripts and noting descriptive, linguistic and conceptual comments. Emerging themes were then identified, which informed a discussion between the author and research supervisor to critically examine the emergent themes and inform an interpretative account (Larkin & Thompson, 2012; Smith, 2017).

To promote the validity of the identified themes, an independent researcher not involved with the study and with previous experience in IPA, blind read one transcript and made comments on emerging themes. Similar themes were identified in the transcript, with variation in the language used to describe semantically similar themes.

Quality Assurance

Interview schedules were informed by Yardley's (2008) core principles for evaluating the validity of qualitative research: sensitivity to context, commitment and rigour, coherence and transparency and impact and importance. Yardely's (2000) principles of assessing validity of qualitative studies were followed throughout the study, including the importance of reflexivity and ensuring that the analysis was grounded in the data. This included, an external supervisor cross-checking parts of the analysis and the researcher kept a reflective diary, which was used to consider the researcher's power and involvement (Appendix N), and included reflections on discussions about preconceptions and experience of compassion and mindfulness. One page of anonymised transcript was coded by a researcher external to the research team and compared to the researcher's initial codes, where difference were noted in linguistic rather than conceptual terms.

Results

The analysis generated five master themes and seventeen sub-themes, illustrated in Table 3, with examples of initial codes from which each theme and sub-theme were developed provided in Appendix O.

Table 3

Master themes derived from analysis

Master Themes	Sub-themes
Turning away from self-with-pain	• Efforts to control or avoid pain • Previous traumas • Initial resistance or apprehension towards compassion
Self-with-pain experienced as shameful	• Critical-self and pain • Cultural and personal relationship with compassion • Social network and institutions experienced as shaming • Pleasing others to reduce feelings of shame
Facilitating change	• Personal factors involved in being ready for change • Mindful awareness facilitating compassion practice • Guidance from facilitator • Shared experience of challenge as a group
Turning towards self-with-pain	• Experiential learning and process of overcoming personal defences • Awareness of self-with-pain • Confronting difficult experiences in compassion-based meditation • Turning towards self-with-pain following programme
Accepting self	• Sense of empowered self and committing to value-based activities • Understanding that this is the start of a journey

Master Theme 1: Turning away from self-with-pain

Participants identified a self-with-pain prior to the programme, where they recognised their efforts to control or avoid the experience of pain and distress so that they could manage the obligations of their life. These were understood as long-standing strategies, whose perseverance was not easy to overcome due to their habitual nature and the perceived suffering that would be induced if they were to turn towar.ds the pain. This master theme comprised the following sub-themes.

Effort to control or avoid pain

Participants detailed various strategies to either avoid or control the severity of their somatic pain so that they could engage with activities of daily living. However, these required a detachment from their present self, which could often lead to "boom and bust" cycles, where periods of over-activity are followed by pain flare-ups and self-criticism. For example, with Pauline, there was a lost sense of self and, similarly, George describes the externalised focus on controlling factors in his environment to minimise flare-ups.

"I'm not kind with myself, I just… just get on with it. If that makes sense? Yeah, I'm just (sigh). I'm just here. I just get up, get dressed, go on, go to work, do what I've got to do, get off, take my painkillers. I'm not kind to myself. Don't ask me why, I don't know." Pauline

"Well, I think that's what we all do in life and there's like this… it's a control issue. We feel as if we've always got to control everything that's going, you know, our lives, so there's no pain. To stay away from the pain." George

Previous Traumas

All participants shared difficult memories, adversity or periods of heightened stress that were associated with the beginning or worsening of their pain condition. Participants experienced the distress of the trauma that was felt in the present, suggesting that there were both somatic pain and psychological distress triggered by traumas that continued to impact them. Therefore, pain avoidance existed in addition to avoidance of traumatic events and the consequent negative beliefs about the self. For example, Beth's experiences of ill-health and healthcare were, in themselves, traumatic. However, these were experienced within the negative self-belief from highly critical interpersonal dynamics with a close family member that has left her ‘scarred for life’.

“It takes me right back to my childhood and we went through these things (sigh) I had in my life… five life threatening situations that I’ve been in. So I’ve had this excessive trauma and also in my early years… we suffered really toxic, uhm, emotional abuse from, uhm, my father’s mother. Actually very, very toxic abuse that has sort…of scarred for life.” Beth

Initial resistance or apprehension towards compassion-based meditation

Participants’ initial experience of compassion meditation appeared to be influenced by their avoidance of a self-with-pain, which manifested in self-criticism or an aversion towards the invitation for self-compassion. For Claudia, she recognised that her aversion towards the narrator of the compassion-based meditation arose from feelings of shame and the opposition caused between a self-compassionate self and a self-critical self.

“I found the meditation really hard and I got very agitated and… cross with the lady on the record. She’s saying about, you know, love yourself or, you know, be compassionate to yourself. Be kind to yourself or in a kindly manner or something. And I’d sort of in my mind, I’d be answering her back… in a very agitated way, and I’m not going to be compassionate to myself ‘cause I don’t like myself. So I sort of ended up we’re having a… bit of a battle.”

This self-criticism was expressed in inner narratives, where some participants described their habit of avoidance clashing with an invitation to turn towards their suffering that initially seemed counter-intuitive.

“Try to be kind with yourself… how can you try to be kind to yourself when you are in pain?” Maria

“We really struggled, like, what am I doing here? Don’t quite get it. What… what are we trying to achieve here?” Suzzannah

Master Theme 2: Self-with-pain experienced as shameful

Participants had both internal and external sources that influenced feelings of shame associated with the self-with-pain. These experiences had a degree of intersectionality, where factors such as their education, family and experiences with healthcare shaped a relationship with pain that sought to hide the self-with-pain rather than nurture it. Experiences of shame were understood to lead to participants trying to promote their self-esteem by controlling social evaluation from others, where to reduce feelings of shame, they often took caring dynamics with others and neglected their own needs.

Critical-self with pain

Participants expressed self-criticism that had manifested in response to pain and pain-related interference, where participants identified with an expected life or previous life that they had lost because of their pain. For example, their pain conditions prevented them from engaging in many activities of daily living, which led to feelings of guilt and social isolation in a social network of people without persistent pain. With Laura, isolation was a factor that influenced self-criticism, as it acted as a reminder of the exclusion that she was experiencing. For example, for Maria, pain-related disability manifested in social interactions, where she felt shame for the expectation of how she should present and the way in which she thinks that she presents.

“You know, it’s a long time to be sat at home, by yourself and not able to drive, do stuff and you do feel really isolated and sort of left to your own devices… hiding away” Laura

"And also feeling blamed for the way things were going…. Because the pain is slowing the brain. I cannot engage in conversations with people. I'm just physically there, but I cannot engage if they bring a subject to the table." Maria

Cultural and personal relationship with compassion

Participants' understanding of compassion was developed through dynamics with their family, their culture and institutions they interacted with, such as healthcare. Compassion was typically framed as a quality that is given to others, where it is one's duty to serve those who suffer. Whereas, it was understood as shameful to be compassionate towards yourself, such as 'loving yourself'.

"…but we weren't nurtured in a way to be… it was a bad thing if you loved yourself… and compassion towards yourself was associated with arrogance, so it's quite a negative thing. It's almost like, loving yourself was kind of being self-absorbed." Claudia

"You're taught when you grow up that the compassion was for everybody else apart from myself." George.

Compassion towards the self-with-pain was also shaped by a relationship to self and suffering that seeks to eliminate suffering rather than nurture it. In healthcare, this manifested as a focus on a diagnosis that could lead to a treatment within a biomedical understanding of pain rather than care for the self that is suffering.

"It was really, really bad and I didn't know how to describe it and I was searching and searching and trying and trying… for more than three years I was trying to find an answer for it. Trying to speak with people who could help me and find a name for it." Maria

Social network and institutions experienced as shaming

Participants identified a self-with-pain that was met with salient events that were experienced as shaming, where there was an absence of empathy for symptoms that were not physically visible and the feeling that the lived-experience of pain was disregarded by colleagues at work, healthcare professionals and their close family. For Beth, this experience was exemplified in invasive assessment procedures and feedback that felt dismissive and inconclusive. This led to feelings of shame, where being invalidated gave her a sense that there was something wrong with her.

"I had lots of scans, lots of sort of questionnaires, all kinds of things, and each clinic at the end of the investigations they did, they just go "yeah, well, you're absolutely fine" or "you don't quite tick marks" or, you know, "you've not got anything severe" and (sigh) it was very difficult for me."

"And having spent all these years thinking that there was something wrong with me, like why does nobody else see all these symptoms? Why does nobody else take this seriously? Am I just being a fraud? Am I mentally ill?" Beth

Pleasing others to moderate feelings of shame

To moderate the impact of a self-with-pain that was experienced as shameful, participants described efforts to promote their self-esteem. As self-esteem is dependent on social evaluations, participants described the extent to which they focused on pleasing or appeasing others, often through being carers and attending to their needs at the expense of their own needs.

"I'm not going to give compassion and... well, to myself, anyway. To everybody else, yes. If I've been working like eight hours, if my friend wants to go shopping 'cause she feels

bad, I'll just do it even if I was tired, I would… I wouldn't say no, that's me. I'm not the person to say no to other people. I want to help everybody." Martha

With Suzannah, these feelings became very apparent when she was in a hospital bed, which she attributed to illness arising from exhaustion, and she was pushing herself to get better because "*what good am I to them [parents]*" in the hospital. Here, her need to be a carer for her parents was emphasised in her drive to recover so that she can serve her parents, rather than a motivation to alleviate her own suffering in itself.

Master Theme 3: Facilitating change

There were factors at the outset, during the programme and following its completion that participants understood as necessary for managing and engaging with compassion-based practices. From participants arriving at the programme with a commitment to change, to the group and personal processes that support them through difficult experiences, participants' accounts suggested that personal commitment had to co-exist with the foundations of compassion, such as compassion from others, feelings of shared humanity and mindful awareness.

Being ready for change

Participants experienced moments where they noticed the need for a change, which appeared to increase their willingness to engage with the difficult experiences involved in compassion-based practice. These were sometimes accompanied by moments of severe distress, where there were highly salient moments of a change in perspective, such as with Suzannah, whilst in a hospital bed, noticing that the absence of self-compassion was involved with her ill-health and that she needed to change for herself rather than others.

"I hit a brick wall and I literally went 'I need help' and then suddenly…I said I will take it and grasp it…'cause I…need to look after me." Suzannah

However, others perceived mindfulness as the last available option that could treat their pain condition. Healthcare was described as prioritising biomedical treatments, which were sometimes accompanied by harmful unwanted effects, interpersonal feelings of being dismissed and the failure to find the sought after treatment. Therefore, some participants engaged with MfH as a *"last chance saloon" Beth.*

Mindful awareness facilitating compassion practice

Participants described the process of developing mindful awareness, whether through meditations or new habits, which were necessary in turning towards pain and, therefore, bringing compassion towards that suffering. These were unique in each participant, for example, Suzannah practiced the breathing anchor and body scan as practices that could be used to promote present awareness of the self and allow her to take a more compassionate position towards herself.

"I had a sore place on my foot and I had been kind to myself because … ordinarily I would have just like, you know, whatever, but I was actually careful with my foot. Consciously careful, which really surprised me, 'cause I've never really done that before, you know? Just hold it." Claudia

Guidance from facilitator

The facilitator was described as attending to participants as individuals and being compassionate towards their suffering. This was evident through participants' descriptions of teaching material and discussions applied to their present concerns and meditative experiences. In this way, the facilitator modelled compassion towards participants and assisted the group dynamics.

"She [the facilitator] was good at listening, good at picking up on things that I wouldn't necessarily have picked up on myself, you know, she would hear something and then we would discuss it." Beth

"And so when I was put into this [programme], it was almost like a huge relief (sigh), now someone is going to take me seriously, somebody is actually taking care of me, sees me as who I am, if that makes sense?" Suzannah

Shared experience of challenge as a group

Through the group facilitator assisting an environment where participants felt confident to share their experiences, there was the facilitation of a sense of "shared humanity" in their pain experience. This was particularly salient among people with persistent pain, where participants described an almost unspoken understanding of one another's pain. At other times, there were explicit acts of social support through difficult moments. For most participants, this change from individual to group identification was evident in the change of pronouns from "*I*" to "*we*" or "*the girls*", which emphasised the group's cohesion. It was understood that feelings of shared humanity and being compassionate towards others in the group facilitated being open and compassionate towards their own previously shameful self-with-pain

"There was no like, 'we can't say anything 'cause I think I'm stupid or I don't get this'. Everybody just literally was comfortable with people around them and realised that, you know? And the sharing part for me was the best because it was, you know, it just makes

you feel how different every person thinks. They might feel something different, but they're putting it all in the melting pot and you could take something away." Suzannah

"And so when I returned to compassion to myself, you know, from that I... I think having gone through that little journey of compassion for the entire world, you know…if you go through that little journey actually coming back to compassion for myself was a bit easier."

Master Theme 4: Turning towards the self-with-pain

Some participants described the compassion-based session as overcoming their previous defences (avoidance, control) to turn towards the self-with-pain with acceptance and compassion. The meditations and compassion-based discussions were recognised as challenging and potentially upsetting, but engaging with the practice was seen as rewarding.

Experiential learning and process of overcoming personal defences

During the initial sessions up to the introduction of the three regulation systems (Appendix L), the participants were recognising patterns that were aimed at controlling or avoiding pain and the subsequent importance of removing these barriers to facilitate meaningful change. However, it was through practicing the meditation that all participants noticed changes, where the compassion meditation facilitated a different way to relating to the self and the pain. Taking a non-judgemental position of acceptance allowed participants to engage with the practice without the fear of perceived failure, even where these experiences were not initially pleasant.

"I think what was really good was the way we were told that there's no right or wrong for doing this, 'cause I…think a lot of things you do, in life, you're not confident if you're doing it at home by yourself because you don't know if you're doing it right, and it's

really reassuring if there is no right or wrong answer, don't worry, and listen to what's happening" Pauline.

For some participants, a guided experiential process allowed for a novel way of relating to themselves, which was described in particularly salient and emotive language that suggested a new relation with pain and the self that modelled self-compassion.

"When we were doing it [open heart meditation], he [facilitator] was saying you could hug the pain. Now I've never thought of that 'cause I'd stabbed the pain, kicked the pain all over the place but never thought of hugging it. It's a totally different way of looking at it and honestly never in my life have I sat there and thought 'it's Ok to look at that pain' I'd like to kill the pain. I just smashed it all over the place. This had taught me to love it and that makes me feel different." Pauline.

For *Martha* and *George*, their descriptions of compassion-based practiced remained on an abstracted and conceptual level rather than an account of an experiential process. Neither gave accounts of confronting difficult experiences and one possibility is that this reflects less experiential engagement in practice than others and a tendency to avoid distress.

Confronting difficult experiences

It was acknowledged by participants that turning towards the self-with-pain with compassion could be difficult, as it involved addressing the distress and loss that they had been avoiding or trying to control up until the meditation. However, for some, engaging with the meditation in the group was seen as helpful as the environment was perceived as containing and supportive.

"Every one of us, you know we ended up in tears at some stage, but it wasn't because we were unhappy, it was because there was some triggering of something in somebody." *Suzannah*

Although these were often described as revelatory experiences, in their novelty and contrast to previous ways they managed distress, participants took a degree of perspective, understanding that the compassion-meditation was not necessarily a life-changing event but a salient experience that they would want to continue working on.

"Yeah, I think it's to do with being let down. And relationships. And uhm… that's it, it is men and relationships, and I think you just put barriers up because you've got to protect yourself and your daughter and just plough through. So this meditation, it's going to be a… first step…so you're going to chisel away". Claudia

Turning towards the self-with-pain following programme

Following the programme, some participants described their commitment to nurturing a self-compassionate position. These changes were specific to each individual, who found their own way to turn towards the self-with-pain with the aim of alleviating the suffering. Although not mutually exclusive, this involved either promoting an awareness of the self so that a more self-compassionate position could be taken or recognising one's own suffering and connecting with others to communicate their suffering earnestly and seek the necessary support.

"It made me really think about it because you're so busy doing, you don't often think about yourself. And then what I've taken from the course is actually recognising what I do, which I probably didn't, I would never actually think about." Laura

"[Work said] we understand that you're not well at the moment, and if you need help, you know if you need support then let us know and we can put it in place. You know, I spent a lifetime hiding issues form work." Beth

Master Theme 5: Accepting self

Most participants described a change following their compassion-based practice, which though powerful in some accounts, was also tentative in the face of uncertainty following the loss of their group and the challenge of living with persistent pain.

Sense of empowered self and committing to value-based activities

The role of compassion manifested in how participants viewed their position in their social network, where a self-with-pain was no longer fused with shame, but had developed into a sense of empowerment that allowed them to feel confident engaging with valued activities. In Beth, this was expressed in spontaneous responses that contrasted with a previous self-critical self, leading to cherished moments that she recounted with pride. With these changes, was a sense that there was a new self-emerging.

"I had a really difficult problem with somebody who'd done something that was really out of line and I decided… I dealt with it in quite an assertive way. I'd felt the anger in me but normally I wouldn't do anything about it when I'm feeling angry, 'cause I don't trust myself. But actually I felt the anger, I recognised where it was. Where I felt it. Why it was anger. And just dealt with it very short and sweet and assertive and is what I'm doing and that, uhm, which was very different to how I would normally have done it. ... and that helped me with the compassion, because I began to think, you know, you are actually worth something, you are actually, you know, quite capable and you can be assertive."

Understanding that this is the start of a journey

Participants did not describe a sudden transformation despite the salience of some of their experiences, as it was acknowledged that continued self-compassion, awareness and acceptance was necessary to maintain change. For some, they saw the eight sessions as a necessary moment to change their life's trajectory or begin the challenge of addressing their defences and nurturing new ways to respond to suffering.

"Well, maybe there's like a little fissure now in the rock and a tiny trickle of water opening up in this heart on concrete that I have for myself." Claudia

"I think… I needed that journey of those eight weeks to sort of get me going and get me focused on changing things and changing my attitude." Beth

With Maria, there was a sense that the programme had led to positive change, however, she was still seeking guidance to keep her on this new trajectory. Participants often expressed a longing for the group, where they had connected with others and felt a positive change, but were conflicted by the loss of that group, its perceived short-duration and the uncertainty of returning to their lives without the group.

"I've learned things, I've changed things. But I still need guidance and I still need support and… it was a good way of socialising with… Mindfulness, the people there and everyone is moving on with their lives."

Discussion

This study sought to explore how participants understand their experience of compassion-based practice as part of MfH, including how they manage difficult experiences and understand these within their context. The eight participants provided rich and detailed accounts of their experiences and these were analysed with IPA and organised into five master themes, which are considered in turn.

Turning away from self-with-pain reflected both an understandable attempt to avoid the intensity of unpleasant somatic and psychological distress, and a phenomenon widely acknowledged in persistent pain sufferers that is theorized to maintain their persistent pain condition (Crombez et al., 2012). The reliance on these defences was evident with participants' resistance towards compassion-based practice, which invited them to turn towards their self-with-pain or difficult past experiences. Importantly, strategies to avoid or control pain extended beyond the experience of pain to the emotional distress elicited by difficult memories. This is important when considering the prevalence of mental health concerns and previous trauma in persistent pain populations (Lopez-Martínez et al., 2014).

Efforts to avoid or control pain were understood in the context of a *self-with-pain experienced as shameful*, where participants noticed pleasing or appeasing others served to negate possible negative social evaluation from social networks and institutions. One example in the findings was healthcare, which is consistent with previous studies that have highlighted interactions that are perceived as eliciting shame in those with persistent pain (Nicola et al., 2021). This study suggested that such long-term patterns may have related to a family or cultural norm where compassion is given to others rather than the self. Participants also made links to a highly critical environment that led to hyper-vigilance to potential negative social evaluation that manifested as self-criticism, which is a common phenomenon in pain populations (Kempke et al., 2014). Literature suggests that whereas a drive to achieve positive social status and positively judged attributes may reduce interpersonal threat, this can impact acceptance of persistent pain, and necessary adjustment and pacing (Depue & Morrone-Strupinsky, 2005). Therefore, engaging with compassion-based meditation was described as occurring in the context of participants who used avoidance and control to manage a self-with-pain associated with shame.

The experience of the compassion-based session involved a challenge in turning towards the self-with-pain and overcoming the barriers that they adopted to protect them, such as avoidance. The participants' experiences reflected the distress sometimes encountered in meditative practice (Britton et al., 2021), where practice confronts participants with adverse attachment experiences (Gilbert, 2009) and previous traumas (Lutkajtis, 2018). However, the participants described a recognised phenomenon; that it can be necessary to attend to their pain and suffering before they can nurture self-compassion (Farias et al., 2020). This corresponds to a theorised process whereby the participant nurtures an ‘open monitoring’ of experiences so that they can begin to be compassionate towards the self (Zeidan et al., 2011). It appeared that these positive changes were accompanied by acceptance, where feelings of shame were alleviated to facilitate a less judgemental and more compassionate awareness of the self. Where feelings of shame were alleviated, it was understood that this allowed participants to experience less avoidance strategies or self-criticism, as they no longer felt as strong a need to hide their self-with-pain. These changes are consistent with theory and research suggesting a focus on acceptance and non-judgemental awareness that reduce ‘secondary suffering’ through addressing habitual patterns that worsen pain intensity, such as avoidance strategies, pain catastrophizing, psychological distress and physiological responses to threat (Chiesa & Serretti, 2011; Crombez et al., 2012; Zeidan et al., 2011). However, although these experiences were often described as highly salient in their novelty, this study indicated that these were understood as the beginning of a change in their trajectory rather than transformative events.

Some participants identified strongly with the group, especially amongst women, who shared a sense of solidarity in their experiences. There is recent literature on disparities in accessing physical and mental healthcare group programmes in men and women (Emslie et al., 2006; Gough & Robertson, 2010), where one explanation is that men are less likely to engage with group-based support due to conflicts between hegemonic masculinity and the perceived ‘feminine’ activity of engaging with mental-health orientated activities (Noone & Stephens, 2008), including compassion (Yarnel et al., 2019). Additionally, disability and being ‘othered’ can be a barrier to engaging with a group of non-disabled participants (Johnson et al., 2004). Accordingly, one male participant and a female participant with a disability did not identify strongly with their group and gave accounts of their experience of compassion that were largely abstracted and conceptual rather than emotive and experiential. These participants might have also experienced barriers within the group relating to the experience of difference in disability (Davis, 2016) or difficulties engaging with peer support due to gender norms (Addis et al., 2016). This peer support might have been necessary to create the interpersonal safety that reflects a secure-attachment that Mikulincer and Shaver (2005) theorised as necessary to self-soothe from the distress elicited by difficult experiences during the session. This study suggests that compassion towards others and a sense of ‘shared humanity’ facilitates an acceptance of the self-with-pain and helps alleviate the shame associated with pain, allowing people to better turn towards their pain. However, where difference was a barrier to associating with the group, this may have led participants to rely more on avoidance due to the lack of perceived internal safety (shame) and external safety (the group). Therefore, this might have limited the development of ‘focused attention’ and ‘open monitoring’ theorised as necessary to bring self-compassion to one’s pain and suffering (Lutz et al., 2008; MacLean et al., 2010).

Overall, the way participants described how they managed the initial challenge of compassion practice reflected previous literature, such as using mindful awareness to address avoidance strategies (Tirch, 2010), compassion modelled by an attentive facilitator (Naismith et al., 2019), the feelings of shared humanity in the group to overcome shame (Au et al., 2017; Farr et al., 2021), and acceptance of the-self-with-pain (Smith & Osborn, 2007).

Strengths and limitations

IPA emphasises an in-depth understanding of human experience rather than generalisability of findings (Smith et al., 2009). Importantly, participants were self-selected and only participants who completed the programme participated in research. Completers with adverse experiences of the compassion practice may not have opted in despite the invitation to share both positive and negative experiences. This may have led to a bias towards participants who benefitted from the programme (Collier & Mahoney, 1996). This might be apparent in the diversity of the sample, where mostly White-British women participated and the study did not represent men and those of marginalised ethnicities present in the population (Mills et al., 2019). Research in healthcare group programmes suggest that those of minoritised demographics might experience additional challenges in benefiting from group support (Mentis et al., 2019). This could include barriers to attaining an experience of ‘shared humanity’ that were understood as facilitating self-compassion in participants.

Unlike many studies in MBIs and compassion-based interventions, data collection and analysis were performed by a researcher external to the facilitation of the programme and not employed by the providing service, reducing potential favourable biases in participant interviews and interpretation of data. However, it can be difficult for participants to provide retrospective accounts of experiences that occurred at a single point some months prior to interviews, making it harder to connect with their initial experience.

Clinical implications

Participants described a primacy of biomedical conceptions of pain in previous healthcare interactions. On uncovering the absence of a clear pathology or structural abnormality, participants described shame and self-criticism, where their suffering was related to having “nothing wrong” with them and, what has been discussed in literature as, the expectation to overcome their disability with their own extraordinary effort (Wendell, 2006). However, the continued search for a biomedical “answer” to pain located not in pathology is, although an understandable response to unbearable suffering and the influence of healthcare, nonetheless a barrier to compassion practice. For compassion practice, it is necessary to be aware of one’s suffering, accept suffering within the self and others, and nurture the one who suffers. Similarly, mindfulness has an aim to reduce pain-related suffering rather than target the pain intensity directly. However, a biomedical conception of pain might involve avoiding suffering through a primary aim to control, eliminate or avoid pain (Lima et al., 2014). Therefore, clinicians need to be aware of a participant’s paradigm shift between biomedical to psychologically informed understanding of pain, as the intention of compassion-practice is contradictory to biomedical treatment of pain. Therefore, careful preparation and education (e.g. pain education prior to programme) would benefit participants prior to compassion-practice rather than risk contradicting participant’s beliefs without them having foundations to ground a new biopsychosocial understanding of their pain. Such preparation could also address barriers to group entry and drop-out, where participants may disengage because of these conflicts.

Communication that addresses shame is integral to this process, with a population highly alert to shame manifested in vigilance to negative social evaluation and self-criticism. Achieving positive change appears to be more challenging for those with self-criticism (Carvalho et al., 2019) and developing acceptance of pain (Costa & Pinto-Gouveia, 2011), which is reflected in the experiences of participants who dropped out as being socially isolated, having self-critical responses to distressing experiences and not feeling connected to the group. The drive to achieve positive social status by attempts to control how the pain is perceived and strategies control one’s own pain is the goal of avoidance strategies and self-critical perfectionist patterns common in people with persistent pain (Kempke et al., 2014), yet these goals impact processes of acceptance and the adjustment and pacing necessary to effectively manage pain (Depue & Morrone-Strupinsky, 2005). In contrast, participants who described positive change often cited a process of pain acceptance and self-compassion that was facilitated by belonging to a group and a sense of shared humanity, which is consistent with literature (Crombez et al., 2012; Wren et al., 2012). This suggests the importance of attending to group dynamics and reaching to socially isolated members of a group to dismantle shame and isolation, rather than a focus predominately on strategies reduce subjective pain or outcomes tied to positive social evaluation. However, clinicians should be attentive to difference within the group that may isolate members from bonding helpfully to the group and feeling able to share difficulties and concerns. This is especially important for characteristics that are associated with societal shame, such as socio-economic background, minority ethnicity and disability (Arboleda-Flórez, 2003). For instance, this research suggests that developing open and trusting relationships with participants can protect participants from adverse outcomes or drop-out by encouraging appropriate disclosure of any negatively evaluated comments participants receive from the facilitator or group members regarding their identity or difference. This would contrast with participants with difference being socially isolated and potentially harmful exchanges going unaddressed.

However, focusing on the group has several important barriers, including group duration, time to develop trust in the group and the risk of deterioration following its termination due to participants falling back into unhelpful patterns following the programme. Participants also face the challenge of investing and learning in the interventions' contrasting philosophical approaches to the biomedical model of illness and pain, which was linked towards numerous dropouts. Yet, initial worsening of pain experience or discomfort in the group did not necessarily lead to negative outcomes and clinicians may benefit from being aware of the risk of participants being isolated with distress rather than understanding that this could be part of a process to meaningful change. Where appropriate, attending to difficult or upsetting experiences after meditative practice or discussions could help frame distress as part of this process of developing self-awareness and compassionate acceptance, rather than perceived failure. Likewise, these interactions could address dissonance of uncertainty when transitioning from a bio-medical conception of pain to a often complex multifaceted biopsychosocial understanding.

Although MBIs and compassion-based approaches acknowledge that their outcomes have a broader focus on well-being and changes in lifestyle, it is important that clinicians recognise self-reported change in pain intensity, pain-related distress, and pain interference evident in many participants. Despite some changes being attributed to mindful or compassion-related changes in acceptance, awareness and perspective, participants also benefited from a skills-based change and feelings of empowerment that the ‘tools’ they acquired could be used to manage pain.

Research implications

MBIs and compassion-based interventions do have participants who disengage from the intervention, suggesting that some participants either do not engage or experience adverse experiences without subsequent positive change. Recruiting these participants is challenging, as they are less likely to volunteer (Collier & Mahoney, 1996). Nevertheless, it is important to understand more about the experience of compassion-based practices for those who do not experience positive change, are unable to manage difficult experiences or whose context prevents them from engaging. This could provide useful information regarding how facilitators could best address those who are vulnerable to adverse experiences. Factors such as supportive group dynamics, acceptance of self-with-pain, and successful acquisition of mindfulness skills might be necessary for participants to successfully engage with the compassion session and further research could explore participants who experience barriers with these factors and how to better support them within the programme. This would benefit from more diverse samples, including cultural and ethnic diversity, disability and gender, especially where this research has suggested possible links between a participants’ context and their experience of compassion-based practice. There is a growing field of research into the development of acceptance and awareness in pain populations, and linking these meaningfully to the experience of compassion could help further uncover processes and challenges integral to developing compassion in pain.

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Section C: Appendix of Supporting Materials

Appendix A – CASP Qualitative Studies Checklist

Paper for appraisal and reference:

Section A

Was the recruitment strategy appropriate to the aims of the research? *Yes, can't Tell, No*

Consider

- If the researcher has explained how the participants were selected
- If they explained why the participants, they selected were the most appropriate to provide access to the type of knowledge sought by the study
- If there are any discussions around recruitment (e.g. why some people chose not to take part)

Was the data collected in a way that addressed the research issue? *Yes*, *can't tell, No*

Consider

- If the setting for the data collection was justified
- If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
- If the researcher has justified the methods chosen
- If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)
- If methods were modified during the study. If so, has the researcher explained how and why
- If the form of data is clear (e.g. tape recordings, video material, notes etc.)
- If the researcher has discussed saturation of data

Has the relationship between researcher and participants been adequately considered? *Yes, can't tell, no*

Consider

- If the researcher critically examined their own role, potential bias and influence during
    - (a) formulation of the research questions
    - (b) data collection, including sample recruitment and choice of location
- How the researcher responded to events during the study and whether they considered the implications of any changes in the research design

Section B: What are the results?

Have ethical issues been taken into consideration? Yes, can't tell, No

Consider

- If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- If approval has been sought from the ethics committee

Was the data analysis sufficiently rigorous? *Yes, can't tell, no*

Consider

- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- If sufficient data are presented to support the findings
- To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

Is there a clear statement of findings? *Yes, can't tell, no*

Consider

- If the findings are explicit
- If there is adequate discussion of the evidence both for and against the researcher's arguments
- If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)
- If the findings are discussed in relation to the original research question

Section C: Will the results help locally?

How valuable is the research?

Consider

- If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research based literature
- If they identify new areas where research is necessary
- If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be us

Appendix B: *Section A papers assessed by CASP criteria*

Criteria	**Example**	**Paper for appraisal and reference:**									
	Study strength	**KP**	**KP**	**KP**	**KP**	SAT	SAT	SAT	SAT	?	SAT
		Bawa et al. (2021)	**Van Gordon et al 2016**	**Moore & Martin 2014**	**Hawtin & Sullivan 2011**	**Kerr, Josyula, Littenberg 2011**	**Morone et al 2008**	**Parry & Malpus 2017**	**Gooding, Stedmon, Crix 2020**	**Penlington 2019**	**Luiggi-Hernandez et al 2018**
Aims	Explicitly stated aims/objectives of research	Yes - to explore the experiences of patients with chronic pain who took part in a mindfulness programme.	Yes - to explore whether following participation in a mindfulness-based intervention, patients with FMS report experiencing changes in (i) how they experience and relate to their illness and (ii) their attitudes towards societal participation, work and unemployment.	Yes - to conceptualise chronic pain patients' perceived benefits of an MBCT programme	Yes - to examine the experiences of mindfulness training for five adults living with rheumatic disease.	Yes - to investigating chronic pain participants' descriptions of changes experienced over multiple time points during mindfulness programme	Yes - to explore the effects of mindfulness meditation on older adults with chronic low back pain	Yes - to explore chronic pain participants' experience of novel compassion in pain programme	Yes - to explore chronic pain participants' experience of compassion-focused therapy group	Yes - to explore chronic pain participants' experience of compassion-focused therapy group	Yes - to investigate dominant themes present in the experiences of older adults applying mindfulness and meditation to cope with chronic lower back pain

Methods	Appropriate use of qualitative methods	Yes - two research investigations into programme experience in group, exploring effectiveness (quantitative) and experience (qualitative)	yes - justified within remit of research question	Yes - A realist methodological approach sought to examine the semantic content of participants' descriptions of their experiences following participation in the MBCT group.	yes - justified within remit of research question	yes - justified within remit of research question	yes - justified within remit of research question	yes - justified within remit of research question	yes - justified within remit of research question	"would add to the results" of standardised measures - research design placing primacy on quantiative	yes - justified within remit of research question
Research Design	Justification of specific research design	Aim to explore pain patients, referencing literature of use of IPA in population, detailing 'data rich with meaning and reflexivity (Willig, 2008)', looking for participants' experiences and particular vulnerabilities to be understood.	yes - justified within remit of research question	yes - justified within remit of research question	yes - justified within remit of research question	Justified within remit of research question - query of using diaries with free format where grounded theory is guided	Justified within remit of research question - query of using diaries with free format where grounded theory is guided	yes - justified within remit of research question	yes - justified within remit of research question	Use of thematic analysis discussed and justified by purpose	Justified within remit of research question - did not adequately discuss impact of thematic analysis in group setting

Sampling	Appropriate sampling strategy, description of recruitment	Appropriate sampling strategy detailed. Description how participants were selected, appropriate. Discussion of participant drop-out/not participating and difference on results	yes - explained randomisation, pathway to participation and inclusion/exclusion	Convenience sampling - detailed the process	Convenience sampling - detailed the process	Participants completed diaries as part of intervention, reducing sampling bias, however, still relied on completion of course	Participants completed diaries as part of intervention, reducing sampling bias, however, still relied on completion of course	Convenience sampling - detailed the process	Convenience sampling - detailed the process	Convenience sampling - some information on the process	Convenience sampling - detailed the process
Data collection	Appropriate description of data collection methods	Yes - adequate description and justification - post-programme interview and 8-month f/u	Yes - adequate description and justification	Yes - adequate description and justification	Yes - adequate description and justification	While diaries provide an open space to record behaviors, thoughts, and experiences, certain processes of reperception may not have been captured since there were no specific guideline	While diaries provide an open space to record behaviors, thoughts, and experiences, certain processes of reperception may not have been captured since there were no specific guideline	Use of reflective group - limitations for IPA	Yes - adequate description and justification	Limited description and unsatisfactory use of questionnaires to develop themes from	Yes - adequate description and justification

Reflexivity	A critical examination of researcher's own role and bias	Some discussion of role of researcher and potential bias considered	Limited discussion of own role and potential influence, including implications of participants and wider ethical and social concerns	Limited discussion of own role and potential influence, including implications of participants and wider ethical and social concerns	discussed limitations of focus group for IPA - considered within context of mindfulness teaching, previosu professional relationship with researcher	Limited discussion of own role and potential influence, including implications of participants and wider ethical and social concerns	Limited discussion of own role and potential influence, including implications of participants and wider ethical and social concerns	discussed limitations of reflective group for IPA - 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	Limited discussion of own role and potential influence, including implications of participants and wider ethical and social concerns	Limited reflexivity - some discussion of context of research and participant selection bias from research design	Limited reflexivity - some discussion of context of research and participant selection bias from research design
Ethical issues	Evidence of approval by an appropriate body	Yes - detailed consent and ethics considered. Includes non-completors in interviews and analysis	Yes - detailed consent and ethics considered (e.g. group set up and FMS as a biopsychosocial condition possibly affecting results)	Yes - consent and ethics considered (e.g. group set up and selection bias of clinical research)	Yes - consent and ethics considered (e.g. group set up and selection bias of clinical research)	Yes - detailed consent and ethics considered	Yes - discussion of generalising study based on white british men	Ethics detailed and considered	Ethics detailed and considered	Some discussion of ethics considered, including those who did not participate and high attrition	Some discussion of ethics considered, including those who did not participate and high attrition

Data analysis	Adequate and in-depth description analysis, sufficiently rigorous data analysis	Yes - detailed process of IPA, referencing guidance and considerations for critically analysis. Considers contradictory data	Yes - detailed process of IPA, referencing guidance and considerations for critically analysis	Yes - followed standards of thematic analysis as detailed by Braun and Clarke 2006	Yes - detailed process of IPA, referencing guidance and considerations for critically analysis	Yes - detailed process of grounded=theory within somewhat unusual format of diary entries, referencing guidance and considerations for critically analysis	Process of qualitative narrative analysis referencing guidance and considerations for critically analysis. Some themes without quotes or not clearly supported by quotes	Yes - detailed process of IPA, referencing guidance and considerations for critically analysis. Limited use of quotes to justify data analysis process	Yes - detailed process of IPA, referencing guidance and considerations for critically analysis	Limited reporting of themes, elaboration of thematic structure, use of data to justify categories	Yes - followed standards of thematic analysis as detailed by Braun and Clarke 2006

Findings	A clear statement of the findings, discussion of evidence, credibility, integrity	Yes - including thorough limitations of findings and methods	Yes - including thorough limitations of findings and methods	Yes - including thorough limitations, generalisation issues of findings and methods	Yes - including critical consideration of limitations generalisation issues of findings and methods	Yes - including critical consideration of limitations of research design, issues of findings and sample size	Yes - including critical consideration of limitations of participants and generalisability	Yes - detailed discussion on implications for clinical and research future	Discussion of high attrition and variance between groups impacting generalisability - discussion of clinical and research implications within scope of investigation	Some limitations of findings and methods, future directions	Limited discussion of clinical and research implications, limitations discusses white british adults limitations to generalisability, inadequate discussion of potential impact of researcher or group format

How valuable is the research?	- If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research based literature - If they identify new areas where research is necessary - If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be use	Yes - including thorough limitations of findings and methods	Yes - including thorough limitations of findings and methods	Yes - including thorough limitations, generalisation issues of findings and methods	Yes - including critical consideration of limitations generalisation issues of findings and methods	Yes - including critical consideration of limitations of research design, issues of findings and sample size	Yes - including critical consideration of limitations of participants and generalisability	Yes - detailed discussion on implications for clinical and research future	Discussion of high attrition and variance between groups impacting generalisability - discussion of clinical and research implications within scope of investigation	Some limitations of findings and methods, future directions	Limited discussion of clinical and research implications, limitations discusses white british adults limitations to generalisability, inadequate discussion of potential impact of researcher or group format

Appendix C: Section A themes across studies

Theme	Subtheme	Bawa et al. (2021)	Gooding, Stedmon, Crix 2020	Hawtin & Sullivan 2011	Kerr, Josyula, Littenberg 2011	Luiggi-Hernandez et al 2018	Moore & Martin 2014	Morone et al 2008	Parry & Malpus 2017	Penlington 2019	Van Gordon et al 2016
Living with persistent pain	Experiences of shame, exclusion, and disability	/	/	/		/	/		/		/
Importance of understanding programme	Value of understanding	/				/	/		/		/
	Not understanding the rationale	/		/		/	/	/			
Group process	Building trust in the group		/						/		
	Value of being part of a group	/	/				/	/	/		/
	Sense of community and shared humanity	/	/				/		/	/	/
Difficulties or distressing experiences on programme	Pain and unpleasant somatic symptoms during practice	/			/	/					/
	Unpleasant feelings elicited on programme	/			/				/		/
	Barriers to engaging in practice	/		/	/		/		/		/
Perceived benefits of programme	Developing acceptance and perspective on life and pain	/	/	/		/	/	/	/	/	/

	Listening to body and developing awareness	/		/	/	/	/	/	/		/
	Developing understanding of persistent pain experience	/	/	/		/	/	/	/		/
	Feeling sense of empowerment	/	/	/	/	/	/		/		/
	Acquiring toolbox to help manage daily life	/		/	/	/	/	/	/	/	
	Improved sleep					/		/			/
	Reduction in pain and pain-related distress	/	/	/		/		/	/		/
Challenges of maintaining positive change			/				/		/		/

Appendix D: *Table of studies contributing to themes*

Theme	Subtheme	Contributing studies
Living with persistent pain	Experiences of shame, exclusion, and disability	Bawa et al., 2021; Gooding et al., 2020; Hawtin & Sullivan, 2011; Luiggi-Hernandez et al., 2018; Moore & Martin, 2014; Morone et al., 2008; Parry & Malpus, 2017; Van Gordon et al., 2015
Importance of understanding programme	Value of understanding	Bawa et al., 2021; Luiggi-Hernandez et al., 2018; Moore & Martin, 2014; Parry & Malpus, 2017; Van Gordon et al., 2015
	Not understanding the rationale	Bawa et al., 2021; Hawtin & Sullivan, 2011; Luiggi-Hernandez et al., 2018; Moore & Martin, 2014; Morone et al., 2008
Group process	Building trust in the group	Gooding et al., 2020; Moore & Martin, 2014
	Value of being part of a group	Bawa et al., 2021; Gooding et al., 2020; Moore & Martin, 2014; Parry & Malpus, 2017; Van Gordon et al., 2015
	Sense of community and shared humanity	Bawa et al., 2021; Gooding et al., 2020; Moore & Martin, 2014; Parry & Malpus, 2017; Penlington, 2019; Van Gordon et al., 2015
Difficulties or distressing experiences on programme	Pain and unpleasant somatic symptoms during practice	Bawa et al., 2021; Kerr et al., 2010; Luiggi-Hernandez et al., 2018; Van Gordon et al., 2015
	Unpleasant feelings elicited on programme	Bawa et al., 2021; Kerr et al., 2010; Parry & Malpus, 2017; Van Gordon et al., 2015
	Barriers to engaging in practice	Bawa et al., 2021; Hawtin & Sullivan, 2011; Kerr et al., 2010; Moore & Martin, 2014; Van Gordon et al., 2015
Perceived benefits of programme	Developing acceptance and perspective on life and pain	Bawa et al., 2021; Gooding et al., 2020; Hawtin & Sullivan, 2011; Luiggi-Hernandez et al., 2018; Parry & Malpus, 2017; Penlington, 2019; Moore & Martin, 2014; Morone et al., 2008; Van Gordon et al., 2015
	Listening to body and developing awareness	Bawa et al., 2021; Hawtin & Sullivan, 2011; Kerr et al., 2010; Luiggi-Hernandez et al., 2018; Moore & Martin, 2014; Morone et al., 2008; Parry & Malpus, 2017; Van Gordon et al., 2015
	Developing understanding of persistent pain experience	Bawa et al., 2021; Gooding et al., 2020; Hawtin & Sullivan, 2011; Luiggi-Hernandez et al., 2018; Parry & Malpus, 2017; Moore & Martin, 2014; Morone et al., 2008
	Feeling sense of empowerment	Bawa et al., 2021; Gooding et al., 2020; Hawtin & Sullivan, 2011; Kerr et al., 2010; Luiggi-Hernandez et al., 2018; Parry & Malpus, 2017; Moore & Martin, 2014; Van Gordon et al., 2015
	Acquiring toolbox to help manage daily life	Bawa et al., 2021; Hawtin & Sullivan, 2011; Kerr et al., 2010; Luiggi-Hernandez et al., 2018; Moore & Martin, 2014; Morone et al., 2008; Parry & Malpus, 2017; Penlington, 2019

	Improved sleep	Luiggi-Hernandez et al., 2018; Morone et al., 2008; Van Gordon et al., 2015
	Reduction in pain and pain-related distress	Bawa et al., 2021; Gooding et al., 2020; Hawtin & Sullivan, 2011; Luiggi-Hernandez et al., 2018; Morone et al., 2008; Parry & Malpus, 2017; Van Gordon et al., 2015
Challenges of maintaining positive change		Bawa et al., 2021; Gooding et al., 2020; Moore & Martin, 2014; Parry & Malpus, 2017; Van Gordon et al., 2015

Appendix E: *Table of exemplary quotations from themes*

Theme	Subtheme	Exemplary quotations
Living with persistent pain		*"[….] it hurts me, they don't seem to understand how much it hurts me, you know, not being able to do it, [….] watching everybody else enjoying themselves, and I'm just sitting there like an idiot."* (Bawa et al., 2021) *"You don't realise just how much [pain] brings you down. It gets in your head and takes over. Everything becomes black and a struggle."* (Van Gordon et al., 2015)
Importance of understanding the programme	Value of understanding	*"Once acquainted with the actual process of mindfulness meditation and experiencing it first-hand, however, she revised her prior statement by saying, "But to go in and try to see my muscles, to see the tenseness, see them actually spasming, and to feel that they were spasming, see what they were connected to.. . . Next thing you know, you're letting go and you're off somewhere else and it's not bothering you."* (Luiggi-Hernandez et al., 2018) *"I'm fighting the whole time because my belief was that eventually you would find the answer to my back pain and fix it' and 'It is hard, especially at the beginning. I think the deterrent in the whole thing is the expectation and trying too hard"* (Moore & Martin, 2014)
	Not understanding the rationale	*"Several participants began the programme with expectations of pain relief. When the first session did not focus explicitly on pain control, the majority doubted whether the programme would benefit them, causing some to drop out."* (Bawa et al., 2021) *"Participants expressed mental conflict created by their attempts not to think about pain paradoxically increasing their focus on the pain"* (Moore & Martin, 2014)
Group process	Building trust in the group	*"It took me a long time to be able to get things out there from what I wanted to say, and felt comfortable saying, and then it was all over and I just, you know, it was too soon for me." (*Gooding et al., 2020) *"The concept of feeling open seemed connected to acceptance and vulnerability, whilst retaining warmth and resilience."* (Moore & Martin, 2014)
	Value of being part of a group	*"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"* (Parry & Malpus, 2017)

		"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." (Parry & Malpus, 2017)
	Sense of community and shared humanity	*"[developed compassion] even if the participants had not yet developed a complete and integrated understanding of their individual experiences"* (Parry & Malpus, 2017). *"we caught up in our own world and not see the [big] picture. I want to change that now. I want to reach out and help others. It's hard to explain. Everybody has got their fair share of problems. It's important that I remember this"* (Van Gordon et al., 2015).
Difficulties or distressing experiences on programme	Pain and unpleasant somatic symptoms during practice	*"One completer had occasional dizziness during sitting meditation, one was sometimes more aware of his tinnitus, one felt faint on one occasion, one had a sense of panic during a breathing meditation practice, and mindful walking brought on chest pain on one occasion for one participant with a history of angina."* (Bawa et al., 2021). *"Participant 2 begins the course with a strong awareness of certain parts of her body and a strong unawareness of other parts of her body as well as somatic difficulty. She experiences pain in her knee and lower back and writes that 'I felt kind of gross and fat while focusing on my abdomen and pelvis'. At the same time, she has an 'inability to feel most parts of her feet"* (Kerr et al., 2010)
	Unpleasant feelings elicited on programme	*Participant 3 begins the course with racing thoughts and writes that it is 'hard to turn my mind off'. Her peak period of difficulty occurs in week 1 of the course characterized by cognitive and emotional suffering*. (Kerr et al., 2020) *"I felt quite low sometimes [after the group] … when you come away and you're digesting everything we've done"* (Parry & Malpus, 2017)
	Barriers to engaging in practice	*"Balancing the need to care for others with caring for oneself was sometimes a challenge. Some expressed guilt around taking time for themselves to do the practices"* (Bawa et al., 2021) *"I should come to the group sessions because then it would be better for me. I know all that, but you know, I just think sometimes depression gets the better of me I'm afraid… and it's really hard to get over it."* (Moore & Martin, 2014)

Perceived benefits of programme	Developing acceptance and perspective on life and pain	*"Now I think, "You are sore, you have got pain, that's okay!" Um, whereas before I probably exacerbated the pain, by trying to work through it and pushing myself further than I should have been doing [….], I would come to a complete stand still."* (Bawa et al., 2021) *"And along you come to the pain clinic so you learn and you've got to make some changes, making changes is what it's all about, and you can't do anything except move on from where you were…You have to accept what's happening right now, not necessarily forget it, but just, okay, that's happened, this is now, and we move on"* (Moore & Martin, 2014)
	Listening to body and developing awareness	*"Gradually, participant 1 begins to view her abdomen with greater clarity, focus and objectivity. She notices how 'how dense and connected the muscles are from belly through chest' and discovers ways to relax her muscles."* (Kerr et al., 2010) "*You don't realise just how much [pain] brings you down. It gets in your head and takes over. Everything becomes black and a struggle. It's different though when I practise meditation. It's like I'm a spectator"* (Van Gordon et al., 2015)
	Developing understanding of persistent pain experience	*"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."* (Parry & Malpus, 2017) *"The next best thing was the way they explained the mind and how it was working … you understood a bit more of why you might be feeling the way you were feeling."* (Gooding et al., 2020)
	Feeling sense of empowerment	*"I think the biggest insight for me, for the whole thing, was suddenly thinking, "actually I am entitled to have this space, I need this time and space [slower speech starts] to cope with [slower speech ends] the rest of my life, to manage other things.'"* (Bawa et al., 2021) *"It gives me a sense of some control… given me a tool, a skill, to be able to deal with things that are normally too uncomfortable or too frightening for me to deal with."* (Parry & Malpus, 2017)
	Acquiring toolbox to help manage daily life	*"Participants described using mindfulness meditation for pain relief during everyday events where they experienced pain, such as during hospital visits and hospitalizations, social events, walking, sports, gardening, washing dishes, and just sitting or lying in bed."* (Luiggi-Hernandez et al., 2018) *"I always do breathing now to help me through the day, which helps to keep me calm with my day to day anxiety and emotions I'm going through, as I find it hard but this has helped me no end"* (Penlington, 2019)

	Improved sleep	*"A woman who had difficulty with insomnia also found a great benefit from meditation as she reported that "sleeplessness was harming my quality of life in every aspect and I am grateful I no longer have the problem. It has made a huge difference in my life"* (Morone et al., 2008) *"I meditate just before going to bed. I used to wake up about every hour but now I'm onlywakinguptwo or three times [per night]."* (Van Gordon et al., 2015)
	Reduction in pain and pain-related distress	*"I'm not as tense as I was, which means I'm maybe not as sore as I was [….] so, it's more about how the pain was in my head, although I didn't really think I had much of a pain in my head! [laughs]"* (Bawa et al., 2021) *I'm definitely noticing that there is less pain now."* (Van Gordon et al., 2015)
Challenges of maintaining positive change		*"Slowly it just gradually petered out and I found myself back to my old self of depression and all that and finding it hard to get out of it. And then pain crept in more and I just couldn't control it"* (Moore & Martin, 2014). *"It's comfort back here, I know what I'm doing, I know where I am and if I go forward I'm not really sure what I'm going to."* (Gooding et al., 2020)

Appendix F: Participant Information Sheet

Experience of compassion-based session in Mindfulness for Health programme for individuals living with persistent pain

You have been invited to take part in this research study because of your experience living with persistent pain and because you have taken part in the Mindfulness for Health programme. Before you decide, we have outlined why the research is being done and what taking part will involve. Please take time to read the following information carefully. The research is being led by [redacted], a doctoral student in Clinical Psychology, who has also been a participant on the Mindfulness for Health programme. If you have any questions, would like more information or if anything you read is not clear, please contact me on the details provided at the end of this sheet.

Why have I been invited to take part?

You are being invited to participate as a person living with a persistent pain condition who has participated in the Mindfulness for Health programme. We would like to learn more about your experiences and what this can tell us about the compassion-based practices.

What is the purpose of the study?

The open-heart meditation, which you will have been guided through in session 6 of the Mindfulness for Health programme, is focused on compassion. Compassion-based practices are part of all Mindfulness for Health programmes; however, people experience many different things during the meditation. These experiences can be pleasant and positive, however, sometimes people find the meditation difficult or challenging. There is no right or wrong way to experience a compassion-based meditation and we would like to learn more about what people living with persistent pain experience, as this may help us how we offer compassion-based practices in the programme

What will taking part involve?

If you agree to take part in the research study, you will meet with myself, [redacted] for an informal interview. It should take no more than 60 minutes. I have a room available at the Pain Management Centre and your travel expenses would be reimbursed. Social distancing will be maintained and depending on the government guidelines, we may have to wear masks. Alternatively, if you have access to an online facility such as Microsoft Teams, I can arrange to do a video call on this. I would give you all the instructions for this beforehand.

During the interview, I have some information that I would like to get from you about your experiences of the compassion-based mediation on the Mindfulness for Health programme.

During the interview [redacted] will ask questions about your experience of the compassion-based session, including; things that you noticed during the meditation, things that you might have found pleasant, positive, things you felt neutral towards and experiences that were difficult or unpleasant. This will include your experience of the context of the meditation. It will be your choice what you decide to share and not share. If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. No one else but the interviewer will be present.

How will it affect me?

Taking part will have no impact on the treatment and care you receive from the Pain Management Centre. What you share in the research will be made anonymous and no personal identifiable information will be shared.

You will not be asked to share anything you do not want to share, however, discussing difficult experiences can be upsetting or distressing. We will be sensitive whilst exploring potentially difficult experiences and you can withdraw at any point without giving reason and without any consequences.

You can ask questions about the research before deciding whether to take part. If you start but change your mind during the interview, you can withdraw at any time and without giving a reason or negative consequence.

If you decide to take part in the study but then go on to change your mind, you are able to do this. You do not need to give a reason. I can remove you from the study and delete any of your details up to the point that they have been anonymised. To protect individual’s confidentiality once interviews are completed these are given a code and your name is removed. Once your name is removed then it is not possible to link you to the interview data. it will not be possible to remove your interview data from the study after that point but there will be no personal details included to connect it to you.

Are there any possible benefits of taking part?

You will have an opportunity to share and discuss your experiences of these compassion-focused meditation in a safe and confidential setting.

Your contribution will help further research in the field of compassion-based practice for people living with persistent pain. You will be one of 8-10 interviewees, which may help us to better understand the experiences, including any difficulties and barriers, to engaging with this practice. Our hope is that the research may help to support Mindfulness for Health programmes and staff to better support and manage participants through compassion-based approaches to persistent pain.

Will I be reimbursed for taking part?

You will be offered up to £10 for travel costs. Please bring valid receipt for transport costs.

What will happen to my data?

The information you provide during the study is the **research data**. Any research data from which you can be identified is known as **personal data**. In this study, personal identifying information will be modified or removed to ensure your anonymity.

A pseudonym will be generated so that each participant is identified by this name only. Your interview will be recorded and stored on a secure encrypted file space. A transcript of the recordings will be made, where any personal data will be removed. These transcripts will be kept on a secure encrypted file space and treated as confidential. No one except the researcher, [redacted], and research supervisor will have access to the research data transcripts.

Personal data and consent forms will be kept on a separate secure encrypted device to the research data. This is to ensure that personal data and research data cannot be linked.

To comply with the General Data Protection Regulation (GDPR) and the Data Protection Act 2018, personal data will be destroyed by deletion once transcripts have been completed. Once the study has ended, research data will be retained for ten years.

Everything you share in the interview will be treated as confidential information. If you disclose information that indicates risk to yourself or others, we will discuss this with you further and may need to share this information with appropriate services and professionals. If you disclose information of unmet needs or report poor practice, we will discuss this with you directly and how this could be shared with appropriate services and professionals.

What will happen to the results of this study?

The research may be published on the Canterbury Christ Church University Research website, in academic journals, in the open science archive (as publications) and presented at academic conferences (e.g. *British Journal of Pain).* Publications will included anonymised quotes and no personal identifying data will be included.

You will not be identified from any report or publication placed in the public domain. Publications might include quotes from participations, but these will be anonymised. A link to a summary of the results will be provided to you once the study is complete.

What if there is a problem?

If you have a concern about any aspect of this study, please contact [redacted] [redacted] and I will do my best to answer your query. I will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with.

If you remain unhappy or wish to make a formal complaint, please contact the Programme Director of Clinical Psychology and Director of Salomons Institute for Applied Psychology *(*margie.callanan@canterbury.ac.uk*)* who will seek to resolve the matter as soon as possible.

The research supervisors can be contacted. For questions directed for the university supervising the research, please contact [redacted]. For questions relating to the [redacted] Pain Management Centre, please contact [redacted].

If you feel distressed following participation and want to talk to someone outside of the immediate research team, the Patient Advisory Liaison Services (PALS) can be phoned on [redacted] between 9am and 5pm, Monday to Friday.

Who is organising and funding the study?

This study is funded by Canterbury Christ Church University. The [redacted] Pain Management Centre is involved in supporting and organising the research.

Who has reviewed this study?

This study has been reviewed by the ethics clearance through the HCS Research Ethics Committee

Further information and contact details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact: [redacted]

Further information on Online Platform Microsoft Teams

Microsoft Teams is a free video communication app, which we can use to set up virtual video meetings. The programme does not need to be downloaded and can be used on a desktop computer, laptop or Android/IPhone mobile phone via a link that I will share with you. The meeting will be secured with password protection and the researcher will authorise entry to ensure no other individuals have access to the meeting. Recording will not be kept on Microsoft Stream cloud storage. I will be available to support with any questions about using Microsoft Teams.

Appendix G: example of an email to participants who express interest in participation

Dear [redacted]

I want to thank you for expressing interest in the research I introduced when we spoke at the end of your Mindfulness for Health programme. Firstly, I wanted to ask if you have any questions from the participant information sheet or in general.

To participate we will need to meet for a 40-60 minute conversation about your experiences of compassion-based meditation and practice. What would be your preferred way of meeting? We can set up a Microsoft Teams call or meet in person at the Pain Management Centre, but I'm open to other suggestions.

I have Thursday 18th and Friday 26th March available to meet and I understand that you are working full-time so please let me know if you are available on either of these days/evenings, or let me know what works best for you.

Kind regards,

[redacted]

Trainee Clinical Psychologist

Appendix H: consent form

CONSENT FORM

Experience of compassion-based meditation in Mindfulness for Health programme for individuals living with persistent pain

Name of Researcher: Callum Gray

Name of organisation: Canterbury Christ Church University, UK

Please initial box

1. I confirm that I have read the attached information sheet version/date for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my care being affected. ☐
3. I understand that the information collected about me will be used for this research only and Will only be shared anonymously within the research team for the purpose of data analysis. ☐
4. I agree to the safe storage of my interview recordings and transcript on encrypted and protected system as detailed in the information sheet. ☐
5. I understand that the findings from this study will be published and made available online, as described in the information sheet. ☐
6. I understand that my interview will be recorded by audio-only ☐
7. I agree to take part in the above study. ☐

____________________	____________________	____________________
Name of Participant	Date	Signature
____________________	____________________	____________________
Name of Person taking consent	Date	Signature

Appendix I: Semi-structured interview

Could you give me a brief history of your experience of pain, from when it started to when you arrived on the Mindfulness for Health programme?

I will be focusing on compassion-based approaches, but I would like to ask how you have found the MfH programme from the beginning?

> *Prompt: experience of teaching, experience of other learned meditations, experience being in a group*

You may remember, in session 6 of programme, the theme of the session was on compassion and you went through the three-modes model. Do you remember parts of this session?

Prompt if participant expresses unclear memory of session, describe topics of teaching as detailed in Mindfulness for Health programme to support recall as necessary.

> *Prompt: one of key practices of session was the open-heart meditation, which would have been the 1st time you were introduced to this practice. The sort of guidance involved encouraging kindness towards yourself and extending this kindness to others close to you and then to other people. (additional information provided if necessary, using script from open-heart meditation)*

During the session, you participated in this open-heart meditation. Please describe what happened when you participated in the open-heart meditation, in your own words?

As best as you can remember, how did you experience that practice from the beginning

> *How did you feel during the meditation?*
>
> *Prompt: physical, emotional, psychological, experience of pain*
>
> *How did you react to these feelings?*
>
> *Prompt: body & emotion*

(if not already covered)

Did you encounter (other) difficult experiences during the meditation. If so, can you share more about these?

How did you react to these difficult experiences?

Prompt: physical, emotional, psychological, experience of pain

(if not already covered)

Sometimes people report trouble engaging with this practice. I wonder if you experienced any difficulties staying engaged with the practice, if so What were these?

Is there anything else about your experience of this practice that we haven't already covered that you would be comfortable sharing. *Can you share more about these experiences?*

How did you feel at the end of the meditation?

How did you make sense of those experiences, how did you understand those experiences?

After the meditation, you had a chance to meet with the group for an enquiry process. Here, some people will have shared their experiences, and these may have been explored. Can you tell me how was this experience for you?

How did this influence your thinking about the practice?

After the session, you were guided to do follow the recording of practice at home

What was your experience in relation to this practice at home?

(similar prompts to above in relation to experience of practise, engagement, difficulties encountered)

Can you tell me more about what influenced how you decided to practise or not practise this meditation at home? Can you remember any points where you were weighing up whether to do this practice or another practice? Can you talk me through, as best as you remember, your experience of those?

Based on your experience, what are your thoughts about these practices? Is there anything else in relation to this practice that might be helpful to share?

How does it compare with other practices learned on course?

Appendix J: ethics approval

13/11/2020

Dear [redacted]

Study title: Experience of compassion-based practice in individuals with persistent pain

REC reference: 2020/HCSREC/06

The HCS REC convened a sub-group to review the above application and report to the REC meeting on 12 November 2020.

The members of the committee reviewed the application for the above research on the basis of the research described in the application, research protocol and supplementary documentation.

Ethical Opinion

The members of the committee gave a favourable ethical opinion of the above research on the basis of the research described in the application, research protocol and supplementary documentation. The REC favourable opinion is subject to the following conditions being met.

Conditions of Favourable Opinion

Page 33 Participant Information Sheet – What if there is a problem? You have included details of who to contact should there be a problem or concern with how the research is conducted. In addition to these, please include a local point of contact (in addition to the Pain Management Team) for instances where a participant may become distressed and want to talk to someone outside of the immediate research site. An example of this might be the Patient Advisory and Liaison Service.

Recommendation

The HCS REC recommend including brief information on the video-conferencing options giving an overview of Microsoft Teams, to enable participants to make an informed decision about a virtual or face-to-face meeting.

You should notify the HCS REC once all conditions have been met and provide copies of any revised documentation with updated version numbers. Revised documents should be submitted to the HCS REC HCSResearchEthicsCommittee@[redacted]

Please note, it is the responsibility of the Principal Investigator/Lead Researcher to ensure that all organisational permissions and approvals are in place to commence the research. It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study.

Membership of the HCS Research Ethics Committee in attendance:

The members of the committee present are listed as: [redacted]

You should let us know if there are any significant changes to the proposal that might raise any further ethical issues. A substantial amendment form is available on the MyStates Research Ethics intranet site.

If the proposed research project is for a period of longer than one year, please can you provide a brief update to the HCS REC to ensure an ongoing favourable opinion. The template for completion of this is available on the MyStates Research Ethics intranet site.

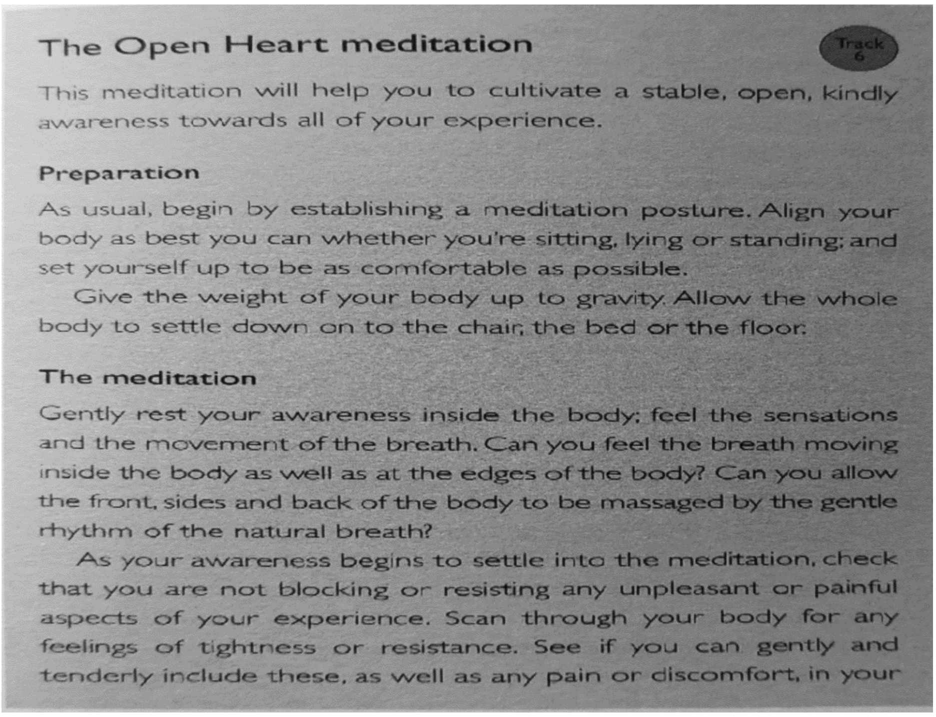
Please let us have a brief final report to confirm the research has been completed.

Yours sincerely

[redacted]

Chair HCS Research Ethics Committee

Appendix K: open-heart meditation as presented in MfH



The Open Heart meditation

Track 6

This meditation will help you to cultivate a stable, open, kindly awareness towards all of your experience.

Preparation

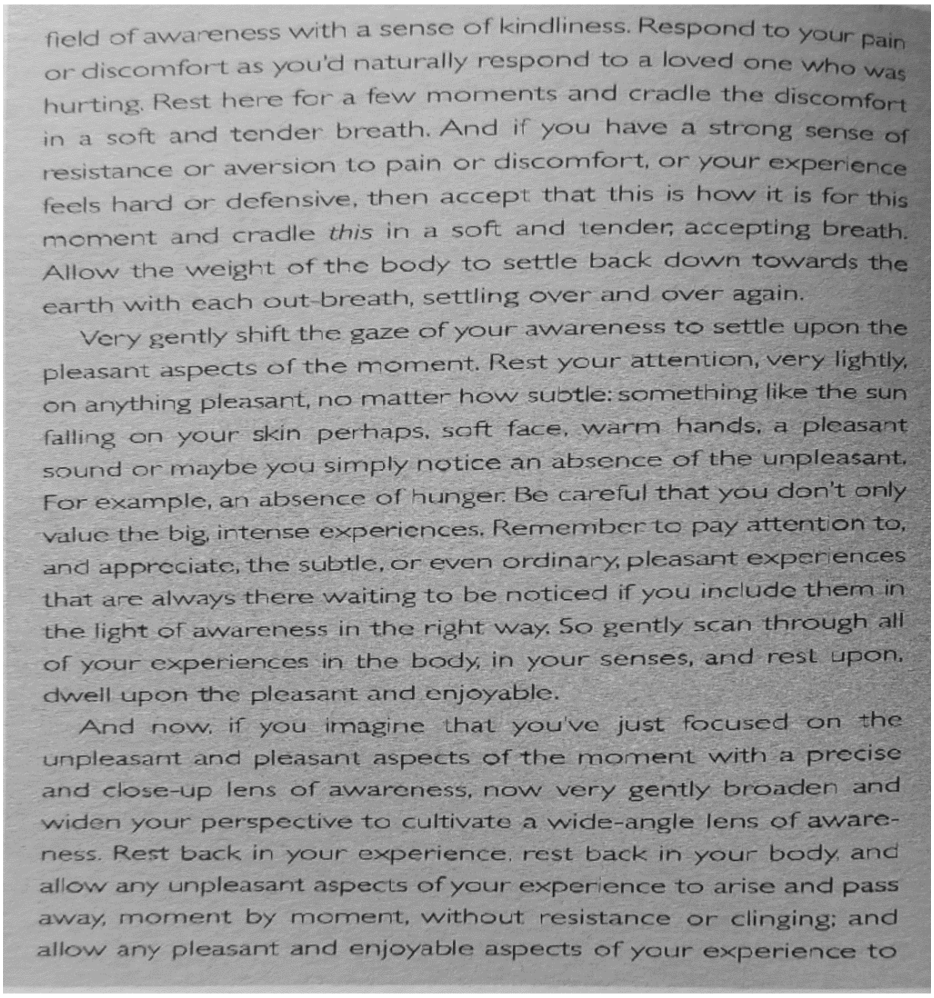
As usual, begin by establishing a meditation posture. Align your body as best you can whether you're sitting, lying or standing; and set yourself up to be as comfortable as possible.

Give the weight of your body up to gravity. Allow the whole body to settle down on to the chair, the bed or the floor.

The meditation

Gently rest your awareness inside the body; feel the sensations and the movement of the breath. Can you feel the breath moving inside the body as well as at the edges of the body? Can you allow the front, sides and back of the body to be massaged by the gentle rhythm of the natural breath?

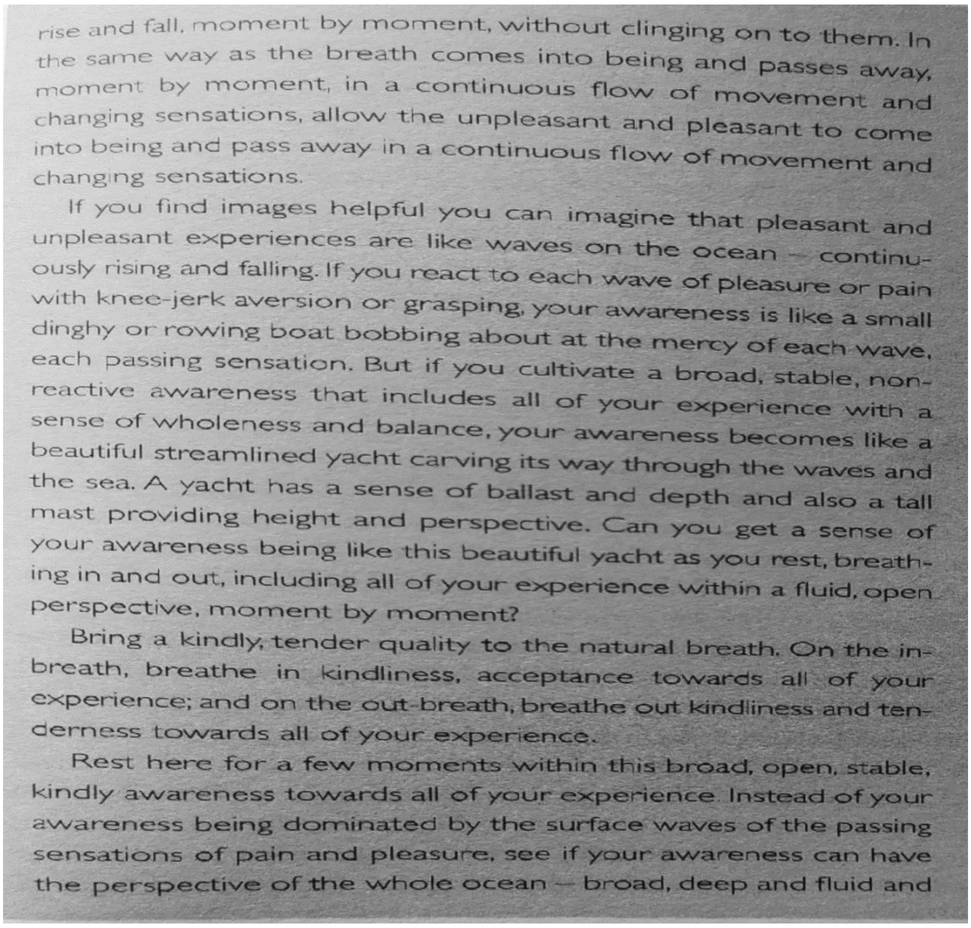
As your awareness begins to settle into the meditation, check that you are not blocking or resisting any unpleasant or painful aspects of your experience. Scan through your body for any feelings of tightness or resistance. See if you can gently and tenderly include these, as well as any pain or discomfort, in your



field of awareness with a sense of kindliness. Respond to your pain or discomfort as you'd naturally respond to a loved one who was hurting. Rest here for a few moments and cradle the discomfort in a soft and tender breath. And if you have a strong sense of resistance or aversion to pain or discomfort, or your experience feels hard or defensive, then accept that this is how it is for this moment and cradle *this* in a soft and tender, accepting breath. Allow the weight of the body to settle back down towards the earth with each out-breath, settling over and over again.

Very gently shift the gaze of your awareness to settle upon the pleasant aspects of the moment. Rest your attention, very lightly, on anything pleasant, no matter how subtle: something like the sun falling on your skin perhaps, soft face, warm hands, a pleasant sound or maybe you simply notice an absence of the unpleasant. For example, an absence of hunger. Be careful that you don't only value the big, intense experiences. Remember to pay attention to, and appreciate, the subtle, or even ordinary, pleasant experiences that are always there waiting to be noticed if you include them in the light of awareness in the right way. So gently scan through all of your experiences in the body, in your senses, and rest upon, dwell upon the pleasant and enjoyable.

And now, if you imagine that you've just focused on the unpleasant and pleasant aspects of the moment with a precise and close-up lens of awareness, now very gently broaden and widen your perspective to cultivate a wide-angle lens of awareness. Rest back in your experience, rest back in your body, and allow any unpleasant aspects of your experience to arise and pass away, moment by moment, without resistance or clinging; and allow any pleasant and enjoyable aspects of your experience to

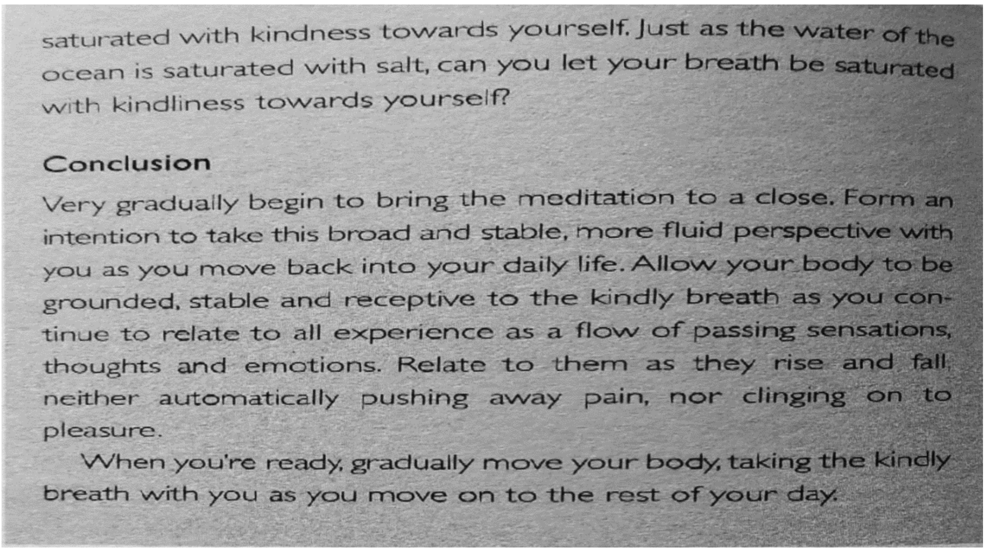


rise and fall, moment by moment, without clinging on to them. In the same way as the breath comes into being and passes away, moment by moment, in a continuous flow of movement and changing sensations, allow the unpleasant and pleasant to come into being and pass away in a continuous flow of movement and changing sensations.

If you find images helpful you can imagine that pleasant and unpleasant experiences are like waves on the ocean – continuously rising and falling. If you react to each wave of pleasure or pain with knee-jerk aversion or grasping, your awareness is like a small dinghy or rowing boat bobbing about at the mercy of each wave, each passing sensation. But if you cultivate a broad, stable, non-reactive awareness that includes all of your experience with a sense of wholeness and balance, your awareness becomes like a beautiful streamlined yacht carving its way through the waves and the sea. A yacht has a sense of ballast and depth and also a tall mast providing height and perspective. Can you get a sense of your awareness being like this beautiful yacht as you rest, breathing in and out, including all of your experience within a fluid, open perspective, moment by moment?

Bring a kindly, tender quality to the natural breath. On the in-breath, breathe in kindliness, acceptance towards all of your experience; and on the out-breath, breathe out kindliness and tenderness towards all of your experience.

Rest here for a few moments within this broad, open, stable, kindly awareness towards all of your experience. Instead of your awareness being dominated by the surface waves of the passing sensations of pain and pleasure, see if your awareness can have the perspective of the whole ocean – broad, deep and fluid and



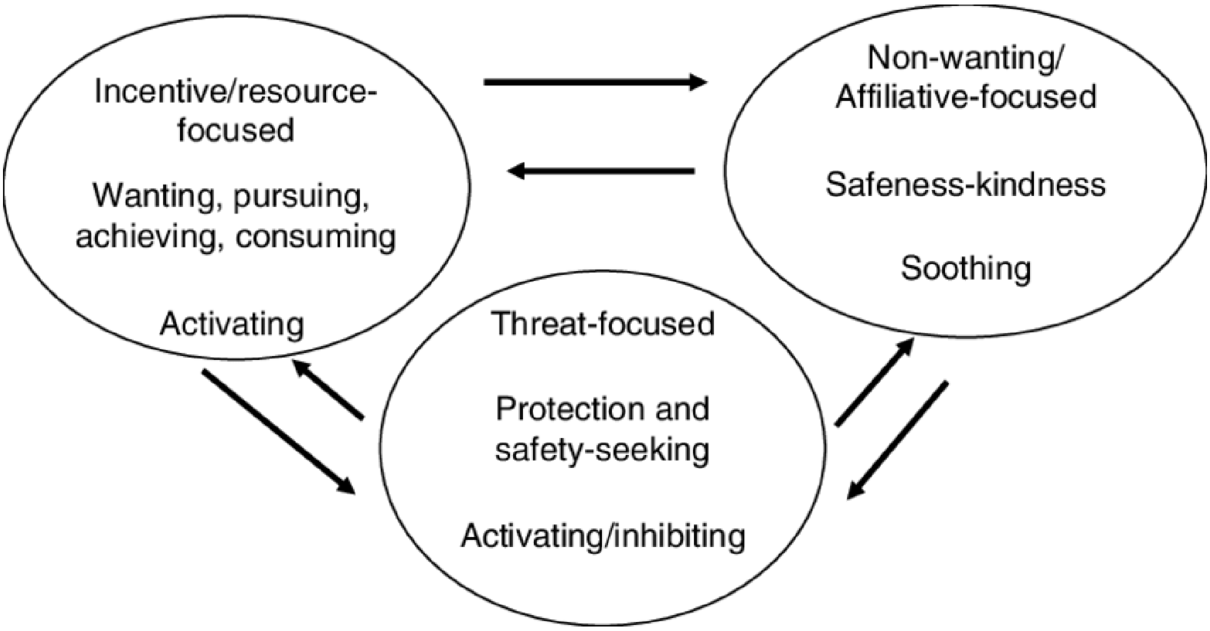
saturated with kindness towards yourself. Just as the water of the ocean is saturated with salt, can you let your breath be saturated with kindliness towards yourself?

Conclusion

Very gradually begin to bring the meditation to a close. Form an intention to take this broad and stable, more fluid perspective with you as you move back into your daily life. Allow your body to be grounded, stable and receptive to the kindly breath as you continue to relate to all experience as a flow of passing sensations, thoughts and emotions. Relate to them as they rise and fall, neither automatically pushing away pain, nor clinging on to pleasure.

When you're ready, gradually move your body, taking the kindly breath with you as you move on to the rest of your day.

Appendix L: three regulation systems model as presented in MfH



Appendix M: Risk Assessment

Identified Risks	Likelihood	Potential Impact/Outcome	Risk Management/Mitigating Factors
Discussing mindfulness meditation has been known to trigger distressing memories in patients with existing Trauma/PTSD	Low	Participant: Psychological Stress Researcher: Anxiety about dealing with a complex situation	Exclusion criteria for enrolling in the study will include those with pre-existing psychiatric comorbidities, particularly Trauma/PTSD conditions The researcher will be able to signpost participant to the relevant support services
Discussion of sensitive topics in interview has potential to cause distress to participant	Low	Participant: Psychological Stress Researcher: Anxiety about dealing with a complex situation	Offer to cease interview Exclusion criteria (as above) The researcher will be able to signpost participant to the relevant support services
Interviews taking place in an familiar location with people not already known to the researcher	Low	Researcher: Physical Injury or Psychological Harm	Visit location prior to data collection to assess possible risks associated with built and social environment Use this information to plan session Identify back up at location Allow extra time to familiarise participants with research and environment

			Researcher to have contact details and means of making timely contact with back up
Disclosure of information about poor practice	Low	Immediate, urgent or prompt response may be required from service providers	Ensure all verbal and written information about research indicates possible researcher response to disclosure The researcher will be able to signpost participant to the relevant support services
Disclosure of unmet health or social care needs	Medium	Immediate, urgent or prompt response may be required from service providers	Ensure all verbal and written information about research indicates possible researcher response to disclosure The researcher will be able to signpost participant to the relevant support services
Research participant in danger of harm to self or others	Low	Immediate, urgent or prompt response may be required from service providers	Ensure all verbal and written information about research indicates possible researcher response to disclosure

	The researcher will be able to signpost participant to the relevant support services

Appendix N: reflective diary

March 2021: bracketing interview

Interesting experience and I benefitted from being asked these questions and ‘put on the spot’, as I think it set a more reflective than defensive stance. It raised a few questions regarding my interest in the subject and how this might narrow my awareness and bias my interpretation as a professional part of an ‘institution’ studying pain rather than from lived-experience, which is ultimately, where my interest originated. I have considered how I can use my own experience of pain and challenge with compassion to inform an understanding and connection rather than over-identify or take a ‘too academic’ stance to interpretation rather than genuinely trying to make sense of my participants’ experiences. I voiced my concern that participants would not have any particularly salient experiences of the meditation and that I would spend much of my interviews trying to elicit memories of or about the session in vain. I appreciate that these might arise from my own initial lack of responses to the open-heart meditation when I was a participant in 2015, over six years ago.

March 2021: recruitment

Having conducted the first recruitment and hearing passing comments from participants who had potentially had negative experiences of compassion, I spoke with my research supervisor to suggest a more explicit invitation to those who have not had good experiences of the compassion-based practice or programme and that these views are also valued.

March 2021: Interview 1

I was considering pointers from the IPA book (Smith, Flowers & Larkin, 2009) when going into the interview, especially the importance of building a rapport so that deeper discussions can be had. I was pleasantly surprised by how disclosing the participant was. Asking the opening question about the background about the pain seemed very validating and giving time to discuss this both helped them feel listened to and gave a very natural entry into the subject of compassion. I felt a more ‘natural’ flow in the interview than ‘structured’, which I was re-assured by when re-reading the IPA chapter following the interview. My initial concerns about whether participants had any experiences of note has been somewhat alleviated, as the participant seemed to understand their initial experience in a web of associations that were activated by instructions relating to self-compassion. I checked-in whether they were making these connections to compassion in the present interview, however, they responded that these were brought up in session, including traumatic exchanges, feelings of being isolated and criticised by a parental figure and feelings of self-hatred. I felt that the participant had an impressive self-awareness and I think this was testament to how much personal reflection and work they had gone through, contrasting this to the image described in the session of someone very disempowered and lost in multiple healthcare departments being ‘done to’ by inconclusive assessments, dismissive interactions and severe symptoms brought on by medications.

March 2021: Interview 2

I was struck by the complexity of this participant’s experience relating to compassion. I noticed that my own initial experience of compassion was marked by avoidance, resulting in an ultimately benign experience, which was very different to this participant who had a highly salient experience of anger, distress and personal change. This led on to discussions on the climate in which compassion has been absent, including early experiences of neglect and challenges with parental figures. I was very grateful that the participant was confident in discussing this experiences and I was aware of the checking in and bringing the interview back to the experiences of compassion-based practice. The interview gave me a sense of the depth of experiences and vast connections that instructions in the guided meditation can have in some participants.

April 2021 Interview 3

I interviewed my first male participant and noticed how different the rapport was developed in session. I’m careful not to over generalise on the basis of gender. My experience was that of an emphasis on naming physical distress and ‘objective’ (for lack of a better term) factors, such as medical interventions, pain-related disability, impact on daily life, rather than disclosure on emotional events and arguably less tangible inner experiences. During the conversation I was thinking about Heidegger’s ‘being-in-the-world’ in reference to how the rapport was being built on reference to terms and our mutual pre-conception of these rather than his and my present experience of relating to events. I responded by framing questions similar to Smith, Flowers and Larkin (2009) “this might sound like a stupid question”, which allowed me to ask more about how he related to experiences himself rather than rely on our pre-conceptions. Such an example was asking about what he thought compassion means to him. This opened up an interesting question on the context of his up-bringing informing a relationship with compassion toward self and others.

April 2021: Interview 4

The participant recognised me from five years prior when I was an assistant psychologist and this reminded me of the small size of [redacted] community. I openly asked about how this might feel in this context however they were candid in replying that it made them feel more confident, as I was a familiar face. I used to guide meditation sessions for the pain charity where they attended and this seemed coherent with the research aims. However, I did consider that providing negative feedback might be more difficult in a small community, where there might be a fear of consequence, yet the participant was open about difficult experiences and quite openly discussing their initial aversion to compassion-based practice, which may reflect that we had given permission to share difficult experiences and that this was well accepted. I find myself drawn into a way of understanding connections between experiences and compassion as similar to Ronald Melzack's neuromatrix, where these are hypothetically held as nodes in vast interconnected neural networks. I am finding the experience of compassion is branching out in interesting memories, linguistic, physical and emotional paths and I find myself referring back to the interview schedule to contain my interests and the many ways an interview can go.

May 2021 Interview 5

I found connecting in this interview more difficult. The participant had a life-long experience of disability and I was aware that this was a salient difference both in the group, where other participants seemed to hold her at times in an endearing manner, and in the interview, where, upon re-listening to the recording, I felt that I was more empathetic in my responses than in previous interviews. I am attentive that this empathy is a warm and compassionate way to respond to distress, however, can also be a form of secondary handicap, as described by Valerie Sinason and it could be perceived as patronising. I was aware of this dilemma in the interview and I was vigilant to instances of power, where the participant might have been appeasing me and I might have been maintaining power by taking a 'professional' position rather than 'researcher'. This included asking her about difficult interpersonal experiences of compassion rather than 'giving advice' or only responding with empathy. I feel that the interview was helpful and the participant was grateful to share, however, I am aware of both the limitations of my blindness as a 'non-disabled' person why trying to understand how they understand their experiences. This was particularly salient to me in descriptions of the pain-related interferences that contrast from my experiences, namely with mobility and a lack of empowerment when navigating healthcare consultations.

May 2021: Interview 6

I was struck by the way the meditation and compassion have triggered extensive painful memories and the degree of self-awareness that the participant portrayed. The theme of the group the participant was in seemed very powerful and they often referred to the other participants, some of whom had participated in research. The cohesion and support in the group was a pleasant surprise as I had not excepted this in an eight-week programme and there was the sense of a building up in a community, where I felt that such community was absent in session.

May 2021: Interview 7

I found parts of the interview very difficult as they brought up my own memories. The participant recounted difficult exchanges with institutions, which seemed related to cultural differences and language differences due to her minoritised status that I related to from experiences as a child. I was careful to keep some distance and not over-relate in session. The extent of the person's suffering and difficulties was striking and I felt myself pushing towards empathetic responses and turning-away from pain and suffering in my interview, however, I knew that this would do disservice to the participant's participation and might tacitly communicate that I find her distress intolerable, which would reinforce how she's understood how professionals and some family feel towards her distress. I checked-in throughout the interview to re-assure that she share what she feels comfortable sharing and I acknowledged that she give the time she is willing to, as the interview lasted 2 hours in total. The interview made me reflect on how the research setting contrasted with many exchanges participants otherwise have, in that I am aiming to better understand their pain and suffering, accept their accounts without judgement and value these to include them in research. This feels very different from previous accounts where they have felt others will turn away from their suffering and they feel invalidated. It made me feel more confident that maintaining a researcher position, rather than moving towards an clinician position, can in itself be a positive experience.

June 2021: Interview 8

I have noticed feeling more at ease with interviews, especially the latter interviews as I feel that I have some rich data and that meaningful discussions can happen naturally, which has meant giving participants more space and time rather than pushing towards certain topics. I have also noticed in this interview that some firmer direction can be containing, as it gives feedback in what the research interview will aim at, what depth I am seeking and giving permission and confidence at sharing at a certain level of complexity. Without explicit feedback and questioning, I noticed the participant at times showing self-doubt with comments such as ‘I’m not sure if this is relevant’. I didn’t want to wait until the end at the debrief to explain and be grateful, when the interview is over, so I put more emphasis in session to be explicitly interested and grateful in their sharing. I am also grateful for the recruitment success, as I appreciate that many of my peers have had severe disruptions during COVID-19 and that this process is often fraught with uncertainty.

June 2021 process of analysis

I was surprised that most participants wanted to meet in person for interviews. All except one, who had the much appreciated reason that she has a busy work schedule. I understood these within the context of coming out of a long COVID-19 lockdown and that participants were seeking a connection that is not always accessible online. It may also reflect participants who feel grateful for the treatment and support that they have been offered through the pain management service and that most participants gave reasons similar to ‘giving back’, in the context that this service is public and free of charge. I am heartened to see this positive rapport with services, however, it does make me consider whether I am missing participants who haven’t had a good experience and that my research won’t pick up on those who “don’t want to give back” because they haven’t appreciated or had a good experience on the programme. I discussed this with the external supervisor and one of the facilitators and thought about how the pitch they give at the beginning of MfH about opportunity to participate can explicitly invite difficult feedback and invite participants be reiterating possibility to meet online, confidentiality with all feedback (including negative) and travel reimbursement.

December 2021: process of analysis

It has been a long time since I conducted the interviews. Writing part A has done a lot to bring me back to where I was at my last interview, as is the repeated listening of recordings. I’m finding a great deal come out from the recordings, which in retrospect, I had hoped that I had done more of during the interviews to inform further interviews questions, pacing, style, and connecting. Having completed a first draft of Part A, I find myself coming back to the recordings with fresh eyes and I’m keen to annotate and make sense of experiences. I find this the part of research I’m most excited in and I take needed pauses to reflect on my interpretations rather than be carried away.

December 2021: process of analysis

I found myself getting stuck during initial notes on transcripts, where I would be spending a lot of time finding words to annotate passages but find these words inadequate due to the assumptions such language makes. This included terms such as “trying to get on with life”, where the comment can be rightly deconstructed for the assumptions it makes within a cultural context that emphasises productivity, engagement with the economy, disease-model, stoic idealism, ideals of how to ‘get better’ etcetera. I decided to hold these arguments until later, noting the breadth of my research and the initial research questions and used the ‘sous rature’ technique to signify that these comments used words that were “inadequate yet necessary”. (e.g. “~~trying to get on with life~~”).

January 2022: start of write-up

I’m finding the word count a challenge. I feel that I have a vast array of experiences that I want to communicate and worry about that the interpretative process feels like I’m ‘reducing’ these data rather than developing them into themes. I guess part of this process is inevitable. There is a great deal that I want to write on and I’m using research supervision to help me remain focused on the research questions rather than be drawn into a subject that I’m very interested in elaborating. It’s reminding me that writing concisely is a far greater challenge than writing extensively.

Appendix O: Table of exemplary quotations from themes

Master Themes	Master Themes	Master Themes
Turning away from self-with-pain	Efforts to control pain or avoid pain	*"I'm not kind with myself, I just… just get on with it. If that makes sense? Yeah, I'm just (sigh). I'm just here. I just get up, get dressed, go on, go to work, do what I've got to do, get off, take my painkillers. I'm not kind to myself. Don't ask me why, I don't know."* *"Well, I think that's what we all do in life and there's like this… it's a control issue. We feel as if we've always got to control everything that's going, you know, our lives, so there's no pain. To stay away from the pain."*
	Previous traumas	*"It takes me right back to my childhood and we went through these things (sigh) I had in my life, five life threatening situations that I've been in, so I've had this excessive trauma and also in my early years… we suffered really toxic, uhm, emotional abuse from, uhm, my father's mother. Actually very very toxic abuse that has sort…of scarred everyone for life."* *"In very many ways I think… I'm not sure whether it's to do with the police force and crazy hours and no sleep and all that… or whether it's just the fact that I've got arthritis and all that skipped in, or whether it's just the back [operations]. Very unlucky, I don't know"*
	Initial resistance or apprehension towards compassion	*"I found the meditation really heard and I got very agitated and… cross with the lady on the record. She's saying about, you know, love yourself or, you know, be compassionate to yourself. Be kind to yourself or in a kindly manner or something. And I'd sort of in my mind, I'd be answering her back… in a very agitated way, and I'm not going to be compassionate to myself 'cause I don't like myself. So I sort of ended up we're having a… bit of a battle."* *"And I just kept thinking 'I'm rubbish at this. I can't do this'. I've never been able to do this kind of thing."* *"Yeah, yeah, at first I didn't think it was going to make any difference. It fills my mind. I think it doesn't stop the pain, it doesn't stop. I was convinced it wasn't going to work. But I convinced myself to go with an open mind."* *"We really struggled, like, what am I doing here? Don't quite get it. What… what are we trying to achieve here?"*
	Critical-self and pain	*"And also feeling blamed for the way things were going…. Because the pain is slowing the brain. I cannot engage in conversations with people. I'm*

Self-with-pain experienced as shameful		*just physically there, but I cannot engage if they bring a subject to the table."* *"So I couldn't work after that…and lost my job and C and I ended up in social housing"* *"You know, it's a long time to be sat at home, by yourself and not able to drive, do stuff and you do feel really isolated and sort of left to your own devices."*
	Cultural and personal relationship with compassion	*"You focus on the few incidents or the few people and you build it up into something bigger and the first thing when someone that does something, the firs thing you think is that it's a criticism and it just going back to…that just comes from my grandmother (sigh). That's where it comes from, the constant little jibes, etcetera. But I was worried about being tainted by my grandmother of having those genes in me and having that genetic material in me that there might be something wrong."* *"It was really, really bad and I didn't know how to describe it and I was searching and searching and trying and trying… for more than three years I was trying to find an answer for it. Trying to speak with people who could help me and find a name for it."*. *"I'm not kind with myself, I just… just get on with it. If that makes sense? Yeah, I'm just (sigh). I'm just here. I just get up, get dressed, go on, go to work, do what I've got to do, get off, take my painkillers. I'm not kind to myself. Don't ask me why, I don't know."* *"Well, I think that's what we all do in life and there's like this… it's a control issue. We feel as if we've always got to control everything that's going, you know, our lives, so there's no pain. To stay away from the pain."*
	Social network and institutions experienced as shaming	*"I had lots of scans, lots of sort of questionnaires, all kinds of things, and each clinic at the end of the investigations they did, they just go "yeah, well, you're absolutely fine" or "you don't quite tick marks" or, you know, "you've not got anything severe" and (sigh) it was very difficult for me."* *"And having spent all these years thinking that there was something wrong with me, like why does nobody else see all these symptoms? Why does nobody else take this seriously? Am I just being a fraud? Am I mentally ill?"*
	Pleasing others to reduce	*"But when you try, for me to think of compassion for myself, I find that really hard. I did find it and I think the whole group of us found it really hard. But then we were kind of saying, is it because we're doers for people?*

	feelings of shame	*We're always helping other people, so then actually taking time out and think about yourself is quite hard (sigh). And to give yourself some kind of credit or recognise who you are in this system. It was quite difficult and the phrases they use, they were… I found it very strange. I could never say them out loud, I just found it really weird."* *"Ok, no come on. I really had no compassion for myself at all. No. I have it for other people, but for me, why should I be kind to myself?"* *"You're taught when you grow up that the compassion was for everybody else apart from myself."*
Facilitating change	Being ready for change	*"And I then very slowly just decided that I just had to get better."* *"I hit a brick wall and I literally went 'I need help' and then suddenly…I said I will take it and grasp it… 'cause I…need to look after me, you know."*
	Mindful awareness facilitating compassion practice	*"I [can] work on my pain now by taking several minutes and it allows me to have my little mini pit stop and then I think the world can carry on for that moment. Nothing is gonna happen. I'm here."* *"I had a sore place on my foot and I had been kind to myself because when I was having a shower, ordinarily I would have just like, you know, whatever, but I was actually careful with my foot. Consciously careful, which really surprised me, 'cause I've never really done that before, you know? Just hold it."* *"[Be]cause you do feel, I think, frustration. I get angry at myself. I get… 'cause it's just like I've done something to bring this back, so I've never done it. We've never listened to our bodies."* *"I had realised, part way through the practice, I'd said 'you know what?' it came out of the one meditation, which was very unexpected… when I realised how bloody angry, I'm sorry, but how angry I was inside. Really, really angry and all those years of turning the other cheek."* *"I just thought 'actually, you have never given yourself time', so as much as you're upset that other people aren't being compassionate to you, you're not being compassionate to yourself, which is blindingly obvious, probably. But it just hit home, you know, like the old saying 'charity starts at home'."*

	Guidance from facilitator	*“She [the facilitator] was good at listening, good at picking up on things that I wouldn’t necessarily have picked up on myself, you know, she would hear something and then we would discuss it.”* *“And so when I was put into this [programme], it was almost like a huge relief (sigh), now someone is going to take me seriously, somebody is actually taking care of me, sees me as who I am, if that makes sense?”*
	Shared experience of challenge as a group	*“The self-compassion was obviously…I think every single person in the group said the same thing was difficult, that that was very… difficult and when we were looking at compassion for somebody that you like, that was really easy. It was reinforcing seeing other people on the course all like me. Very compassionate people, very articulate people, intelligent people, caring people who couldn’t be nice to themselves. So we all had that experience and it was lovely hearing about other people talking about it.”* *“There was no like, ‘we can’t say anything ‘cause I think I’m stupid or I don’t get this’. Everybody just literally was comfortable with people around them and realised that, you know? And the sharing part for me was the best because it was, you know, it just makes you feel how different every person thinks. They might feel something different, but they’re putting it all in the melting pot and you could take something away.”*
Turning towards pain	Experiential learning and process of overcoming personal defences	*“When we were doing it [open heart meditation], he [facilitator] was saying you could hug the pain. Now I’ve never thought of that ‘cause I’d stabbed the pain, kicked the pain all over the place but never thought of hugging it. It’s a totally different way of looking at it and honestly never in my life have I sat there and thought ‘it’s Ok to look at that pain’ I’d like to kill the pain. I just smashed it all over the place. This had taught me to love it and that makes me feel different.”* *“And so when I returned to compassion to myself, you know from that I… I think having gone through that little journey of compassion for the entire world, you know…if you go through that little journey actually coming back to compassion for myself was a bit easier.”* *“I think what was really good was the way we were told that there’s no right or wrong for doing this, ‘cause I…think a lot of things you do, in life, you’re not confident if you’re doing it at home by yourself because you don’t know if you’re doing it right, and it’s really reassuring if there is no right or wrong answer, don’t worry, and listen to what’s happening”*

		"I know that there are a lot of papers and a lot of information and a lot of books and… but it's not the same because, I find it difficult to translate what's on paper to translate it in my situation. You stay there and you listen and things make sense and try to translate that in real life when it's pain. But it's not just the pain-pain."
	Confronting difficult experiences in compassion-based meditation	*"Everyone of us, you know we ended up in tears at some stage, but it wasn't because we were unhappy, it was because there was some triggering of something in somebody."* *"Yeah, I think it's to do with being let down. And relationships. And uhm… that's it, it is men and relationships, and I think you just put barriers up because you've got to protect yourself and your daughter and just plough through. So this meditation, it's going to be a… first step…so you're going to chisel away".*
	Turning towards pain and suffering following programme	*"It made me really think about it because you're so busy doing, you don't often think about yourself. And then what I've taken from the course is actually recognising what I do, which I probably didn't, I would never actually think about."* *"Because you're not focused on your pain… you're looking at it differently. It's you're just looking at the whole thing."* *"[Work] we understand that you're not well at the moment, and if you need help, you know if you need support then let us know and we can put it in place. You know, I spent a lifetime hiding issues form work."*
Accepting self	Sense of empowered self and committing to value-based activities	*"This need to be more aware…. I was on a call with a London partner and it started snowing outside and I was like 'Oh my God'. So the kids were home and I said 'I'm really sorry but can I have two minutes… and the other guy was from Jamaica and, he's never seen snow in his life, so he ran out to have a look and he came back and went, 'thank you, I've seen snow for the first time'. And it was like one of those moments."* *"I had a really difficult problem with somebody who'd done something that was really out of line and I decided… I dealt with it in quite an assertive way. I'd felt the anger in me but normally I wouldn't do anything about it when I'm feeling angry, 'cause I don't trust myself. But actually I felt the anger, I recognised where it was. Where I felt it. Why it was anger. And just dealt with it very short and sweet and assertive and is what I'm doing and that, uhm, which was very different to how I would normally have done it.*

		Normally I would have brooded on it for a long time and I've been all that here and you know, and upset and whatever, and that night I slept like a baby. I really did. I slept like a baby, which was great and I felt good and that helped me with the compassion, because I began to think, you know, you are actually worth something, you are actually, you know, quite capable and you can be assertive." *"Because I began to think, you know, you are actually worth something, you are actually, you know, quite capable and you can be assertive…and I just thought, you do deserve better and you've got lovely friends and take care of yourself first and I did and it's… yeah, it's a start."* *"So I walk every day, twice a day and it's become part of my busy routine. But it's really important to me and just to stay healthy, get some fresh air. And I think it's good for the kids to see. Often they come with me…often I'm thinking of a million things and I could have missed these things. Was the sea rough? These things I could have missed."*
	Understanding that this is the start of a journey	*"Well, maybe there's like a little fissure now in the rock and a tiny trickle of water opening up in this heart on concrete that I have for myself."* *"I think… I needed that journey of those eight weeks to sort of get me going and get me focused on changing things and changing my attitude."* *"I think that, well, I've got to work at it. I have to. This is a work in practice. Because otherwise, how could I change, unless I want to change? And the only way I can change is by working at it…and it's going to take a long time. I think I see anywhere I'm going to be able to conquer. It is just to go with it, is what it is, isn't it? To be kindly to myself. To let my barriers down."* *"I've learned things, I've changed things. But I still need guidance and I still need support and… it was a good way of socialising with… Mindfulness, the people there and everyone is moving on with their lives."* *"I think it's very easy to, you know,, depending on how your life is, I think it would be quite easy to take the eight weeks and go right down the eight weeks, now Ciao, you know, I'm going to walk away from it. But actually for me it's just to say it gave me the coping mechanisms for all the stuff that's going on."*

Appendix P: publications considered for research and publication guidelines

British Journal of Pain: https://journals.sagepub.com/author-instructions/bjp#:~:text=British%20Journal%20of%20Pain%20is,original%20research%20exceeds%205000%20words.

SAGE journals: https://us.sagepub.com/en-us/nam/manuscript-submission-guidelines

International Association of Pain (IASP): https://www.iasp-pain.org/resources/guidelines/

Journal of Pain Research (Dove Press): https://www.elsevier.com/journals/the-journal-of-pain/1526-5900/guide-for-authors

British Journal of Clinical Psychology: https://bpspsychub.onlinelibrary.wiley.com/hub/journal/20448260/homepage/forauthors.html

Appendix Q: *End of Study Report***:** Summary of research findings for participants and ethics board

Dear [redacted]

The purpose of the study came from research which suggests that compassion is an essential part of benefiting from Mindfulness-based interventions. However, there is evidence suggesting that people with persistent pain might experience challenges when engaging compassion-based practices, such as the Open Heart meditation. Mindfulness for Health is a standardised MBI for people with persistent pain and health conditions. This study sought to explore the positive, neutral and difficult experiences of compassion-based practice and meditation for participants in Mindfulness for Health programmes.

To explore these experiences, a method called 'Interpretative Phenomenological Analysis' was used. This involves the researcher trying to understand how participants understand their experience and the meaning they gave to it. **E**ight participants who had completed the Mindfulness for Health programme from four separate groups were interviewed about their experience.

The study suggested five themes that participants spoke to. This were named 'turning away from self-with-pain', 'self-with-pain experienced as shameful', 'facilitating change', 'turning towards self-with-pain', and 'accepting self'. Participants identified both perceived positive changes and difficult emotional experiences during the meditation practice, which they related to the context of compassion in their past and present life.

This study sought to explore how participants understand their experience of compassion-based practice as part of MfH, including how they manage difficult experiences and understand these within their context. The eight participants provided rich and detailed accounts of their experiences and these were analysed with IPA and organised into five master themes. These are considered in turn.

Turning away from self-with-pain reflected both an understandable attempt to avoid the intensity of unpleasant somatic and psychological distress, and a phenomenon widely acknowledged in persistent pain sufferers that is theorized to maintain the persistent pain condition. The reliance on these defences was evident with participants' resistance towards compassion-based practice that invited them to turn towards their self-with-pain or difficult past experiences. Importantly, strategies to avoid or control pain extended beyond the experience of pain to the emotional distress elicited by difficult memories.

Efforts to avoid or control pain were understood in the context of a self-with-pain experienced as shameful, where participants noticed pleasing or appeasing others served to negate possible negative social evaluation from social networks and institutions.. This study suggested that such long-term patterns may have related to a family or cultural norm where compassion is given to others rather than the self. Participants also made links to a highly critical environment that led to hyper-vigilance to potential negative social evaluation that manifested as self-criticism.

The experience of compassion-based session involved the challenge in turning towards the self-with-pain and overcoming the barriers that they adopted to protect them, such as avoidance. The participants' experiences reflected the distress sometimes encountered in meditative practice, where practice confronts participants with adverse attachment experiences and previous traumas. However, the participants noticed that it can be necessary to attend to their pain and suffering before they can nurture self-compassion. It appeared that these positive changes were accompanied by acceptance, where feelings of shame were alleviated to facilitate a less judgemental and more compassionate awareness of the self. Where feelings of shame were alleviated, it was understood that this allowed participants to experience less avoidance strategies or self-criticism, as they no longer felt as strong a need to hide their self-with-pain. Although, such experiences were often described as highly salient in their novelty, this study indicated that these were understood as the beginning of a change in their trajectory rather than transformative events.

Some participants identified strongly with the group and this study suggests that compassion towards others and a sense of ‘shared humanity’ facilitates an acceptance of the self-with-pain and helps alleviate the shame associated with pain, allowing people to better turn towards their pain. However, some participants did not identify as closely with the group and it is important to consider what factors are involved and how to better support these participants during the programme.

This study can provide helpful suggestions for clinicians facilitating mindfulness programmes and compassion-based practices in groups, including the importance of supportive group dynamics, the benefit of acquiring mindfulness skills to support compassion-based practice and the role of the facilitator in modelling compassion. Future research could look into the experience of more participants from diverse backgrounds to further explore the experience across participants and the processes involved in change.

Thank you for your support and involvement. Your participation has been highly valuable. A poster of the research will be created in due course and this will be made available to you.

This research has been funded and supported by Canterbury Christ Church University, The [redacted] Pain Management Centre and Research and Ethics Committee.

If you have a concern about any aspect of this study, please contact [redacted] and I will do my best to answer your query. I will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with.

If you remain unhappy or wish to make a formal complaint, please contact the Programme Director of Clinical Psychology and Director of Salomons Institute for Applied Psychology (margie.callanan@canterbury.ac.uk) who will seek to resolve the matter as soon as possible.

The research supervisors can be contacted. For questions directed for the university supervising the research, please contact [redacted] For questions relating to the [redacted] Pain Management Centre, please contact [redacted]

Kind regards,

[redacted]