

## A qualitative study exploring the effects of attending a community pain service choir on wellbeing in people who experience chronic pain

Mirella J Hopper<sup>1</sup>, Suzi Curtis<sup>2</sup>, Suzanne Hodge<sup>1</sup> and Rebecca Simm<sup>2</sup>

<sup>1</sup>Division of Health Research, Lancaster University, Lancaster, UK

<sup>2</sup>Clinical Health Psychology Service and Community Pain Service, Southport & Ormskirk Hospital NHS Trust, Southport, UK

### Abstract

The choir has links to a multidisciplinary pain management service, which is informed by the ethos of solution-focused principles, specifically in identifying and drawing upon patients' resources. Seven choir members participated in semi-structured interviews, grounded in lines of enquiry commonly used in SF practice. Thematic analysis of the data uncovered seven themes: *Physical Improvements*, *Emotional Impact*, *Personal Growth*, *Interpersonal Processes*, *Relationship with the 'Self'*, *Living Well with Pain* and *Sharing the Music and Spreading the Word*. The choir enabled continued progress towards accomplishing key PMP aims: self-management, coping and living well with pain. Findings expanded upon existing findings relating to singing and wellbeing by highlighting the choir's role in promoting resilience and acceptance of pain. Clinical implications are explored in relation to psychosocial dimensions of pain.

### Keywords

Chronic pain, pain management programme, solution-focused approaches, choir, singing, psychological wellbeing, self-efficacy, qualitative research

---

### Corresponding author

Mirella Hopper, Division of Health Research,  
Lancaster University, Lancaster, LA1 4YG, UK.  
Email: [m.hopper1@lancaster.ac.uk](mailto:m.hopper1@lancaster.ac.uk)

## **Introduction to chronic pain**

Chronic pain is estimated to affect around 14 million people of all ages in England alone<sup>1</sup>. It is defined as the persistent and long-term experience of pain (over 6 months) which outlasts the expected time of healing<sup>2</sup>, and may or may not be caused by tissue damage. Unlike acute pain, chronic pain cannot be wholly alleviated by medical or physiological interventions. For some, chronic pain can reduce quality of life over time by causing emotional, psychological and behavioural changes<sup>3</sup>.

## **Psychosocial dimensions of chronic pain**

Five psychosocial dimensions of the pain experience have been identified<sup>4</sup>, namely physical, emotional, cognitive, behavioural and social/cultural. Firstly, due to subjective variations in how physiological sensations are interpreted, it is proposed that there are vast differences in individuals' experiences of pain<sup>5</sup>. Although chronic pain is unobservable to others due to the absence of illness or injury, the unique physical experience of pain can impair an individual's quality of life through 'secondary complications'<sup>6</sup>, such as long-term absence or resignation from work<sup>1</sup>, challenges in returning to manual employment<sup>7</sup>, loss of hobbies due to inactivity and sleep disturbances<sup>8</sup>.

It is estimated that the risk of suicide in individuals with chronic pain is doubled due to low mood, hopelessness regarding the future and a need to escape pain<sup>12</sup>. Anger is also common in those with chronic pain due to a sense of frustration and loss<sup>13</sup>. Many individuals with long-term pain may experience anxiety and fear due to worries regarding finances, health, relationships and the future<sup>14</sup>.

The emotional facet of chronic pain appears closely linked to the cognitive dimension of pain. 'Catastrophising', for example, is reported to be a significant predictor of an individual's response to pain<sup>15</sup>. This can lead to a fear of movement, hypersensitivity to pain and avoidance<sup>16</sup>, potentially reinforcing low mood and 'disability'. Beliefs about pain,

together with expectations about treatment and recovery, have also been shown to shape clinical outcomes<sup>17</sup>. The functional loss associated with chronic pain can have a detrimental impact on self-worth due to negative perceptions of the body<sup>18</sup>. In addition, self-efficacy beliefs are often predictive of 'pain behaviour'<sup>19</sup>, suggesting that an individual's perception of their ability to complete a task successfully while experiencing pain may affect their performance<sup>20</sup>.

Literature regarding the behavioural dimension of pain primarily relates to 'illness behaviour', that is the manner in which an individual responds to a physical condition<sup>21</sup>, for instance by monitoring their body, interpreting symptoms and taking remedial action. This is described as a natural, logical response designed to protect the body from further harm and promote healing. However, over a prolonged period such behaviour may result in hypervigilance to pain cues, inactivity and avoidance, which are associated with anxiety, low mood and 'disability'<sup>22</sup>. Ongoing attempts to eliminate pain through unsuccessful investigations and reliance on medication may unintentionally reinforce beliefs in a medical cure for chronic pain<sup>24</sup>, preventing engagement in other potentially beneficial psychosocial interventions.

Finally, the experience of chronic pain may be affected by particular social and cultural contexts. The 'hidden' nature of pain can result in discrimination due to a lack of understanding regarding its impact on the person, consequently becoming a barrier to social engagement<sup>25</sup>. This may lead to the internalisation of stigma and 'difference', increasing social isolation and withdrawal<sup>26</sup>. Existing prejudice towards ethnic minority groups may further exacerbate the social challenges associated with chronic pain<sup>27</sup>. Family relationships can be considerably affected due to changing social and gender roles, including limitations in helping with household chores and raising children, and restrictions in engaging in leisure activities and intimacy with a spouse<sup>28</sup>. Financial strains, due to loss of earnings from

employment and ongoing medical costs, may lead to additional difficulties as a result of chronic pain<sup>29</sup>. In summary, while chronic pain may primarily be thought of as a physiological phenomenon, it is also evidently a psychosocial experience, and one which requires concurrent psychosocial and medical interventions.

### **Psychosocial management of chronic pain**

This holistic approach to chronic pain is consistent with the philosophy of multidisciplinary pain management programmes (PMPs) which are recommended for the psychological management of chronic pain<sup>30</sup>. PMPs adopt a biopsychosocial model and often use a combination of cognitive behavioural therapy (CBT) and acceptance and commitment therapy (ACT) principles to address the psychosocial dimensions associated with chronic pain. The programmes aim to improve functioning and coping and enable patients to take responsibility for maintaining their own health by developing strategies for long-term self-management<sup>31</sup>.

While CBT approaches to PMPs are found to be somewhat effective<sup>32,33</sup>, the evidence remains conflicting<sup>34</sup>, with limited support for maintained effects over time<sup>35</sup>. The application of CBT for pain has been described as lacking in coherence across PMPs, creating difficulties in ascertaining the effectiveness of specific techniques<sup>36</sup>. ACT has also seen increasing popularity for use with chronic pain populations and, for some, has demonstrated significant changes in life satisfaction, ‘disability’ and depression<sup>37</sup>.

The SF model is non-directive in that it emphasises patients’ own views of what constitutes a good outcome from interventions, and is client-centred as it encourages the recognition and development of patients’ existing skills, strengths and resources<sup>38</sup>. SF approaches involve ‘problem-free talk’ in which the therapist facilitates change by enabling the patient to find their own solutions and work towards their ‘preferred future’, often resulting in the patient living a more fulfilled, connected and meaningful life<sup>39,40</sup>.

Preliminary outcome data from the PMP delivered by the SF-informed pain management service has suggested statistically and clinically significant improvements in self-efficacy, functioning and wellbeing<sup>41</sup>, along with psychological and behavioural improvements which enabled individuals ‘to live better in the presence of pain’<sup>42</sup>. While the evidence for SF PMPs is limited at present, these studies indicate growing support for this approach. Fundamentally, SF principles reflect PMP guidance<sup>30</sup> which stipulates that these programmes should enable individuals to ‘live well’ despite chronic pain by supporting them to develop self-management plans based on personal resources.

### **Valuing patient expertise**

NHS services across the UK have long recognised the value of patient experience and involvement in the development, delivery and evaluation of health services, particularly for people living with chronic health conditions<sup>43</sup>. SF approaches are helpful in identifying and valuing patient expertise. In line with the SF ethos of the pain management service described above, a patient with extensive experience of using music and singing to manage her own chronic pain volunteered to direct a choir for others with chronic pain. A pilot evaluation of the choir suggested statistically and clinically significant changes in mental wellbeing of choir attendees after 12 weeks<sup>44</sup>.

### **Singing with chronic pain**

The role of creative arts is becoming increasingly acknowledged within health care settings<sup>45</sup>, particularly the therapeutic properties of music and singing<sup>46</sup>. A number of recent studies have highlighted the range of positive outcomes of choral singing. For example, physiological benefits include improvements to breathing, the respiratory system and muscle tension<sup>47</sup>, together with relaxation, increased energy and improved posture and body control<sup>48</sup>. Singing also encourages the release of endorphins which can reduce pain<sup>49</sup>. The general relationship between physical and psychological health in pain conditions is well-

established<sup>50,51</sup>, suggesting that any reductions in pain may improve psychological wellbeing, and vice-versa.

Singing has been shown to improve emotional and mental wellbeing as it promotes positive affect, cognitive stimulation and regular commitment<sup>52</sup>, enhances spirituality<sup>53,54</sup> and improves psychological difficulties and daily functioning for individuals with mental health difficulties<sup>55</sup>. Participation in group singing sessions can also improve active coping with chronic pain<sup>56</sup>. The social and behavioural dimensions of pain may also be addressed through singing as it can contribute to social cohesion and identity, enabling individuals to develop positive interpersonal relationships through trust, co-operation and empathy<sup>57</sup>, together with promoting empowerment, providing meaning and enhancing social roles<sup>58,59</sup>. Choral singing has received public attention and appreciation over recent years through popular television shows like *The Choir*<sup>60</sup> and *Unsung Town*<sup>61</sup> which have portrayed group singing in a positive light. The increased cultural profile of singing appears to have prompted a resurgence in the popularity of choral singing<sup>62</sup> and an increasing awareness of its benefits.

## **Current study**

Research into choral singing and wellbeing has not so far been explored with a chronic pain population, nor within a SF framework. To begin to fill these gaps, the current research employed a qualitative methodology to explore individuals' experiences of being part of a choir that was grounded in the same SF ethos as the pain management service and PMP, '

## **Method**

### **Design**

Semi-structured interviews were employed to gather detailed descriptions of participants' experiences of attending the community pain choir, the personal meaning the choir held for them and how they perceived this to have impacted on their psychological wellbeing and self-efficacy. The interview topic guide included some lines of enquiry commonly used in SF practice: exploring participants' views of the choir in enabling them to discover exceptions to their difficulties and move towards their preferred futures. Two service-users contributed to the study design, which reflected the ethos of the expert patient model. The data analysis process was informed by Bandura's theory of self-efficacy<sup>20</sup> and Ryff's model of psychological wellbeing<sup>63</sup> (comprised of personal growth, autonomy, purpose in life, self-acceptance, environmental mastery and positive relationships with others). This conceptualisation of psychological wellbeing is an expansion of Aristotle's concept of 'eudaimonic wellbeing'<sup>64</sup> which proposes that happiness is achieved through the pursuit of personal growth, self-actualisation and meaning in life; this is distinct from Aristippus' theory of 'hedonic wellbeing'<sup>65</sup> which denotes that humans strive to obtain maximum pleasure and minimise negative affect.

## **Participants**

A purposive sample of seven patients who had attended the community pain service choir for five or more sessions, and had previous or current involvement with the community pain service participated in the study (N=7, males=1, females=6, ages=44-79 years, duration of chronic pain=1-40 years, duration of choir attendance=2-18 months). A number of participants had completed the community pain service PMP, while others had received one to one input from community pain service clinicians. One choir member expressed interest in participating in the study; however, withdrew from the research prior to interview due to illness. Participants were invited to select their own pseudonym which was used to represent their data.

## **Procedure**

The research received approval from a National Health Service (NHS) Research Ethics Committee. Choir members had the opportunity to opt-in to the study by returning the expression of interest form. Individuals were then contacted to arrange an appropriate time for the interview. For participants' convenience, the interviews took place over several days at the local NHS health centre where the pain service is based. As three participants were unable to travel due to difficulties relating to their chronic pain, interviews took place within the individuals' homes. The interviews were conducted by the lead author and lasted between 30 minutes and one hour; interviews were audio-recorded following participant consent.

## **Topic guide**

The interviews primarily explored growth in psychological wellbeing rather than decrease in negative affect or pain, as the SF framework of the study focused on strengths and resources, in line with problem-free talk. However, individuals' relationships with their pain were also explored within the interviews.

## **Analysis**

The interview data were transcribed verbatim and analysed systematically using a staged process of thematic analysis<sup>66</sup>. This approach allowed detailed exploration of the rich data produced through the interviews, highlighting the uniqueness and complexity of participants' personal experiences of attending the choir while discovering commonalities across individuals. A partially-inductive process was adopted throughout the study, as SF questions informed the topic guide and other psychological models were used as interpretive lenses for refining themes from the initial codes. Clustering of the codes revealed 25 emerging themes which were then grouped according to their commonalities, resulting in seven final themes.



## **Epistemology and factors affecting interpretation of the research**

The study was conducted from a social constructionist epistemological position, which assumes that individuals construct their own subjective truths from their experiences in the world and with others and there is no single ‘truth’ to be discovered. All stages of the research were conducted by the first author, a young white female, as part of her clinical psychology training. She had no personal experiences of chronic pain or any affiliations to the community pain service, PMP or community pain choir. However, the first author acknowledges positive personal experiences of music, including choral singing, encountered prior to conducting the research. In order to reduce the effects of this on data collection and analysis, interviews and coding were corroborated by the third author. The second and fourth authors run the PMP that the pain choir was connected with and provided supervisory support. The third author provided academic supervision.

## **Results**

Data analysis revealed seven final themes. Participants largely shared personal narratives of a ‘journey’ with chronic pain: from noticing initial physical and emotional changes, emerging into a world of personal discovery and acceptance, and concluding with an impetus to share their experiences of the choir.

### **Theme 1: Physical Improvements**

Each participant described some benefit to their physical health from attending the choir. Mary identified improvements to her lung capacity and breathing, demonstrated by her annual spirometry test result, while Eddie described increased relaxation as a result of singing which prompted a period of alcohol abstinence as this was no longer required to facilitate relaxation. Other interviewees noticed a reduction in their pain as a result of changing

relationships with pain. For example, some felt more in control of pain, were able to release their pain or were distracted from pain when immersed in singing: “I try to ignore it...I seek ways of putting something in its place, and the pain choir is the best thing since sliced bread!” (Nancy). A shared experience was that of being less reliant upon painkillers on the day of the choir: “I don’t take my pills on a Friday because when I get there and start singing it sort of lifts you for the day” (Paige). Several participants also experienced increased energy following the choir which inspired some to engage in other physical activities, such as Tai-Chi (Charlotte), walking (Paige) and swimming (Eddie). During a health check one participant discovered that his blood pressure had lowered after attending the choir for a period of time.

## **Theme 2: Emotional Impact**

The choir was portrayed by all as having a positive short-term effect on mood. While some described excitement in anticipation of the choir, most spoke of the happiness evoked by singing: “It’s like taking a happy pill without the tablets!” (Faye). A number of specific mechanisms of the choir were identified as contributors to improved mood, including the ‘manageable’ session-length which maintained interest, the inclusive and light-hearted choir environment (“When you’re singing you’re freer!” [Charlotte], “Everybody gets a buzz out of it” [Nancy]), and the range of musical genres chosen by the choir director: “She’s been teaching us some African music...as you’re singing you’re picturing yourself in another place, that’s relaxing” (Eddie). This theme also reflects the sustained impact of singing on participants’ emotional wellbeing which was replenished during each session: “You come away and then for the rest of the day you’re sort of on a high” (Paige). Friends and family had also observed changes in participants’ mood following the choir: “They can tell when I’ve been there because I’m more upbeat...a sparkle in my eye” (Faye).

### **Theme 3: Personal Growth**

This theme captures how the choir was considered by some as part of a personal journey in pursuit of meaning and purpose, and ultimately personal growth. Singing provided a temporary focus for several participants in which attention was directed towards a meaningful and rewarding activity. The choir was also portrayed as an agent, enabling participants to learn a new skill, develop an existing talent or work towards a personal goal. Some gained satisfaction from small successes, such as just ‘having a go’. Several interviewees stated that the choir also allowed them to discover a deeper purpose in life: “If it hadn’t started 18 months ago I would still be sat on the couch now” (Paige), which enhanced motivation and propelled some to make future plans, increasing their hope and optimism. The choir also appeared to ‘open doors’ to discovery and pursuit of other opportunities by enhancing self-efficacy, as it enabled participants to recognise their own capacity to achieve, commit and self-motivate. This led to the development of new interests for some, including joining other social groups (Eddie) and volunteering (Mary).

### **Theme 4: Interpersonal Processes**

This theme was the most common and reflects participants’ experiences of interpersonal relationships both within and externally to the choir. Some interviewees revealed initial comparisons they made between themselves and other choir members, suggesting that the choir facilitated self-appraisal. Several participants highlighted the validating, safe environment which promoted friendships and provided opportunities for valuable social interactions: “You stand and talk for half an hour making real good friends with people you never knew, but we all have something in common” (Eddie). All participants perceived their connections to other choir members as fundamental to improved wellbeing, with understanding and acceptance as key to this process: “I don’t have to explain myself” (Charlotte). Most interviewees attended the social events connected to the choir, including a

monthly coffee morning, which offered further structure and social contact outside of the choir. Friendships among choir members also provided peer support, helping to combat low mood and social isolation. A number of participants displayed admiration for the choir director: “She’s amazing, she is a sufferer herself, but she will put the choir first” (Mary). Her lived experience appeared to promote hope for a fulfilled life with pain and enhanced self-efficacy. Finally, the majority of interviewees reflected on their improved relationships with friends and family, which included forgiving others for past mistakes and being able to talk more easily to those closest to them; this also resulted in increased social activity with others outside of the choir.

### **Theme 5: Relationship with the ‘Self’**

All participants reflected on the choir’s role in developing the ‘self’ and promoting internal changes. Interviewees presented this as a journey of self-discovery, beginning with the development of self-awareness and knowledge through members’ recognition of their abilities and limitations. This was followed by learning to accept one’s self (“There you don’t have to pretend, you can be you” [Faye]), which was facilitated by peer validation. Several participants described increased autonomy from attending the choir: “It’s something for me, just for me” (Hannah). The next phase involved deepening a sense of worth and self-efficacy through singing: “I think I’ve found something that I’m quite good at” (Mary), which was often influenced by the perceptions of key figures, such as family members and the choir director, whose beliefs were subsequently internalised. Following this the choir seemed to provide an opportunity to revive lost roles, skills and interests, enabling participants to recreate or rediscover the ‘self’: “The choir has helped me become that person again...my musicianship is now returning to me” (Nancy). Lastly, many described drawing upon their self-knowledge, sense of worth and re-established identity in order to request

support, make personal decisions and take control over their lives: “It’s given me the confidence boost I needed to make decisions” (Charlotte).

### **Theme 6: Living Well with Pain**

This theme represents the concluding stage of participants’ journeys in which the choir nurtured long-term change processes. Key to this were the therapeutic properties of the choir: an alternative to medication (“It’s better than all the tablets in the world” [Eddie]), a coping mechanism, a communication tool and a self-management technique (“I just think singing is good for you, I sing at home now” [Hannah]). This ‘healing’ nature of the choir appeared to facilitate two key intrapsychic processes. The first - *resilience* - captured the choir’s function in enabling individuals to overcome the difficulties associated with pain. Participants often recognised this when they prevailed over the practicalities of participating in the choir: “You find your way of doing it, you’ve won a medal!” (Faye). The choir seemed to offer an environment to observe personal strength, resulting in improved wellbeing and self-efficacy. The second process - *acceptance* - reflected the choir as part of an ‘alternative journey’ in which participants learned to embrace a life where they existed with pain but were not defined by it: “I’m more positive, even with the restrictions I have, part of any change in your life is a certain form of acceptance” (Charlotte). Acceptance also involved making adaptations to live well with pain: “I’m a survivor and I’ve adapted my life according to how I’m able to live it” (Mary).

### **Theme 7: Sharing the Music and Spreading the Word**

The final theme captures participants’ desire to share singing and their personal stories of the choir in hope of it having a positive influence on others. For some this involved shaping the experiences of those without pain, such as family members (“I used to sit with her and sing...she found comfort in it” [Mary]) and performance audiences (“It makes me happy knowing we’re making someone happy” [Paige]). Others were concerned with

informing those with pain about the benefits of attending the choir: “We would be happy to welcome anybody who will come along with us on this journey to pain-free rehabilitation” (Nancy). One participant was even passionate about sharing their experience of the choir on a national scale: “We can link up with other pain choirs...that surely has to be on the agenda towards it being a national movement” (Nancy). The interviewees’ drive to share their experiences of the choir seemed to relate to the gratification gained from having a positive effect on others, together with the belief that their personal experiences were valuable: “If our experiences help *one* person then that would make us happy” (Nancy).

## Discussion

This study explored participants’ experiences of attending a community pain choir and the impact of this on their psychological wellbeing, self-efficacy and relationship with pain. Data analysis revealed seven overarching themes which represent participants’ personal journeys; similar stories are found in the general pain literature<sup>67</sup>. While other research into singing identifies a number of comparable themes, this study provides additional insights into how attending a service-user led pain choir might facilitate not only physical benefits and positive affect, but also have potential lasting effects on psychological wellbeing and self-efficacy through deeper intrapsychic changes.

Consistent with other choral research, this study identified improvements in participants’ breathing<sup>47</sup> and lung capacity<sup>68</sup>. The current research, however, suggests a more extensive impact on relaxation than other studies<sup>69</sup>, as participation in the choir prompted lifestyle changes, such as alcohol abstinence, which may improve overall health and quality of life. Several participants also described increased physical activity resulting from improved energy, while previous research revealed no changes in participants’ exercise

capacity following singing classes<sup>70</sup>. Furthermore, one participant reported lowered blood pressure, whereas singing in other studies caused increased heart rate and sweating<sup>71</sup>.

Emotional wellbeing is perhaps comparable to hedonic wellbeing in which positive affect is sought and negative affect is avoided<sup>65</sup>. Parallel to previous research<sup>75, 76</sup> this study discovered that singing was linked to positive emotions. The ‘opponent-process theory’<sup>77</sup> proposes that basic emotions have opposing counterparts; therefore, when happiness and enjoyment were experienced through the choir, sadness and frustration were suppressed. The choir also appeared to contribute to improved emotional wellbeing as a result of the strengths-focused ethos, together with other key mechanisms of the choir such as a “fun” and inclusive” atmosphere.

The positive impact on interpersonal processes is reflective of other research into choral singing<sup>78, 79</sup> and is recognised as a component of psychological wellbeing<sup>63</sup>. The choir in the current study offered a shared understanding, social inclusion and belongingness, which was further reinforced by participants’ engagement in shared social activities. A recent study of a community-based social group provided evidence that this sense of social identity can predict recovery from mood-related difficulties<sup>80</sup>. While acceptance from others was essential, interviewees also made direct social comparisons of themselves to other choir members<sup>81</sup> in order to accurately evaluate their abilities and develop their personal identities<sup>82</sup>.

The current study also presents a new dimension to research in this area as it explores participants’ experiences of attending a choir led by a service-user director. The choir leader appeared to model commitment and fortitude, empowering members and enhancing their self-efficacy beliefs through internalisation of personal resilience and self-management of pain<sup>20</sup>. Although previous research discovered improvements in choir members’ relationships

with friends and family due to increased confidence<sup>83</sup>, similar changes in the current study appeared to relate to additional internal changes within participants, such as enhanced self-worth, re-evaluation of roles and contributions to relationships. Finally, singing has also been found to increase empathy for others<sup>84</sup> which may help to explain forgiveness within some participants' relationships.

Consistent with other research<sup>52, 75</sup> choral singing provided members with a regular focus, a sense of achievement and a purpose, which is consistent with research into the key components of psychological wellbeing<sup>63</sup>. The choir also seemed to facilitate the experience of 'flow', a state in which the mind is effortlessly absorbed in an activity<sup>85</sup>. Individuals appeared to be fully immersed in the process of singing which was a rewarding experience and a distraction from pain. The choir was also a vehicle for discovering meaning, which is proposed as our primary motivation in life<sup>86</sup>. Parallel to previous research<sup>87</sup>, current interviewees described having experienced intrapsychic change processes, including developments within the 'self'. The 'self-concept' was defined by Carl Rogers as 'the organised, consistent set of perceptions and beliefs about oneself'<sup>88</sup>, consisting of self-knowledge, self-beliefs and self-esteem<sup>89</sup>. For some the choir provided a safe space for personal discovery which improved self-worth; for others having increased ownership enhanced self-determination to grow and develop independence<sup>90</sup>. These internal changes reflect eudaimonic wellbeing, achieved through the pursuit of meaning, personal growth and self-understanding<sup>64</sup>.

While previous studies also found that singing promoted internal growth<sup>91</sup>, in the current study participants reported having developed both resilience and acceptance. These psychological processes may have foundations in positive affect and interpersonal relationships which the choir promoted, but also appear to relate to the development of a positive self-concept<sup>92, 93</sup>.



## **Practice implications**

Participants' narratives portrayed the choir as an important adjunct to the community pain service. By providing a resource which patients could use to rediscover themselves as social beings, make new connections and participate in a meaningful 'flow' activity, the choir contributed to its members' progress, including self-management, coping and living well with pain<sup>30</sup>. In line with the key principles of the PMP, the choir also offered an alternative therapeutic group environment which promoted self-knowledge, worth and acceptance, without a specific focus on pain. It also provided a resource-minimal, sustainable group activity, perhaps particularly important given the long-term management required for chronic pain.

This research provides some support for the potential success of a service-user led choir in addressing the psychosocial dimensions of chronic pain: physical, emotional, cognitive, behavioural and social. Participants reported an increased sense of energy and relaxation, together with a reduction in pain, as the choir accommodates its members by enabling them to sing through their pain. The choir seemed to promote both positive affect and sustained emotional wellbeing which may counteract negative affective experiences often associated with pain. Improved self-efficacy beliefs were identified, which have been associated with increased pain self-management and reduced reliance on services<sup>96</sup>. Interviewees also felt more in control of their pain which has been shown to reduce 'catastrophising' and improve mood and physical functioning<sup>24</sup>. Having a focus, meaning and opportunities to accomplish may reduce hypervigilance to pain cues and redirect attention, possibly increasing independence and quality of life in moving towards a preferred future. Finally, the development of meaningful relationships with others who experience pain provides opportunities for social inclusion within the community<sup>97, 98</sup> and the rebirth of their social identities.

As the first study exploring a service-user led community pain choir, the findings support the clinically-meaningful use of patient expertise and resources, in accordance with government policies<sup>45, 99</sup> and SF values. In line with patient involvement in service development, some interviewees made recommendations to improve practicalities of the choir, while others requested opportunities to publicise their experience on a local and national scale. Facilitating service-user involvement in the development of other pain choirs may further contribute to members' wellbeing, as their stories could empower others and model self-management and acceptance of pain.

The choir and community pain service was perceived by interviewees as adopting a helpful "holistic view" of patients and their needs, in contrast to other health settings they may have encountered in which pain was considered as 'a set of symptoms' managed by medical treatment. There was some indication in interview responses that patients found it difficult to completely separate the impact of the choir from the support received from professionals on the PMP and within the community pain service more generally. This perhaps is not surprising as both have similar aims: to help people to live well despite pain. In general it would seem reasonable to conclude from the success of this venture that it would be desirable to see this kind of collaboration between patients and professionals occurring in pain services nationally.

### **Strengths and limitations**

The framework and design of this study reflect the ethos of the expert patient model by drawing upon patient resources and expertise. However, a number of participant characteristics may have influenced the findings. As all interviewees were white British, the findings represent one population of those who experience chronic pain. Cultural differences exist in the shaping of internal constructs, such as the 'self-concept'<sup>100</sup>, and therefore cannot be cross-culturally generalised. The findings also reflect the views of participants who had

motivating factors for joining the choir, overall positive experiences and were willing to share their stories.

As the choir is an extension of the community pain service work and PMP, and some participants also attended a patient support group - all of which promote similar change processes - it is difficult to ascertain the specific cause of some positive changes reported by participants. Subsequently, it can only be concluded that the pain choir may have contributed to participants' improved wellbeing. .

### **Conclusions**

This study explored the experiences of seven individuals with chronic pain who attended a community pain service choir. The findings reveal support for the positive impact of a service-user led choir in improving psychological wellbeing and self-efficacy in individuals who experience chronic pain. Together with shifting participants' relationships with their pain, the choir also facilitated two key intrapsychic processes: resilience and acceptance. These changes appeared to be grounded in positive affect, meaningful relationships and internal adjustments, such as reconceptualisations of pain, which the choir promoted. The choir also addressed the psychosocial dimensions associated with chronic pain. While the findings expand upon existing research, only tentative conclusions can be drawn from this study as the choir members also had experience of a "living well despite pain" approach through attending the community pain service and/or PMP. However, the pain choir is a valuable adjunct to this service as its strengths-focused environment enabled participants to develop their ability to live well with their pain.

### **Conflict of interest**

The authors declare that there is no conflict of interest.

**Funding**

The authors did not receive any funding for this research from any public, commercial or voluntary sector organisations.

## References

1. Chronic Pain Policy Coalition. About chronic pain, <http://www.policyconnect.org.uk/cppc/about-chronic-pain> (2015, accessed August 2015).
2. National Institute of Neurological Disorders and Stroke. Chronic Pain, [http://www.ninds.nih.gov/disorders/chronic\\_pain/chronic\\_pain.htm](http://www.ninds.nih.gov/disorders/chronic_pain/chronic_pain.htm) (2014, accessed August 2015).
3. Dallob RM, Lopez-Chertudi C and Rose T. Psychological perspectives. In: Banks C and Mackrodt K (eds) *Chronic Pain Management*. London: Whurr Publishers, 2005, pp.155-186.
4. Severn A and Tait B. Assessment of Chronic Pain – Psychosocial. In: Grady KM, Severn AM and Eldridge P (eds) *Key Topics in Chronic Pain*. 2<sup>nd</sup> ed. Oxford: BIOS Scientific, 2001, pp. 28-31.
5. Portenoy RK and Kanner RM. Definition and Assessment of Pain. In: Portenoy RK and Kanner RM (eds) *Pain Management: Theory and Practice*. Philadelphia: FA Davis Co, 1996, pp. 3-19.
6. McAllister MJ. What is a Chronic Pain Syndrome? <http://www.instituteforchronicpain.org/understanding-chronic-pain/what-is-chronic-pain/chronic-pain-syndrome> (2014, accessed August 2015).
7. Straaton KV, Maisiak R and Wrigley MJ, et al. Barriers to return to work among persons unemployed due to arthritis and musculoskeletal disorders. *Arthritis & Rheumatism* 1996; 39(1): 101-109.
8. Moldofsky H and Lue FA. Disordered sleep, pain, fatigue, and gastrointestinal symptoms in fibromyalgia, chronic fatigue and irritable bowel syndromes. In: Mayer EA and Raybould HE (eds) *Basic and Clinical Aspects of Chronic Abdominal Pain*. New York: Elsevier Science Publishers, 1993, pp. 249-256.

9. Turk DC, Okifuji A and Scharff L. Chronic pain and depression: Role of perceived impact and perceived control in different age cohorts. *Pain* 1995; 61(1): 93-101.
10. Eccleston C. A normal psychology of chronic pain. *The Psychologist* 2011; 24: 422-425.
11. Basbaum AI and Fields HL. Endogenous pain control mechanisms: Review hypothesis. *Annals of Neurology* 1978; 4(5): 451-462.
12. Tang NK and Crane C. Suicidality in chronic pain: a review of the prevalence, risk factors and psychological links. *Psychological Medicine* 2006; 36(5): 575-586.
13. Eccleston C. Role of psychology in pain management. *British Journal of Anaesthesia* 2001; 87(1): 144-152.
14. Linton SJ and Shaw WS. Impact of Psychological Factors in the Experience of Pain. *Physical Therapy* 2011; 91(5): 700-711.
15. Sullivan M, Bishop S and Pivik J. The Pain Catastrophizing Scale: Development and validation. *Psychological Assessment* 1995; 7(4): 524-532.
16. Vlaeyen J and Linton S. Fear-avoidance and its consequences in chronic musculoskeletal pain: A state of the art. *Pain* 2000; 85(3): 317-332.
17. Main CJ, Foster N and Buchbinder R. How important are back pain beliefs and expectations for satisfactory recovery from back pain? *Best Practice & Research in Clinical Rheumatology* 2010; 24(2): 205-217.
18. Bode C, van der Heij A and Taal E, et al. Body-self unity and self-esteem in patients with rheumatic diseases. *Psychology, Health and Medicine* 2010; 15(6): 672-684.
19. Asghari A and Nicholas MK. Pain self-efficacy beliefs and pain behaviour: A prospective study. *Pain* 2001; 94(1): 85-100.
20. Bandura A. *Self-efficacy: The exercise of control*. New York: Freeman, 1997, pp. 36-78.
21. Mechanic D. The concept of illness behaviour. *Journal of chronic diseases* 1962; 15(2): 189-194.

22. Rose MJ, Klenerman L and Atchison L, et al. An application of the fear avoidance model to three chronic pain problems. *Behaviour research and therapy* 1992; 30(4): 359-65.
23. Eccleston C and Crombez G. Worry and chronic pain: a misdirected problem-solving model. *Pain* 2007; 132(3): 233-236.
24. Jensen MP, Turner JA and Romano JM. Changes in beliefs, catastrophising and coping are associated with improvement in multidisciplinary pain treatment. *Journal of Consulting and Clinical Psychology* 2001; 69(4): 655-662.
25. Lennon MC, Link B and Marbach J, et al. The stigma of chronic facial-pain and its impact on social relationships. *Social Problems* 1989; 36(2): 117-134.
26. Waugh OC, Byrne DG and Nicholas MK. Internalised Stigma in People Living with Chronic Pain. *Journal of Pain* 2014; 15(5): 550, e1-10.
27. Green CR, Baker TA and Sato Y, et al. Race and chronic pain: A comparative study of young black and white Americans presenting for management. *Journal of Pain* 2003; 4(4): 176-183.
28. Strunin L and Boden L. Family consequences of chronic back pain. *Social Science and Medicine* 2004; 58(7): 1385-1393.
29. De Souza L and Frank AO. Patients' experiences of the impact of chronic back pain on family life and work. *Disability & Rehabilitation* 2011; 33(4): 310-318.
30. British Pain Society. *Guidelines for Pain Management Programmes for adults: An evidence-based review prepared on behalf of the British Pain Society*. London: British Pain Society; 2013.
31. Severn A. Therapy – Psychological. In: Grady KM, Severn AM and Eldridge P (eds) *Key Topics in Chronic Pain*. 2<sup>nd</sup> ed. Oxford: BIOS Scientific, 2002, p. 229-231.

32. Morley S, Eccleston C and Williams A. A Systematic review and meta-analysis of randomised controlled trials of cognitive behaviour therapy and behaviour therapy for chronic pain in adults, excluding headache. *Pain* 1999; 80(1-2): 1-13.
33. Morley S, Williams A and Hussain S. Estimating the clinical effectiveness of cognitive behavioural therapy in the clinic: Evaluation of a CBT informed pain management programme. *Pain* 2008; 137(3): 670-680.
34. Thorn BE, Day MA and Burns J, et al. Randomized trial of group cognitive behavioural therapy compared with a pain education control for low-literacy rural people with chronic pain. *Pain* 2011; 152(12): 2710-2720.
35. Williams AC, Eccleston C and Morley S. Psychological therapies for the management of chronic pain (excluding headache) in adults. *Cochrane Database of Systematic Reviews* 2012; 11:CD007407.
36. Vowles KE and Thompson M. Acceptance and Commitment Therapy for Chronic Pain. In: McCracken L (ed) *Mindfulness and Acceptance in Behavioural Medicine: Current Theory and Practice*. USA: New Harbinger Publications, 2011, pp. 31-61.
37. Wicksell RK, Ahlqvist J and Bring A, et al. Can exposure and acceptance strategies improve functioning and life satisfaction in people with chronic pain and whiplash-associated disorders (WAD)? A randomized controlled trial. *Cognitive Behaviour Therapy* 2008; 37(3): 169–182.
38. de Shazer S. *Keys to Solution in Brief Therapy*. New York: W. W. Norton & Company, 1985.
39. Ratner H, George E and Iveson C. *Solution Focused Brief Therapy: 100 Key Points and Techniques*. UK: Routledge, 2012, p.49 & p. 93.
40. BRIEF. From Problem to Solution, [http://www.brief.org.uk/view.php?item\\_id=80](http://www.brief.org.uk/view.php?item_id=80) (2015, accessed August 2015).



41. Simm R, Iddon J and Barker C. A community pain service solution-focused pain management programme: Delivery and preliminary outcome data. *British Journal of Pain* 2013; 0(0): 1-8.
42. Dargan PJ, Simm R and Murray C. New approaches towards chronic pain: patient experiences of a solution-focused pain management programme. *British Journal of Pain* 2014; 8(1): 34-42.
43. Department of Health. *The Expert Patients Programme*. UK: Department of Health, 2007.
44. Simm R. Community Pain Service: “Good Vibrations” Choir Evaluation April-July 2013. UK: NHS service evaluation report, 2013, pp. 1-6.
45. Department of Health and Arts Council England. *A Prospectus for Arts and Health*. UK: Arts Council England; 2007.
46. Stacy R, Brittain K and Kerr S. Singing for health: An exploration of the issues. *Health Education* 2002; 102(4): 156 - 162.
47. Hunter BC. Singing as a therapeutic agent in The Etude, 1891-1949. *Journal of Music Therapy* 1999; 36(2): 125-43.
48. Clift S, Hancox G and Morrison I, et al. Choral singing and psychological wellbeing: Quantitative and qualitative findings from English choirs in a cross-national survey. *Journal of Applied Arts and Health* 2010; 1: 19-34.
49. Parker B. Singing your worries away. *Mastersinger* 1999; 32.
50. Lin EH, Katon W and Von Korff M, et al. Effect of improving depression care on pain and functional outcomes among older adults with arthritis: A randomized controlled trial. *The Journal of the American Medical Association* 2003; 290(18): 2428-29.

51. Moseley GL. Evidence for a direct relationship between cognitive and physical change during an education intervention in people with chronic low back pain. *European Journal of Pain* 2004; 8(1): 39-45.
52. Clift S, Hancox G and Morrison I, et al. Choral singing and psychological wellbeing: Findings from English choirs in a cross-national survey using the WHOQOL-BREF. *International Symposium on Performance Science* 2007: 201-207.
53. Clift S and Hancox G. The perceived benefits of singing: Findings from preliminary surveys of a university college choral society. *The Journal of the Royal Society for the Promotion of Health* 2001; 121(4): 248-256.
54. Clift S, Hancox G and Morrison I, et al. What do singers say about the effects of choral singing on physical health? Findings from a survey of choristers in Australia, England and Germany. *Music Performance Research* 2010; 3(1): 79-96.
55. Clift S and Morrison I. Group singing fosters mental health and wellbeing: Findings from the East Kent “singing for health” network project. *Mental Health and Social Inclusion* 2011; 15(2): 88-97.
56. Kenny DT and Faunce G. The impact of group singing on mood, coping and perceived pain in chronic pain patients attending a multidisciplinary pain clinic. *Journal of Music Therapy* 2004; 3: 241-258.
57. Koelsch S. From Social Contact to Social Cohesion - The 7 Cs. *Music and Medicine* 2013; 5(4): 204-209.
58. Hargreaves D J and North AC. The functions of music in everyday life: Redefining the social in music psychology. *Psychology of Music* 1999; 27: 71-83.
59. Sixsmith A and Gibson G. Music and the wellbeing of people with dementia. *Ageing and Society* 2007; 27(1): 127-145.

60. British Broadcasting Corporation 2. *The Choir: Sing While You Work*. UK: British Broadcasting Corporation, 2006.
61. British Broadcasting Corporation 2. *Unsung Town*. UK: British Broadcasting Corporation, 2009.
62. Mesure S. Sing up! The rise of the choir. *The Independent*, 21 October, 2012.
63. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology* 1989; 57: 1069-1081.
64. Susemihl F. Aristotle's Eudemian Ethics,  
<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.01.0050> (1884, accessed August 2015).
65. Krokiewicz A. The Ethics of Democritus and the Hedonism of Aristippus,  
<http://peenef2.republika.pl/angielski/hasla/a/aristippus.html> (1960, accessed August 2015).
66. Braun V and Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006; 3(2): 77-101.
67. Bullington J, Nordemar R and Nordemar K, et al. Meaning out of chaos: A way to understand chronic pain. *Scandinavian Journal of Caring Sciences* 2003; 17(4): 325-331.
68. Clift S, Hancox G and Morrison I, et al. What do singers say about the effects of choral singing on physical health? Findings from a survey of choristers in Australia, England and Germany. In: *Proceeding of the 7<sup>th</sup> Triennial Conference of European Society for the Cognitive Sciences of Music*, Jyvaskyla, Finland, 2009.
69. Grape C, Sandgren M and Hansson LO, et al. Does singing promote wellbeing?: An empirical study of professional and amateur singers during a singing lesson. *Integrative Physiological & Behavioral Science* 2002; 38(1): 65-74.

70. Lord VM., Hume VJ and Kelly JL, et al. Singing classes for chronic obstructive pulmonary disease: a randomized controlled trial. *BMC Pulmonary Medicine* 2012; 12(1): 69.
71. Fechir M, Schlereth T and Purat T, et al. Patterns of sympathetic responses induced by different stress tasks. *The Open Neurology Journal* 2008; 2: 25-31.
72. Grape C, Theorell T and Wikstrom BM, et al. Choir singing and fibrinogen, VEGF, cholecystokinin, and motilin in IBS patients. *Medical Hypotheses* 2009; 72(2): 223-225.
73. Melzack R and Wall PD. Pain Mechanisms: A New Theory. *Science* 1965; 150(3699): 971-979.
74. Elomaa MM., Kalso EA and de C Williams AC, et al. Attention management as a treatment for chronic pain. *European Journal of Pain* 2009; 13(10): 1062-1067.
75. Bailey BA and Davidson JW. Amateur group singing as a therapeutic agent. *Nordic Journal of Music Therapy* 2003; 12(1): 18-32.
76. Hillman S. Participatory singing for older people: A perception of benefit. *Health Education* 2002; 102: 163-171.
77. Solomon RL and Corbit JD. An opponent-process theory of motivation: I. Temporal dynamics of affect. *Psychological Review* 1974; 81(2): 119-145.
78. Bailey BA and Davidson JW. Effects of group singing and performance for marginalized and middle-class singers. *Psychology of Music* 2005; 33: 269-303.
79. Olderog Millard KA and Smith JM. The influence of group singing therapy on the behaviour of Alzheimer's Disease patients. *Journal of Music Therapy* 1989; 26: 58-70.
80. Cruwys T., Haslam SA and Dingle GA, et al. Feeling connected again: Interventions that increase social identification reduce depressive symptoms in community and clinical settings. *Journal of Affective Disorders* 2014; 159: 139-146.

81. Festinger L. A theory of social comparison processes. *Human relations* 1954; 7(2): 117-140.
82. Thorton D and Arrowood AJ. Self-evaluation, self-enhancement, and the locus of social comparison. *Journal of Experimental Social Psychology* 1966; 2: 591–605.
83. Dingle GA, Brander C and Ballantyne J, et al. ‘To be heard’: The social and mental health benefits of choir singing for disadvantaged adults. *Psychology of Music* 2013; 41(4): 405-421.
84. Steinbeis N and Koelsch S. Understanding the Intentions Behind Man-Made Products Elicits Neural Activity in Areas Dedicated to Mental State Attribution. *Cerebral Cortex* 2009; 19: 619-623.
85. Csikszentmihalyi M. *Flow: The Psychology of Optimal Experience*. New York: Harper and Row, 2008, p.108-113.
86. Frankl V. *Man’s Search for Meaning*. London: Rider, 2004, pp.103-137.
87. Pavlakou M. Benefits of Group Singing for People with Eating Disorders: Preliminary Findings from a Non-Clinical Study. *Approaches: Music Therapy & Special Music Education* 2009; 1(1): 30.
88. Rogers C. A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework. In: Koch S (ed) *Psychology: A study of science*. New York: McGraw Hill, 1959, pp. 184-256.
89. Baumeister RF. *The Self in Social Psychology*. Philadelphia: Psychology Press, 1999, p. 69-78.
90. Ryan RM and Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist* 2000; 55: 68-78.
91. Silber L. Bars behind bars: The impact of a women’s prison choir on social harmony. *Music Education Research* 2005; 7(2): 251-271.

92. Fredrickson BL and Branigan C. Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion* 2005; 19(3): 313-332.
93. Waters SJ, Keefe FJ and Strauman TJ. Self-discrepancy in chronic low back pain: Relation to pain, depression, and psychological distress. *Journal of Pain and Symptom Management* 2004; 27(3): 251-259.
94. McCracken L M and Vowles KE. Acceptance of chronic pain. *Current Pain and Headache Reports* 2006; 10(2): 90-94.
95. Morley S, Davies C and Barton S. Possible selves in chronic pain: Self-pain enmeshment, adjustment and acceptance. *Pain* 2005; 115(1): 84-94.
96. Cross MJ, March LM and Lapsley HM, et al. Patient self-efficacy and health locus of control: Relationships with health status and arthritis-related expenditure. *Rheumatology* 2006; 45(1): 92-96.
97. Department of Health. *Our health, Our care, Our say: A new direction for community services*. London: Department of Health; 2006.
98. National Health Service. *NHS Standard Contract for Specialised Pain*. England: NHS England; 2013.
99. Department of Health. *The Expert Patient: A new approach to chronic disease management for the 21st century*. London: Department of Health; 2001.
100. English T and Chen S. Culture and self-concept stability: Consistency across and within contexts among Asian Americans and European Americans. *Journal of Personality and Social Psychology*, 2007; 93(9): 478-490.