**A Comparative Study of Cognitive Behavioural Therapy and Shared Reading for Chronic Pain**

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**ABSTRACT**

The case for psychosocial interventions in relation to chronic pain, one of the most common health issues in contemporary health care, is well-established as a means of managing the emotional and psychological difficulties experienced by sufferers. Using mixed methods, this study compared a standard therapy for chronic pain, Cognitive behavioural Therapy (CBT), with a specific literature-based intervention, Shared Reading (SR) developed by national charity, The Reader. A 5-week CBT group and a 22-week SR group for chronic pain patients ran in parallel, with CBT group-members joining the SR group after the completion of CBT. In addition to self-report measures of positive and negative affect before and after each experience of the intervention, the ten participants kept twice-daily (12-hourly) pain and emotion diaries. Qualitative data was gathered via literary-linguistic analysis of audio/video-recordings and transcriptions of the CBT and SR sessions and video-assisted individual qualitative interviews with participants. Qualitative evidence indicates SR’s potential as an alternative or longer term follow-up or adjunct to CBT in bringing into conscious awareness areas of emotional pain otherwise passively suffered by chronic pain patients. In addition, quantitative analysis, albeit of limited pilot data, indicated possible improvements in mood/pain for up to 2 days following SR. Both findings lay the basis for future research involving a larger sample size.

Key words: Reading aloud; reading and health; chronic pain; Cognitive Behavioural Therapy; interdisciplinarity.

**Abbreviations:** CBT, Cognitive Behavioural Therapy; SR, Shared Reading; PANAS, Positive and Negative Affect Scale; CRILS, Centre for Research into Reading, Literature and Society.

**INTRODUCTION**

Chronic pain currently affects up to 50% of the population1 and is one of the most common symptoms reported in Western health care.2 The association with mental health difficulties is particularly strong, since sufferers’ home and work lives are affected and the deprivation they suffer is often economic, vocational and occupational as well as physical-emotional.3

Chronic pain is defined by the International Association for the Study of Pain as **‘**an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage’4,p.210 Over the past decade or so, research has emphasised the ‘emotional’ dimension of chronic pain. Brain-imaging studies offer neuro-biological support for the role of psychological and emotional factors in the experience of pain,5-7 and psychological research studies have demonstrated the links between pain, emotional stress or trauma, and limited emotional awareness and expression.8-12 The current evidence base supports the use of psychological interventions13-15 which help people to live more satisfactorily with a condition which cannot be ‘cured’ by conventional treatments, and to manage the interference it produces in their lives and in their sense of identity16. CBT’s benefits, while useful, are shown by recent research to be limited and short-term, however.17-19 This study compared the effect of CBT for chronic pain sufferers with a longer-term, specific literature-based intervention, Shared Reading (SR). The study builds on prior research demonstrating the psychological benefits for chronic pain sufferers of SR, and develops an existing evidence-base in relation to the therapeutic value of this intervention.

**The Intervention(s).**

Cognitive Behavioural Therapy (CBT)

The study employed a group CBT model, delivered by Pain Medicine consultants, who had adapted the intervention for the particular needs of chronic pain patients. This model targets relaxation training, stress and behavioural management, and coping skills which try to manage the factors which may influence or exacerbate chronic pain suffering,16,19 It seeks to help sufferers assess the effect that pain is having on their lives, and encourages problem-solving to reduce the impact of the pain on daily living. Altering the way individuals perceive their pain helps patients break out of a vicious cycle of negativity which may prolong or worsen their suffering.16,19 This model of CBT also seeks to treat mood, anxiety and sleep disorders from which many chronic pain patients suffer.

Shared Reading (SR)

Shared Reading (SR), as pioneered and delivered by national charity The Reader, is a specific literature-based intervention, distinguished from other reading therapies (which characteristically rely on ‘self-help’ books) in emphasising 1) literature (fiction and poetry) and its role in offering a model of human thinking and feeling;20 2) reading aloud so that the book is a live presence and not an object of study (as in formal educational settings) or of chat (as in the conventional book club, where the material is read in advance of the group’s meeting).

The model is based on small groups (2-12 people) coming together weekly, to read short stories, novels and poetry together aloud. The reading material ranges across genres and period, and is chosen for its intrinsic interest, not pre-selected with a particular ‘condition’ in mind. The groups are led by The Reader’s trained project workers, who read aloud and pause regularly to encourage participants to reflect on what is being read, on the thoughts or memories the book or poem has stirred, or on how the reading matter relates to their own lives. Group members participate voluntarily, controlling their own involvement, contributing and/or reading aloud themselves as much or as little as they wish. One key aspect of SR is its inclusiveness: the read-aloud model means that people from a wide range of socio-cultural backgrounds and educational experience, including those with literacy difficulties or sight impairment, are able to participate and contribute meaningfully.

Published studies of the effects of SR in community settings,21,22 and in health care and rehabilitation centres,23,24 have shown its value in relation to mental health issues. Specifically, research has shown that SR can alleviate symptoms in people suffering from depression25,26 and dementia.27

Some of the aspects of SR cited in recent research to account for this effect seem particularly pertinent to the situation and needs of chronic pain sufferers. These elements include: literature’s offering of a stimulus to mental agility and emotional flexibility in a way which few activities (including other arts-related ones) demand with equivalent directness and immediacy;28 slowed deep thinking in intrinsic relation to personal emotion, where the text is not a two-dimensional manual but more like a voiced living presence;29 memory or recovery of lost aspects of being, where the reading matter helps bridge the gap between a current unwell self, and a past healthy self and enables integration of fragmented parts of the self into a functioning whole;30 the shared group setting, and the literature within it, offering a compassionate alternative (and partial antidote) to the experience of being judged, exposed, or disregarded within the world, and enabling the compression of lived experience in moments of sudden reflection and realisation.31

Related research in the field of reading and neuroscience has suggested that the inner neural processing of language when a mind reads a complex line of poetry has the potential to galvanise existing brain pathways and to influence emotion networks and memory function.32,33 Together with qualitative findings that reading ‘stimulates metacognition and high-level mentalisation in relation to deepened and expanded emotional investment in human pursuits (created by the book)’,31 it is possible, a recent neurological study has suggested, that some of the benefit associated with reading may come from ‘diverting individuals away from processing their struggles via ingrained and ineffective channels and towards more diverse, novel and effective reasoning options’.34 These findings seem particularly relevant to a condition in which the nervous system is ‘recruiting’ signals into an existing pain pathway and sending messages to the brain when there is no physical stimulus or damage.35 The hypothesis that reading can help enable a ‘re-wiring’ of kinds seems justified by existing research.

Specifically, the project built upon a prior pilot study which found that SR helped participants manage the psycho-emotional symptoms of pain to a degree comparable to the effect of a standard psychological treatment for chronic pain, CBT.36,37 Formally to test such comparable effects was the rationale of the current (follow-up) study. All participants in the pilot study regarded the literature read as an essential component of the SR experience and universally showed a preference for intellectually and emotionally demanding literary pieces, which produced closer concentration and absorbed attention, reducing awareness of pain – ‘as though the extra mental effort helped shift immersion to another level and blocked out the pain more successfully’.37,p.24 The mental challenge of SR created a state consistent with the concept of “flow”, whereby people ‘become more fully themselves – more fulfilled and absorbed, more vitally alive – in forgetting the self, whilst engaged in meaningful activity’.37,p.24 These findings were consonant with research showing that SR enables emotional articulacy and consciousness from a depth of reflective understanding triggered by the power of the literary text and the latter’s very specific felt instances of meaningful matter.31

The current study made use of the pilot study findings in tailoring the intervention – specifically the texts read (see Table 1) - to the needs of chronic pain sufferers. Texts were not specifically chosen for their relevance to pain, as it is not SR’s practice to target particular ‘conditions’ but to make available the full spectrum of human experience which a broad diet of literature offers. 26,p.17, 31, p.119 The choice was guided rather by (i) tried and tested SR texts which have proved successful in evoking response in other (non-clinical) groups (ii) the key finding from the pilot study that emotionally and intellectually challenging material had been favoured by participants.37,p.24

**Table 1.** Record of Reading Material in SR

|  |  |
| --- | --- |
| Session 1 | Charles Dickens, *A Christmas Carol* |
| Session 2 | *A Christmas Carol* |
| Session 3 | *A Christmas Carol*  Thomas Hardy, ‘The Oxen’ |
| Session 4 | Elizabeth Bowen, ‘The Visitor’ |
| Session 5 | David Guterson, ‘Arcturus’  Phillip Booth, ‘First Lesson’ |
| Session 6 | David Guterson, ‘Wood Grouse on a High Promontory Overlooking Canada’  Rainer Maria Rilke, ‘Evening’  Emily Dickinson, ‘Tell all the truth’ |
| Session 7 | Elizabeth Taylor, ‘Flesh’  Brian Patten, ‘One Another’s Light’ |
| Session | Edith Wharton, *The House of Mirth*  David Harsent, ‘The Player’ |
| Session 9 | George Saunders, ‘The Falls’  Mark Doty, ‘Golden Retrievals’ |
| Session 10 | Doris Lessing, ‘Sunrise On The Veldt’  Laurie Sheck, ‘Mysteriously Standing’ |
| Session 11 | Tobias Wolff, ‘The Liar’ |
| Session 12 | Dan Jacobson, ‘The Little Pet’  Fleur Adcock, ‘For a Five Year Old’ |
| Session 13 | Edith Wharton, ‘Mrs Manstey’s View’ Norman Nicholson, ‘The Pot Geranium’ |
| Session 14 | Joyce Carol Oates, ‘Where is Here?’ Anne Bronte, ‘Domestic Peace’ |
| Session 15 | Carol Shields, ‘Mirrors’  Elizabeth Jennings, ‘Resemblances’ |
| Session 16 | John Steinbeck *Of Mice and Men*  Edward Thomas, ‘For these’ |
| Session 17 | *Of Mice and Men* |
| Session 18 | *Of Mice and Men*  ee cummings ‘A man who had fallen among thieves’ |
| Session 19 | *Of Mice and Men*  W. B. Yeats, ‘The Lake Isle of Innisfree’ |
| Session 20 | *Of Mice and Men*  Edwin Muir, ‘Dream and Thing’ |
| Session 21 | Of Mice and Men  Christina Rossetti, ‘Shut Out’ |
| Session 22 | *Of Mice and Men*  Robert Burns, ‘To a Mouse’ |

**Aims**

The study aimed to undertake preliminary investigations into 1) the degree to which CBT and SR offer alternative treatment methods for alleviating the psychological symptoms of chronic pain and 2) how far SR might complement CBT by providing less programmatic and potentially more long-term follow-up to CBT. The study also sought (3) to test the hypothesis that, where CBT characteristically *manages* emotions, by means of systematic techniques related to traditions of stoic practice,38 SR can help turn the passive experience of suffering emotion into articulate contemplation of painful concerns.

**METHOD**

**Participants and Recruitment**

Following ethical committee approval, ten participants (seven females, three males, aged 18-75, all white British) with severe chronic pain symptoms were recruited via referral by pain clinic consultants in a participating NHS Trust, having given informed consent. The study included participants with any chronic pain condition regardless of aetiology, and regardless of demographic (though it is interesting to note that the participants involved in the study reflect the demographic of chronic pain: i.e. more women than men).39 To avoid difference in familiarity across the two activities and any possible bias in the findings, we selected participants for CBT who had no previous experience of CBT or SR, and participants for SR only who had no, or only limited, past experience of reading groups. This did not entail avoiding people who were already readers per se, though most participants did not regard themselves conventionally as ‘readers’. Three participants (one male, two female) took part in CBT followed by SR. Seven participants (two male, five female) took part in SR. Both the CBT and SR groups took place in a dedicated space within the pain clinic. Thus, the participants were at all times under the care of the multidisciplinary care team. (To preserve anonymity, participants are denoted by letters – e.g. A, J, H, P, T, SH, SY – in what follows.)

**Data Collection**

The project compared CBT and SR groups using mixed methods.

* A 5-week CBT group and a 22-week SR group for chronic pain patients ran in parallel, with CBT group-members joining the SR group after the completion of CBT. (5/6 weeks is the standard duration for CBT; 24 weeks is the minimum length recommended by The Reader and the standard duration of SR as a commissioned intervention. SR ran for 22 weeks in this instance in order to fit into the time frame of the research study.)
* Participants kept twice-daily (12-hourly) pain and emotion diaries as a measure of physical/psychological changes. Pain severity was recorded using a 0-10 rating scale (0 = non-existent, 10 = severe), at 12-hour intervals. At the same time, participants wrote down two words to describe their feelings, using as a guide (though not restricted to) those listed on the PANAS (see below). Identical pain rating measures had been employed in the preceding pilot study.37,p.19 However, as pain scores alone had offered a limited picture of overall wellbeing, the emotion diaries were included to provide a more complete picture of mood/psychological health.
* Participants completed the Positive and Negative Affect Scale (PANAS) immediately following each CBT and SR session. This scale consists of words describing emotions (10 positive, 10 negative), and asks participants to write next to each word the extent to which they are feeling each emotion on a scale of 1-5 (1 = not all; 5 = extremely). In addition, participants were asked to write down two words or phrases which best described their experience on that occasion.
* CBT and SR sessions were audio/video-recorded and transcribed.
* Video-assisted individual qualitative interviews with participants took place after the completion of the interventions.

(NB. A range of standard quantitative measures were also administered before and after the interventions to assess physical/ psychological changes.40,pp.18-20 As these data were incomplete, and - given the small sample size, inconclusive on analysis – these data and results have been omitted from this paper.)

**Data Analysis**

Data from the PANAS scores and the pain and emotion diaries were analysed statistically using SPSS.

Though the sample size is small, the data generated by ten participants providing twice-daily reports over six months is considerable, and sufficient to offer preliminary demonstration of perceptible trends. Of course, these are indicative merely and the findings can be offered as pilot evidence only, for scaling up in possible future studies. With regard to such future studies, the method described here models one means of capturing, as closely as possible: the real-time fluctuations in pain/emotion; their correlation with one another; and, as far as is discernible, their association with the respective interventions.

Selections of the video-recordings/transcriptions of the CBT and SR sessions were analysed by a team of linguistic, psychological and literary experts, employing methods (developed and piloted by CRILS) which ‘use language as the main point of access to … moments of subtle mental change and personal break-through, cognitive revaluation, interactive mind’. The method points to ‘how these mental processes are expressed through the participants’ own symptomatic use of language, through the linguistic traces’.41,p.262

Both sets of findings were cross-referenced with the audio-recorded/transcribed video-assisted interviews with participants.

**Ethics**

The project was approved by the Liverpool Central NHS Research Ethics Committee, and conducted on principles of good research governance in line with the ESRC Framework for Research Excellence and the BSA guidelines for the conduct of ethical research (ESRC, 2012; BSA 2002).

**RESULTS AND FINDINGS**

**Quantitative Results**

Pain and Emotion Diaries

The correlation between high scores for pain severity and low (negative) scores for emotion as shown using the Pearson correlation test was highly significant:

r = - 0.32, p < .001

(Threshold for significance is <.05)

As pain goes up, emotion goes down, hence the negative r value here.

The data were analysed to give the mean pain and emotion scores across the study (the ‘overall mean’: see Table 2 and Table 4). After coding for each time that a person attended the reading group, the following tests were carried out for three different points in the week: Sunday evening (two days before the group), Tuesday evening (after the group in the afternoon), and Thursday evening (two days after the group).

**Table 2.** Mean pain/emotion scores in relation to attendances at SR sessions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pain rating 0-10 |  | Emotion (+/- scale, 1-9) |  |
| Overall (24/7) | Mean: 6.00 | Valid N: 1665 | Mean: 3.96 | Valid N: 1573 |
| Sunday PM | Mean: 6.51 | Valid N: 81 | Mean: 4.07 | Valid N: 76 |
| Tuesday PM | Mean: 5.69 | Valid N: 78 | Mean: 4.69 | Valid N: 78 |
| Thursday PM | Mean: 6.31 | Valid N: 92 | Mean: 3.99 | Valid N: 84 |

Pain rating after the session is lower than the mean and lower than at two days before and two days after the reading group session (see Table 2). Pain rating two days after is also lower than two days before the reading group, suggesting the possibility of some prolonged effect, beyond the duration of the group itself. The emotion rating is also higher on the evening following the reading group than at two days before or two days after.

**Table 3.** Emotion words occurring within the pain diaries, **on Tuesday PM (after SR),** grouped roughly according to mood expressed (tired, happy, calm etc). (No = number of times.)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tired | 17 | Very tired; weary | 5 | Exhausted; worn out | 3 | Fatigue/  Fatigued | 2 | Shattered;  drained | 2 |
| Happy | 15 | Elated; delighted | 2 |  |  |  |  |  |  |
| Good; good day | 11 | Very well | 1 | Really good | 1 | Good mood | 1 |  |  |
| Relaxed (chilled; relaxing day) | 10 | Very relaxed | 1 | Calm; peaceful | 1 | Comfortable | 1 | Drowsy  (sleepy) | 1 |
| Irritable | 6 | Tense; on edge | 3 | Restless | 1 | Agitated | 1 |  |  |
| Focused (studying) | 4 | Alert | 1 | Determined (resolute) | 1 | Strong | 1 | Proud | 1 |
| Anxiety/Anxious | 3 | Stressed | 1 | Worried | 1 |  | 1 |  |  |
| In pain; painful | 2 | More pain; getting stronger | 2 | Pain bad | 1 | Unwell | 1 | Not good | 1 |
| Energised; energetic | 2 | Vibrant; Alive | 2 | Refreshed | 1 | Inspired | 1 | Excited | 1 |
| Content; thankful | 2 | Positive | 1 | Hopeful | 1 |  |  |  |  |
| Busy | 2 |  |  |  |  |  |  |  |  |
| Frustrated | 2 |  |  |  |  |  |  |  |  |
| Sore | 2 | Tingly | 1 |  |  |  |  |  |  |
| Okay | 2 | Not bad | 1 |  |  |  |  |  |  |
| Sad | 1 | Upset | 1 | Down | 1 |  |  |  |  |

Words used by participants to describe their emotions at 12-hour intervals were categorised as ‘positive’ and ‘negative’ to enable statistical analysis. 65 positive words were used on Tuesdays after SR (see Table 3). An analysis of the 65 words showed the mean score for pain at these times to be 4.46. Since this falls significantly below the overall mean of 6.00, the accompaniment of positive feeling by lower levels of pain accords with our general finding of the correlation between pain and emotion. It also correlates with the finding that pain scores were shown to be lower overall on the evening following attendance at the reading group, along with a higher degree of positive feeling.

However, there were a few occasions when the pain score given was significantly above average, and yet the positive emotion was still present (for example: ‘Happy’, Pain Score (PS) 8; ‘Energetic’, PS 8; ‘Good’, PS 7; ‘Focused’, PS 7; ‘Proud’, PS 8) suggesting that it is possible for SR to produce ‘good’ emotion even despite severe pain.

The same analyses in relation to the pain and emotion diaries for CBT show a different picture for the CBT sessions. Again, after coding for each time a person attended CBT, the following tests were carried out for three different points in the week: Saturday evening (two days before the CBT group), Monday evening (after the CBT group in the afternoon), and Thursday evening (two days after the group).

**Table 4.** Mean pain/emotion scores in relation to attendances at CBT sessions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Pain rating 0-10 |  | Emotion (+/- scale, 1-9) |  |
| Overall (24/7) | Mean: 6.00 | Valid N: 1665 | Mean 3.96 | Valid N: 1573 |
| Saturday PM | Mean: 7.55 | Valid N: 11 | Mean: 2.3 | Valid N: 10 |
| Monday PM | Mean: 7.59 | Valid N: 11 | Mean: 3.5 | Valid N: 10 |
| Wednesday PM | Mean: 7.59 | Valid N: 11 | Mean: 2.4 | Valid N: 10 |

**Table 5.** Emotion words occurring within the pain diaries, after attendance at a CBT session, on a **Monday PM.** (No = number of times.)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sore | 2 | In considerable pain | 1 |  |  |
| Anxious | 2 |  |  |  |  |
| Tired | 2 |  |  |  |  |
| Lowsy | 1 | Irritable | 1 | Down | 1 |
| Restless | 1 | Agitated | 1 |  |  |
| Interested | 1 | Alert | 1 |  |  |
| Relaxed | 1 |  |  |  |  |
| Happy | 1 |  |  |  |  |

The scores for CBT show a pain score above the mean and an emotion score below the mean (see Tables 4 and 5), although the emotion score is higher after the session than either two days before, or two days after. There is considerably less evidence here that CBT affected pain and emotion beyond the duration of the group.

PANAS (Positive and Negative Affect Scale)

The data were analysed to give the mean positive and negative PANAS scores (maximum score = 50 for positive affect, 50 for negative affect) for each of the CBT and SR sessions. The validity of the mean is increased for the later SR groups which had higher attendance levels, with the small number of participants in CBT having the least validity.

Positive emotions were more prevalent than negative emotions in both CBT and SR (see Figures 1 and 2) with one exception in the latter (see Figure 2, session 4). Although there does not appear to be any trend for the scores to alter over the time course of either group, there does appear to be a tendency for slightly higher positive PANAS scores and lower negative PANAS scores to occur in the SR group (see Figure 2). This result is consistent with the greater diversity of emotion expressed in the two words or phrases which participants recorded on the PANAS forms immediately following each SR session, as compared with those recorded immediately following CBT, even taking into account the larger number of SR sessions.

The two emotion words recorded following CBT tended strongly towards the cognitive (‘interesting’, ‘informative’, ‘educational’) where emotion words were narrow in range (‘relaxing’ was by far the most common word used).

In SR, emotion words showed greater range and intensity of feeling (‘inspired’, ‘exciting’, ‘uplifted’, ‘content’, ‘very enthusiastic’, ‘involved’, ‘love the group’) and were often related to the experience of pain (‘enjoyable and great distraction from pain’). This effect seemed to be reflected in positive ‘feeling’ words with a ‘physical’ emphasis - ‘energised’, ‘refreshed’, ‘awake’, ‘active’, ‘feel motivated’ – just as the distracting absorption is verified by a frequent cognitive language: ‘intrigued’, ‘attentive’ ‘concentration’, ‘thoughtful’, ‘reflective’, ‘alert’, ‘focussed’. Striking too were: (1) positive and negative words occurring together: ‘Feeling uplifted as we went on. Some sadness but feeling better, less pain’; ‘Happy; sad’; ‘Tired; thought-provoking’; ‘My emotions are sad a bit down but glad; mixed emotions’; (2) the occasional use of exclusively negative words from some participants (see Figure 2, Session 4, which saw relatively low scores for positive emotion and relatively high scores for negative emotion): ‘I found it quite sad’, ‘Sad; Feeling down’; ‘Sad; Depressed’. This expression of negative emotion coincided with stronger engagement in the group thereafter (see Personal Story below). The possibility that the expression of negative emotion contributed to the enhanced pain/emotion scores following SR cannot be discounted given the link between suppression of emotion and experience of pain.10,11

**Qualitative Findings**

Personal Story

A key linguistic finding was that the telling of personal stories was a strong feature of both CBT and SR, but with a marked difference in content.40,pp.27-37 In CBT, where participants were encouraged to talk freely about their experience, and where participants welcomed the validation and release from a sense of ‘loneliness’ which came with sharing their struggle, personal story related exclusively to the participants’ common health condition and its associated difficulties. The chronic pain theme was consistently maintained and there was no deviation, linguistic analysis concluded, finding also that story was prompted exclusively by the facilitator constructed as expert. The encouragement to ‘get things off one’s chest’, while demonstrably valuable, meant that personal narrative remained in the same emotional area throughout.

In SR, by contrast, there was a great diversity in the subject and the stories were triggered most commonly in response to the literary text, not prompted by the facilitator. Specific memories of work and its camaraderie were common and often remembered for the first time since giving up employment altogether. Participants were often struck at interview by the fact that stories came from a time when they were ‘fit and able to do things’, and particularly enjoyed how they were unexpected: ‘With pain, you are anticipating all the time,’ said A, ‘you’ve always got to plan. You can’t be spontaneous anymore, and I was always spontaneous.’ This surprise or unpredictability was related to the idiosyncratically personal relationship to the text. For example, the imagined death of Tiny Tim in Charles Dickens’s *A Christmas Carol,* and Bob Cratchit’s sorrow over ‘my little, little child’, prompted P to recall her mother’s repeated memory from childhood of the cot death of a sibling, H to contrast her experience of a loving with an unloving family funeral, T to consider the gains and losses of the Cratchits’ warmth and of Scrooge’s ‘low temperature’ personality, using examples from his workplace. At such times, P, H and T were not simply identifying with the character or finding literal correspondences to personal experience: rather, character was a means of practical thinking in relation to an issue in their own lives or memories.

On occasion, thinking across from fiction to life and back again elicited personal material which was visibly emotionally upsetting for participants, and had a negative effect on the participants’ feeling about the story or poem, and the SR session as a whole. Reading Elizabeth Bowen’s short story, ‘The Visitor’ – where a young boy awaits news that his mother has died – J recalled the moment she had told her son of his grandfather’s death and became upset, saying ‘I can honestly say that’s the only story I haven’t enjoyed’. Her PANAS score for the session reflected this experience with negative emotions receiving unusually high scores (see Figure 2, Session 4.) At interview, however, both J and the SR facilitator recognised from the video evidence that there had been a notable increase in J’s involvement in the group thereafter, as though ‘the release of the “bad stuff”’ was a breakthrough of kinds, “breaking the ice”’, said the facilitator. At interview, J said: ‘It’s strange. It took something like that - the story – to bring that memory out of me. Sometimes even the upset does you good. To let that emotion out - it brings something on’. For T, too,even ‘old’ stories felt like new experiences, freshly and involuntarily triggered by the literature:‘Sometimes it is just a word or a sentence. It’s funny, we must carry all these things around with us, all these stories, and it just needs a word to bring it forward doesn’t it?’

Participants commonly remarked that, in SR, they shared personal matter not spoken of before in therapeutic/counselling sessions, or socially, with friends or family, a novelty reflected in participants’ language at interview – ‘It’s strange’, ‘It’s funny’. The personal story elicited in SR is distinctive not only from CBT, it seems, but from other available forms of personally expressive discourse.

Change

In SR, participants were more engaged with the idea or possibility of change, and more responsive to attitudinal shift than in CBT.40, pp.37-43 Indeed, in CBT, discourse in this area was strongly characterised by the negative changes which the onset of pain had produced:

SH: I’m defined now by my pain; I am not who I was before my pain.

SY: People say to me, I’m not the same. I was very outgoing; now my friends and family think I’m not me anymore.

A: People remember me for what I used to be able to do.

In addition to the strong sense of a reduced or diminished life - ‘of every tiny little thing being taken away’ – there was expressed awareness of stasis, both literal/physical and psychological:

SH: It’s the inactivity … social and physical … you just stay in one place.

This powerful sense of subtraction meant that openness to change tended to be very low in CBT:

Consultant AW: How do you feel about acceptance?

SH: You mean accepting that this is how it is and I’ve got to live my life with it?

SY/SH: (almost in unison): I’m not anywhere near that, no.

SH: On a scale of 1-10 I’m probably at minus 10.

Participant SY: Me too.

By contrast, animated appetite in relation to change was a feature of SH’s response to Elizabeth Jennings’ poem, ‘Resemblances’, five weeks into the SR group:

Always I look for some reminding feature,

Compel a likeness where there is not one …

And doing this, so often have I missed

Some recognition never known before,

Some knowledge which I never could have guessed.42

SH: ‘Compelling a likeness.’ Is it talking about just looking for normality? You just want something that’s familiar. It’s like saying, *that’s* [pointing] like *that*, making it fit what’s known already. But it’s also saying, If you just go for the familiar, what about the new and exciting: you miss a lot.

Where, in CBT, SH’s formulations were characteristically negative as well as expressive of matter that was certain and familiar - ‘I am not who I was before my pain’; ‘I don’t do anything … anymore …. I can’t even speak about it anymore’ - SH’s tone and syntax here is one of energetic questioning and grappling with what is ‘exciting’ in seeing afresh, changing one’s vision. More, SH uses ‘you’ where ‘I’ was normal in CBT. ‘Generic/impersonal “you”,’ linguistic analysis suggests, is a sign that ‘something specific from the text world is transferred to the real world in the form of a generic claim’ thus signalling ‘a change of perspectivisation’.43,p.10 These deictic markers indicate a shift from SH’s default attitude – staying with the habitual and familiar, ‘what’s known already’- toward an engagement with something beyond ‘likeness’ and safe normality, something ‘new’ or ‘never known before’.

This intuitive responsiveness to the possibility of change was evident when P was reading of Scrooge’s vision of his own deathbed at the close of *A Christmas Carol* where he wills a reversal of his fate - ‘Assure me that I may yet change these shadows you have shown me by an altered life?’44

Isn’t this sort of like someone writing a story, and reading over what they’ve put in the story and then – [energetically] they go back and – and alter it. The phantom is showing that the future can be changed if it wants to change.

‘And *alter* it’ is a message new-fired, triggered by the text’s ‘change these shadows … by an altered life’. Consultants AW and JM saw the potential for those ‘new messages’ to be both more frequent and more galvanically vital in SR, because the very premises upon which CBT is built - that one can learn to adapt to new circumstances by shifts in perception – are not imposed upon participants but discovered inwardly and personally*.*

Consultant JM: They find what they need to know in their own way, as if it is coming from themselves individually not from outside.

This example points to one key difference between CBT and SR: SR begins to make a change in the reader precisely by not demanding one (except from Scrooge). The *story,* that is, achieves CBT’s ambition of putting the same person in a different place.

(Good) Thoughts About (Bad) Feelings

Combating negative feelings is especially important in relation to chronic pain, where fear and anxiety recreate the pain as in a vicious circle.45 This is one strong reason for employing CBT’s mind over matter approach - overcoming negative emotions by recognizing them.

Consultant JM: Fear, anxiety, low mood, anyone get angry? anyone get frustrated?

SH. A definite 10 out of 10. I feel I’m letting my child down. He’d love to go to the zoo, and I won’t walk round a zoo.

Consultant JM: It sounds as though you’re feeling guilty.

SH: There’s a lot of guilt there, yes.

Feelings which might otherwise be suffered amorphously as ‘pain’ - frustration, anger, fear, guilt, anxiety - were explicitly named and identified in CBT. Notably the names were exclusively supplied by the facilitator.

In SR, by contrast, the ‘naming’ was performed principally by the text.40,pp.43-58, 63-78 Laurie Sheck’s ‘Mysteriously Standing’, for example, unfolded inner pain into articulacy for some participants, in its description of ‘intervals of withdrawal where I am a burned field… little Stonehenge of the heart’:

T: ‘little Stonehenge’ – it’s like a kind of a feeling that’s been there for a long long time.

K: ‘a burned field’ – that’s a really really *really* good way of describing yourself sometimes isn’t it?

K’s ‘really really *really* good’ – in its vivacity of tone and thought, and emphatic use of repetition – is notably separate from the suffering she recognizes and feels at another level. This gives to her, a ‘good’ thought (at once energetically vital and cognitively tolerable) *about* her own bad feelings – a thought which seems more descriptively accurate than she could have managed for herself, yet which does not feel imposed from without. In the same discussion, H pointed out the ‘strange placing’ of the words when she read the poem out loud:

Mysteriously standing, its distinct construction odd and uninjured in this yellow

Light. If I say I was flexible, was harmed, was cleansed, was helped, was deeply marked,

I still can’t understand what I have been.46

H: I thought that was strange how ‘Light’ kind of went across the line, the yellow light. It’s like the light’s separate from the withdrawal isn’t it. It does really separate the two – it comes after.

This is an explicit example of how poetry – in its ‘strange’ lineation and placing - disrupts conventional or habitual thought patterns, making these ‘strange’ or newly-perceived too.

H: I was having difficulty with ‘flexible’. If you’re deeply marked and you’re down, how can you be flexible? But you can be in your mind. And if you’ve withdrawn to rebuild, not just kept going but stepped back, that’s a flexibility of thought. You’ve flexed your way of thinking, you’ve flexed your outlook.

For the CBT facilitator, this was a critical example for demonstrating how SR can help achieve the shift out of default mind-sets which CBT is seeking.

Consultant JM: Some of the things we spend hours trying to ‘teach’ in CBT come out here. They’re more convincing learnt this way because the patients get there on their own.

Private Spaces

CBT covered means of distracting from the pain via formal instruction in relaxation technique delivered by an Occupational Therapist. Notable in SR was how distraction or relaxation happened without ever being offered, as in CBT, as a specific learning task.40, pp.58-63 So, in participants’ response to W. B. Yeats’s ‘The Lake Isle of Innisfree’:

I will arise and go now, for always night and day

I hear lake water lapping with low sounds by the shore;

While I stand on the roadway, or on the pavements grey,

I hear it in the deep heart’s core.47, p.69

H: I don’t think he’s physically going.

K: I think it’s internal.

H: It’s like you go to your happy place.

T: It could be like a form of meditation like when you go into yourself. Not really aware of anything around you. That could be why this group is good.

H: I think there’s a big difference between us at the end and at the beginning of the group each week.

All participants reported feeling more relaxed and getting a better night’s sleep after the reading group on a Tuesday (a finding corroborated by quantitative evidence – see Tables 2 and 3). T, like many participants, spoke at interview of the ‘uplift’ he feels after attending SR:

From a poem or story you get these pictures in your mind sometimes that you wouldn’t normally get. You can sort of take them away… if you try to relax or when you go to bed of a night-time, you can have that picture in your mind that you got from the poem or story. What you have tried to absorb can come out later or help you as a distraction from all these things spinning round in your mind that you want to get rid of.

This observation might in part explain the prolonged effect of SR on mood and pain (see Tables 2 and 3). But we surmise that the experience of increased relaxation attendant upon SR proceeds at once from what is ‘taken away’ from the session as a deposit in the mind, and from the greater opportunity and capacity for yielding emotional expression,8 both positive and negative, in relation to the literature during the session itself.

Finding A Language

We have seen the tendency of CBT’s ‘didactic’ approach to impose a vocabulary of feeling, where in SR a personally meaningful language of emotion is felt or realized via the text, through participants’ immersion in the vital, individual experience of the protagonist or poem.40,pp.63-78 Significant contrasts were felt at the level of syntax also. In CBT, negative formulations – ‘I can’t’, ‘I don’t’, ‘I haven’t’ – were a characteristic symptom of an overall language of lack. In SR, by contrast, they were often a sign of subtle and nuanced understanding. So with H’s response to Rainer Maria Rilke’s ‘Evening’:

Watcher, from you there is a parting of the lands

And one climbs heavenwards and one descends

Leaving you not belonging quite to either

Not quite so dark as the mute house is

Not quite so surely conjuring the eternal

As what becomes a star each night and rises47, p.30

H: ‘It’s about everything that isn’t. There’s everything you can be and there’s everything that you’re not, and they’re both there at the same time. That’s why it’s called “Evening”, not “Night”.

H likened the scene of the poem to the time just before sunrise when she most likes to walk, ‘getting up before the world’.

‘It’s a space between dark and light - my brain-space. I get that from reading too.’

This is a clue to how H’s intelligently creative use of a negative syntax - ‘It’s about everything that *isn’t*’ – might be much more than a technical matter. What really generates this syntax, perhaps, is the inhabiting, in reading, of an alternative ‘brain-space’, as H calls it - a dimension of thought between ordinary fixities.

The qualitative evidence, moreover, is that a new dimension can powerfully and valuably exist or be summoned in SR without its being, or needing to be, explicitly articulated. T read this passage from Elizabeth Bowen’s ‘The Visitor’, where the boy who is waiting to know of his mother’s death hears a large clock ‘tick out’:

Sixty of these ticks went to make a minute, neither more nor less than sixty, and the hands of the clock would be pointing to an hour and a minute when they came to tell Roger what he was expecting to hear. Round and round they were moving, waiting for that hour to come.48

T: I used to look at the clock when I was a child and try to will the second hand to stop. [Laughs quietly]

Facilitator K: Why, was that because of something you didn’t want to happen?

T: Yes [rubs his face and looks down, no longer smiling]

The silence around T’s ‘Yes’ was palpably full of something too amorphously big to be fitted into words. Where CBT’s emphasis is mind over matter, here the opposite happens. Something subterranean, some residuum of experience seems unconsciously to seek, in these few brief seconds, a form of realization. Seeing this moment at interview, T related his response to the child’s helplessness within the story, to his personal experience of a prolonged period of abuse when he was a child: ‘I didn’t really want to know what was happening to me … Everything was a secret … The pain is still there, locked away inside’. The trauma which T could not bear to face in childhood remains unpurged in adulthood: a hidden, ‘secret’ thing.49-51 What T values about the reading group is that he can express some of what is normally ‘locked away’:

The reading is helping me, and I am actually having a go, to make sense of things. Just to see that there are feelings in the words the way they should be brought out. It helps things, certain things, to stay in my mind whereas otherwise they would be just lost, completely lost forever. Things can be lost forever. So you become incapacitated with this.

If T’s ‘Yes’ signified the sudden retrieval of deep personal matter which demanded expression in order not to be merely hidden, lost or forgotten, his testimony also shows how the literary text’s explicit, pre-formed articulation - ‘*Just to see that there are feelings in the words the way they should be brought out’ -* might sometimes be sufficiently expressive in itself. For at no point is the ‘help’ which T finds in reading confessionally exposing or explicit. Nobody knows why this text resonates personally for T, not even the facilitator. This is what we might call *implicit* therapy,31 doing its own work hiddenly in the moment of reading. Perhaps a very great deal of what happens in SR must remain thus hidden from view. Perhaps that is also part of its special power.

Certainly, as the participant testimony excerpted below demonstrates, it is SR’s distinction from conventional therapies which participants most valued.

*‘Not a therapist’*

In respect of SR, linguistic analysis concluded that it was the text which initiated discussion and triggered contributions, as distinct from the facilitator doing so in CBT. This phenomenon of the book taking on the expert-facilitator’s role - even as the facilitator’s role in SR is to enable the book to do just that - is the main feature which distinguishes the SR group-leader from the conventional role of the therapist in the view of participants.40, pp.78-81

When you read something or say something there’s no return to the therapist. There’s no why, what, when, where, who - ‘Well why don’t you’, ‘how did you feel’, ‘why did you do that’. There is just, in this moment, I feel this and I am thinking about this. This relates to my life at this point.

[Facilitator K] listens but she doesn’t – therapise isn’t a word is it? But you don’t get sort of a grilling, you don’t get told what to do next time but you are given time to explore whatever you are getting through at that time. You are not *asked* to relate personally to it: you just do.

The return to the book in SR, as opposed to the ‘return to the therapist’ allows a personal relation which is entirely voluntary and discovered by the participant at their own pace and in their own time, rather than programmatically. Where the structure of CBT renders turn-taking allocation highly predictable, corresponding with the institutionalised nature of this kind of treatment, SR, by contrast, does not restrict or limit participants’ contributions in the same way, given that the book allows for multiple interpretations and involvement to develop.

*The Group*

Linguistic analysis found more construction of in-groupness between participants in CBT (through agreement, repetitions and collaborative overlaps) compared to SR where there was not much agreement or collaborative overlap between participants. This finding only appears to be at odds with participant emphasis on the intimacy of the SR group as compared to CBT:40,pp.82-4

‘We’re not a group, we’re a little team you know.’

‘A bit like we are brothers and sisters maybe.’

‘I feel like I am part of a little family.’

‘We’re a little community, a little serious community.’

‘It’s quite telepathic really.’

Community in SR developed more implicitly, it seems, beneath the explicit linguistic markers of collaborative ‘in-groupness’. Participants called it ‘an unspoken bond’:

Sometimes in SR we are all talking at once, but we are all hearing what everybody has to say. No one is dominating. It’s a bit like an opera. The parts will all be singing at the same time, and you have a baritone solo over there and the tenor will come in and they are all singing their own part, like in counterpoint harmony. It’s incredible really; it is quite unique.

Consultants JM and AW were struck by the same phenomenon in SR:

Consultant JM: They’re all coming at things from a different angle. The thought processes aren’t identical, the language isn’t identical. They’re saying different things and thinking different things – they have individual impressions and they’re finding their own way. But it feels like it’s all coming together. There’s a clear bonding. A kind of mood. I suppose they’re all in the same place in a way, emotionally, because of the book.

Consultant AW: It’s really dynamic isn’t it? And yet sometimes you can see the dialogue is almost in the same rhythm as the poem isn’t it? Their minds are operating along the same lines as the poetry.

Participants themselves were especially aware of how the vocal presence of the literature when read aloud was a stimulus to mood and atmosphere as well as thought and feeling:40,pp.79-81

‘It seems to resonate.’

‘I’m reading along and already thinking and feeling the poem as she reads.’

‘Things become more 3D and more alive.’

‘You can feel it deep inside.’

‘It creates a stillness and peace in the room.’

The diversity and heterogeneity which distinguishes SR from CBT, is at once enabled and held together, it seems, by the emotional resonance or syntax of the literary work, on the one hand, and the phenomenon of group sharing on the other. The degree to which SR creates an emotionally sharing community which privileges the expression of individuality over that of group identity – the possibility that, in being part of an SR group, people become more themselves - is one area of strong potential for future research.

**DISCUSSION**

Our preliminary hypothesis was that CBT would show evidence of participants 'managing' emotions by means of systematic techniques, where SR would turn passive experience of suffering emotion into articulate contemplation of painful concerns.

This hypothesis was substantially borne out by both quantitative and qualitative evidence, which demonstrated that a far greater *range* of emotional expression occurred in SR than in CBT. In CBT, there was a strong emphasis on a sense of diminishment or subtraction – things ‘taken away’ by chronic pain. In SR, there was frequently a renewed sense of energy and vitality, often in rediscovery, via the new stimulus of the literary text, of what participants still *did* have. Where in CBT, participants focused exclusively on their pain, in SR the literature was a trigger to recall and expression of diverse life experiences – of work, childhood, family members, relationships - related to the entire life-span, not merely the time-period affected by pain. This in itself had a potentially therapeutic effect in helping to recover a whole person, not just an ill one. As one consultant put it, ‘*When people are in CBT, they are people with pain. When they’re in the reading group, they’re people with lives.’*

Moreover, the experiences elicited in SR were not ‘familiar’ to participants in the way the pain narratives offered in CBT often were. The processes of CBT seek to help participants to challenge and overcome negative thoughts through positive thinking. In SR, by contrast, the fiction and poetry was frequently a stimulus to forgotten, buried or inarticulate pain (emotional and psychological). The extended range of emotion expressed or experienced in SR also meant that a greater depth of ‘negative’ emotion was in evidence here than in CBT. It was notable how even difficult emotional material was experienced as a ‘distraction’ from physical pain - as though the more the forgotten pain returned, the more the familiar pain receded into the background. In such ways, the binary distinction between negative and positive emotion was not so marked in SR as in CBT, offering another clue to the richer experiential field offered by encounter with the literature.

Usually, moreover, the distress or upset was leavened by a cognitive capacity or discovery – a new thought or perspective – discovered from within the difficult emotion, rather than from outside or above it. Rather than adopting CBT’s more top-down strategy of mind over matter, this is a process of drawing into explicitness inarticulate, implicit pain. Reading fiction and poetry encourages thinking ‘about’ human situations from an imaginative position inside them: asking vicariously why a person says, does, feels this, is one way reading literature can encourage familiar thoughts and feelings to be regarded in a new way. This process helps to achieve one of CBT’s own principal aims of helping pain sufferers to shift their perception in relation to a physical condition which is in itself unchangeable or incurable.

Indeed, one critical ‘self-help tool’ offered by SR was an extended repertoire of models for thinking about experience – models which were powerful for participants because they were not ‘flat’ exemplars for living (step by step how to’s or bullet point strategies), but dynamically rich and complex. One key benefit for participants was that characters in fiction, or voices in poetry, offered difficult experience which could not be readily resolved or ‘reasoned with’. Personal trouble seemed more normally human than a sign of something wrong or of being ill.

SR’s tendency to ‘find’ pain at its personal-emotional source – as an involuntary rather than intended outcome – allowed sufferers to come for themselves, and in their own time, to the kind of realizations which CBT more programmatically demanded of them. SR, that is to say, showed sensitivity to personal readiness for change.

Finally, the diversity of emotion elicited by SR was indicated across all levels of the study (from quantitative measures of positive/negative affect to qualitative linguistic and literary analysis of video-recorded sessions and transcribed interviews) by the variations and change in language use as compared with CBT. The latter’s categorical naming of emotion, while helpful in acknowledging emotion, also risked (like the word ‘pain’ itself) restricting or misrepresenting the subjective richness and individuality of the experience, as well as impoverishing a pain sufferer’s means of expression. SR produced a much wider range of vocabulary in relation to emotion, and ways of thinking and speaking which were creatively new or uncharacteristic of default speech patterns. This is possibly an external manifestation of SR’s potential to galvanise new messages or produce a form of mental rewiring - a significant consideration in a condition which is in part sustained by the over-rigidity of nervous impulses or mental pathways.

The qualitative findings, together with the pilot quantitative evidence showing improvements in mood/pain for up to 1-2 days following SR, indicates SR’s strong potential as an alternative, adjunct and/or longer-term follow-up to CBT for chronic pain sufferers.

**Limitations**

The small sample size requires that quantitative findings are presented tentatively, to be considered alongside the qualitative analysis. Future studies, involving a larger sample size, might usefully investigate the impact upon response to SR of the duration for which participants have suffered pain, as well comparing other kinds of shared material - visual (photographs, paintings) or written (newspaper articles in place of fiction and poetry) - to consider how far the effect of SR proceeds from the shift away from self onto an external object, and how far from the effect of the literature per se.

**Competing interests**

None

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**Contributors**

JB conceived the study and submitted the proposal for funding and ethics approval. GF and JL collected data. JB, GF and SL analysed qualitative elements of the study. GF, JL, A-LH, AJ, JL designed and analysed quantitative elements of the study. All authors contributed to the report on which this article is based. JB wrote the latter, with critical amendments made to subsequent drafts by all contributors. All authors approve the final version.

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**REFERENCES**

1.Harstall C, Ospina M. How Prevalent Is Chronic Pain? *Pain Clinical Updates, International Association for the Study of Pain* 2003; **11**:1–4.

2.Lumley MA, Cohen JL, Borszcz1 GS, Cano A, Radcliffe AM, Porter LS, Schubiner H, Keefe FJ. Pain and Emotion: A Biopsychosocial Review of Recent Research. *J Clin Psychol* 2011; **67**:942–968.

3.Breivik H, Collett B, Ventafridda V, Cohen R, Gallacher D. Survey of chronic pain in Europe: Prevalence, impact on daily life, and treatment. *Eur J Pain* 2006; **10**:287-333.

4.Mersky H, Bogduk N. Classification of chronic pain: Descriptions of chronic pain syndromes and definitions of pain terms. Second Edition. Seattle: IASP Press 1994.

5.Kender RG, Harte SE, Munn EM, Borszcz GS. Affective analgesia following muscarinic activation of the ventral tegmental area in rats. *J Pain* 2008; **9**:597–605.

6.Zubieta JK, Stohler CS. Neurobiological mechanism of placebo responses. *Ann N Y Acad Sci* 2009; **1156**:198–210.

7.Baliki MN, Geha PY, Fields HL, Apkarian AV. Predicting value of pain and analgesia: nucleus accumbens response to noxious stimuli changes in the presence of chronic pain. *Neuron* 2010; **66**:149–160.

8.Lumley MA, Neely LC, Burger AJ. The assessment of alexithymia in medical settings: Implications for understanding and treating health problems.  *J Pers Assess* 2007; **89**:230–246.

9.Burns JW, Holly A, Quartana P, Wolff B, Gray E, Bruehl S. Trait anger management style moderates effects of actual (“state”) anger regulation on symptom-specific reactivity and recovery among chronic low back pain patients. *Psychosom Med* 2008; **70**:898–905.

10.Carson JW, Keefe FJ, Lowrey KP, Porter LS, Goli V, Fras AM. Conflict about expressing emotions and chronic low back pain: Associations with pain and anger. *J Pain* 2007; **8**:405–411.

11.van Middendorp H, Lumley MA, Moerbeek J, Jacobs JW, Bijlsma JW, Geenen R. Effects of anger and anger regulation styles on pain in daily life of women with fibromyalgia: A diary study. *Eur J* ***Pain***2010; **14**:176–182.

12. Raphael KG, Widom CS. Post-traumatic stress disorder moderates the relation between documented childhood victimization and pain 30 years later. *Pain* 2011; **152**:163–169.

13.Van Damme S, Crombez G, Bijttebier P, Goubert L, Van McCracken LM, Gauntlett-Gilbert J, Vowles KE. The role of mindfulness in a contextual cognitive-behavioural analysis of chronic pain-related suffering and disability. *Pain* 2007; **131**:63–9.

14.Williams AC, McCracken L. Cognitive-behavioral therapy for chronic pain: an overview with specific reference to fear and avoidance. In: Asmundson GJ, Vlaeyen JW, Crombez G, eds. Understanding and Treating Fear of Pain. Oxford: Oxford University Press 2004:293–312.

15.Schütze R, Rees C, Preece M, Schütze M. Low mindfulness predicts pain catastrophizing in a fear-avoidance model of chronic pain. *Pain* 2010; **148**:120–127.

16.Morley SJ. Efficacy and effectiveness of cognitive behaviour therapy for chronic pain: progress and some challenges. *Pain* 2011; 152:S99-S106.

17.Sveinsdottir V, Eriksen HR, Endresen, Reme SR. Assessing the role of cognitive behavioural therapy in managing chronic nonspecific back pain. *J Pain Res* 2012; 5: 371–380.

18.Williams ACDC, Eccleston C, Morley S. Psychological therapies for the management of chronic pain (excluding headache) in adults.  *Cochrane Database Syst Rev* 2012; 11:CD007407.

19.Fullen BM, Blake C, Horan S, Kelley V, Spencer O, Power C.K. Ulysses: the effectiveness of a multidisciplinary cognitive behavioural pain management programme-an 8-year review. *Ir J Med Sci* 2014; **183**:265-75.

20.Davis, J. (2009). Enjoying and enduring: groups reading aloud for wellbeing. *Lancet* 2009; **373**:714 – 715.

21.Hodge S, Robinson J, Davis P. Reading between the lines: the experiences of taking part in a community reading project.  *Med Humanit* 2007; **33**:100-104.

22.Billington J, Sperlinger T. Where Does Literary Study Happen? *Teaching in Higher Education, Special Issue, Leaving the Academy* 2011; **16**: 505-16.

23.Robinson J. *Reading and Talking: Exploring the Experience of Taking Part in Reading Groups in Walton Neuro-Rehabilitation Unit*. Liverpool: HaCCRU Research Report 114/08 2008.

24.Robinson J. *Reading and Talking: Exploring the Experience of Taking Part in Reading Groups at the Vauxhall Health Care Centre*. Liverpool: HaCCRU Research Report 115/08 2008.

25.Billington J, Dowrick C, Hamer A et al. *An Investigation into the Therapeutic Benefits of Reading in Relation to Depression and Well-being*. Liverpool: Liverpool Health Inequalities Research (LivHIR Institute), University of Liverpool 2011.

26.Dowrick C, Billington J, Robinson J, Hamer A, Williams C. Get into Reading as an intervention for common mental health problems: exploring catalysts for change. *Med Humanit* 2012; **38**:15-20.

27.Billington J, Carroll J, Davis P, Healey C, Kinderman P. A Literature-Based Intervention for Older People Living with Dementia. *Perspect Public Health: Special Issue, Arts and Health* 2013; **133**:165-73.

28.Billington, J. Reading for Life: Prison Reading Groups in Practice and Theory. *Critical Survey* 2012; **23**:67-85.

29.Billington J, Davis P, and Farrington G. Reading as participatory art: An alternative mental health therapy. *Journal of Arts & Community* 2014; **5**:25-40.

30.Gray E, Kiemle G, Billington J, Davis, P. An Interpretative Phenomenological Analysis of the Experience of Being in a Reader Group. *Arts & Health* 2016. Published Online First: 31 Dec 2015. doi:10.1080/17533015.2015.1121883

31.Longden E, Davis P, Billington J, Corcoran R. Shared Reading: Assessing the intrinsic value of a literature-based intervention. *Med Humanit* 2015; **41**:113-20.

32.Davis P, Thierry G, Martin CD, Gonzalez-Diaz V, Rezaie R, Roberts N. Event-related potential characterisation of the Shakespearean functional shift in narrative sentence structure. *NeuroImage* 2008; **40**:923-931.

33.Davis P, Keidel J, Gonzalez-Diaz V, Martin C, Thierry G. How Shakespeare tempests the brain: neuroimaging insights. *Cortex* 2012; **48**:21-64.

34.O’Sullivan N, Davis P, Billington J, Gonzalez-Diaz V, Corcoran R. Shall I compare thee: The neural basis of literary awareness, and its benefits to cognition. *Cortex* 2015; **73**:144-57.

35. Henry DE, Chiodo AE, Yang, W. Central nervous system reorganization in a variety of chronic pain states: a review. *PM R* 2011; **3**:1116-25.

36.Billington J, Humphreys AL, Jones A, McDonnell K. A literature-based intervention for people with chronic pain. Liverpool: Centre for Research into Reading, Literature and Society (CRILS), University of Liverpool, 2014.

37.Billington J, Humphreys AL, Jones A, McDonnell K. A literature-based intervention for people with chronic pain. *Arts & Health* 2014; **8**:13-31.

38.Evans, J. Philosophy for Life and Other Dangerous Situations.London: Ebury 2012.

39.Fillingim RB, King CD, Ribeiro-Dasilva MC, Rahim-Williams B, Riley JL. Sex, Gender, and Pain: A Review of Recent Clinical and Experimental Findings. *J Pain* 2009; **10**: 447-485.

40.Billington J, Farrington G, Lampropoulou S, Lingwood J, McDonnell K, Jones A, Ledson J, Humphreys A-L, Duirs N, Holloway C, Smart B. A Comparative Study of Cognitive Behavioural Therapy and Shared Reading for Chronic Pain. Liverpool: Centre for Research into Reading, Literature and Society (CRILS), University of Liverpool, 2016.

41.Kaszynska P. Capturing the vanishing point: Subjective experiences and cultural value. *Cultural Trends* 2015; **24**:256-266.

42. Jennings, E. Collected Poems. Manchester: Carcanet Press 2012.

43.Davis P, Billington J, Corcoran R, et al. Assessing the intrinsic value, and health and well-being benefits, for individual and community, of The Reader Organisation's Volunteer Reader Scheme.London: Art and Humanities Research Council 2014.

44.Dickens, C. A Christmas Carol. Harmondsworth: Penguin Books Ltd. 2003.

45.Ericsson M, Poston WS, Linder J, Taylor JE, Haddock CK, Foreyt JP. Depression predicts disability in long-term chronic pain patients. *Disabil Rehabil* 2002; **24**:334–340.

46.Sheck, L. Captivity. New York: Alfred A. Knopf 2007.

47.The Reader, Poems to Take Home. Liverpool: The Reader 2010.

48.Bowen, E. Collected Stories. London: Vintage 1999.

49.Davis DA, Luecken LJ, Zautra AJ. Are reports of childhood abuse related to the experience of chronic pain in adulthood? A meta-analytic review of the literature.  *Clin J Pain* 2005; **21**:398–405.

50.Ringel Y, Drossman DA, Leserman JL, Suyenobu BY, Wilber K, Lin W, Mayer EA. Effect of abuse history on pain reports and brain responses to aversive visceral stimulation: An FMRI study. *Gastroenterology* 2008; **134**:396–404.

51.Raphael KG, Widom CS. Post-traumatic stress disorder moderates the relation between documented childhood victimization and pain 30 years later. *Pain* 2011; **152**:163–169.

**Figure 1** CBT PANAS Scores

**Dark = Positive Affect Scores re Positive and Negative Affect Scale (PANAS)**

**Light = Negative Affect Scores re Positive and Negative Affect Scale (PANAS)**

**Figure 2.** SR PANAS Scores (\*CBT participants joined the SR group at Week 7)

**Dark = Positive Affect Scores re Positive and Negative Affect Scale (PANAS)**

**Light = Negative Affect Scores re Positive and Negative Affect Scale (PANAS)**