Do metaphors have therapeutic value for people in pain?
A Systematic Review

Mike Stewart
MCSP SRP MSc PG Cert (Clin Ed)
University of Brighton
School of Health Sciences
Faculty of Health and Social Science
49 Darley Rd, Eastbourne
United Kingdom
BN20 7UR
Email: mike@knowpain.co.uk
Twitter: @knowpainmike

Sarah-Jane Ryan
MSc BSc (Hons) FHEA HCPC MCSP
University of Brighton
School of Health Sciences
Faculty of Health and Social Science
49 Darley Rd, Eastbourne
United Kingdom
BN20 7UR
Email: s.j.ryan@brighton.ac.uk
Twitter: @sjryan15

Abstract

Objectives: This paper aims to review the evidence for the potential

therapeutic use of metaphors within pain management, to explore current

treatment approaches, and to guide future research.

Introduction: Communication is a fundamental component of healthcare.

However, the profoundly complex and idiosyncratic nature of pain

experiences often leaves people in pain with varied communication

challenges. Metaphors can enable us to link the abstract to what is already

known. People use metaphors when attempting to convey perceptual experiences that are resistant to expression. Pain is one such experience. Although, whilst some metaphors are explicit in their execution, others remain characteristically concealed and many clinicians remain unaware of both the power of language and how best to use metaphors within clinical practice. A longstanding and on-going debate exists regarding the use of metaphors within pain management. Much of this debate is opinion based and no systematic reviews have been conducted to explore if metaphors may have therapeutic value for people in pain. The aim of this review is to explore the evidence for the use of metaphors within pain management.

Method: A systematic review of qualitative studies relating to metaphor use within pain management was carried out. Meta-ethnography was used as an in-depth approach to synthesize qualitative research.

Main outcome measures: Critical Appraisal Skills Programme (CASP) checklist for qualitative research quality assessment (2006).

Results: Six studies were included in this review with four emerging themes regarding the therapeutic value of metaphors for people in pain. These were *expression, connection, understanding and control*. However, methodological quality varied and a lack of discussion was found across the studies.

Conclusion: Metaphors may provide people in pain with therapeutic value. Whilst the findings of this review are promising, caution is required when applying metaphors within clinical practice. The findings of this review add a

necessary element of rigour to a longstanding debate that is largely based on opinion and speculation. Further research is needed to explore how metaphors can be best applied within practice settings.

Acknowledgements

Introduction & Literature Review

Living with pain can be a distressing and isolating experience (Eccleston and Crombez, 2007: Linton, 2005). Pain is a simple four-letter word that can belie a myriad of subjective human beliefs and emotions. Far from the uncomplicated, cathartic expression of 'Ouch!' that is commonly associated with an experience of pain, the distress that frequently accompanies persistent pain can be characteristically wrapped within feelings of depression, anxiety, isolation, uncertainty and, chaos (Bullington et al, 2003: Linton, 2005). From this chaotic blend of emotions comes a desire to seek meaning (Bullington et al, 2003).

In the absence of meaning, and with pain's elusive resistance to expression (Biro, 2010), much has been written about the role of metaphors within pain science (Bourke, 2014: Loftus, 2011: Stewart, 2015). Metaphorical thinking is an essential part of how we communicate, learn, discover and create meaning (Loftus, 2011). Lakoff & Johnson (1980) argue that metaphors are a fundamental part of human expression. A metaphor is something relatively more concrete or conceivable, but which stands for something more elusive. The word metaphor originates from the Greek words 'meta' (to transfer) & 'pherin' (to carry beyond). Geary (2011) suggests that metaphors follow a simple equation of X=Y. Metaphors are used throughout healthcare literature to transfer abstract pain science (X) into shared meaning (Y) (Louw and Puentedura, 2013; Moseley, 2007). However, despite a longstanding debate regarding the use of metaphors within healthcare, our understanding of their application and therapeutic value remains unclear.

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Shinebourne & Smith (2010) suggest metaphors offer a linguistic 'safe bridge' through which people in pain express emotions that are too distressing to communicate literally. Darlow et al (2015) conducted semi-structured interviews with people in pain to explore their attitudes and beliefs about low back pain (LBP). Throughout the study, the participants used metaphoric expressions as safe bridges with one person figuratively describing her experience as follows,

> "I couldn't sit, I couldn't stand, I couldn't bend, I was frozen in one place." (Darlow et al, 2015, p.846).

If, as empathetic facilitators, we are unable to detect when people in pain are attempting to cross such safe bridges through metaphoric expression, we risk squandering opportunities for therapeutic rapport, thus potentially hindering a meaningful reconceptualisation of pain (Stewart, 2014).

Biro (2010, p.75) suggests pain is, "an all consuming interior experience that threatens to destroy everything except itself and can only be described through metaphor." All pain demands an explanation. The challenge facing many clinicians is how best to explain our current scientifically informed understanding of pain in a non-formulaic way that mirrors individual lived experiences.

When seeking meaning for the worrying and baffling experience of pain, patients frequently resort to metaphoric expressions (Darlow et al, 2015; Stewart, 2015). Throughout the literature, collaborative methods of metaphoric expression are occasionally discussed, but rarely studied (Breslin,

1996, Gaydos, 2004). In a recent randomised-controlled trial (RCT) Gallagher et al (2013) found educational metaphors can assist people in pain towards a positive reconceptualisation that reduces catastrophising behaviours.

In a cross-sectional observational study within palliative care settings, Casarett et al (2010) found patients rated clinicians as good communicators when they used military metaphors such as describing the host's immune system as a defending army. However, whilst this enabled effective communication for some patients, when expressing her personal account of healthcare delivery for cancer, Sontag (1978) argues that 'the fight' against cancer is both unhelpful and misleading. Instead, cancer should be viewed as a process that must be managed, and not a battle that must be won.

In order to promote understanding of abstract scientific models, scientists use metaphors as well as equations and graphs. Table 1 illustrates a range of metaphoric expressions that exist within scientific thinking related to the human body:

Scientific Concept (Body part)	Metaphor
Heart	Pump
Cell membrane	Wall
Brain	Computer
Eye	Camera
Immune system	Defence force
DNA	Blueprint code
Blood vessels	Highways
Nerves	Wires
Sound/light	Ocean waves

Pelvic musculature	Floor

Table 1: Commonly used scientific metaphors

The process of metaphoric transfer extends to the science of rehabilitation and pain. Melzack and Wall's (1965) Gate Control Theory of Pain provides an excellent example of how a metaphoric expression can help explain an otherwise impermeable and abstract model for much of the population. Rathmell (2006) argues that Melzack and Wall's (1965) paper is of crucial significance to pain science as it has transfused common consciousness regarding pain neurobiology. In a comprehensive, longitudinal analysis of theory's adaptations within educational texts, Semino (2011) found that, despite an updated understanding through redefined 'neuromatrix' and 'neurosignature' metaphors, many texts continue to use pain gate theory. The reasons why educational texts continue to use pain gate theory remains largely unexplored across the literature. However, Semino (2011) suggests that the simplicity of the open or closed gate has somewhat prevented us from seeing beyond it.

This poses a wide held and well-documented dilemma regarding the application of metaphor within science and healthcare. Although strong advocates of metaphoric expression, Lakoff & Johnson (1980) warn that metaphors may obscure other lines of inquiry, whilst Taylor (1984, p.11) argues metaphors can be "seductively reductionistic" as Table 1 demonstrates.

When attempting to make sense of pain it is worth remembering Rosenbleuth & Weiner's (1943, p.20) general linguistic warning, "The price of metaphor is eternal vigilance." Clinicians have a constant duty to ensure educational metaphors are both helpful and appropriate. Metaphors can provide a frame through which we paint unique cognitive landscapes. Therefore, we should remain mindful of our eagerness to impose our own brush strokes onto the canvases of others. Whilst searching for meaningful answers to painful questions, people in pain encounter health information that may unwittingly accelerate their journey towards vulnerability (Darlow et al, 2015).

Whilst metaphors can guide people on the road towards a meaningful and helpful reconceptualisation of pain, they can also hinder the journey by reinforcing unhelpful, threatening thoughts that steer vulnerable individuals towards worry (Stewart, 2014). As Eccleston and Crombez (2007, p.233) have so eloquently stated, "Pain is an ideal habitat for worry to flourish." Without an appreciation of the frequently concealed and implicit influence that metaphors have within healthcare; clinicians, patients and researchers may continue to unknowingly fertilise pain's vulnerable ground.

Despite the frequent use of metaphoric expressions used within pain education (Stewart, 2014), and despite the long established and ongoing debate surrounding their application, and their frequently assumed impact on patient care, a gap remains in our understanding. This review aims to explore this gap by asking, do metaphors have therapeutic value for people in pain?

Method

Scoping searches were conducted to determine the relevant background literature. Six electronic bibliographic databases were searched from inception until March 2019. These were Medline, Cochrane, One Search, PsycNET, Science Direct and Prospero. Further attempts to identify studies were made by contacting clinical experts within the fields of linguistics and pain management and by considering the reference lists from all retrieved papers.

Table 2 shows the steps taken to refine the review question:

Review Question	Who	What	How	Where
Do metaphors have therapeutic value for people in pain?	People in pain	Therapeutic value: • Pain • Use of pain medications • Function • Work return • Sleep • Fatigue • Anxiety • Depression • Knowledge & understanding • Behavioural change • Communication • Self-efficacy • Resilience • Empowerment	Metaphor therapy (Verbal, non-verbal & multimodal) Patient and clinician generated metaphors	All qualitative study designs

Table 2: Who, What, How and Where?

Meta-ethnography was used to synthesise the data within this review. In order to capture the depth of data required from a diverse selection of

qualitative studies, meta-ethnography provides a method of identification and defining of concepts within each study selected for review (Noblit and Hare, 1988). Through the formation of emerging themes, meta-ethnography enables the identification of associations within individual narratives across the included studies. As such, the literature search was limited to English language publications.

Table 3 shows the results of initial scoping searches.

Database	Search terms	Results
Medline	1.Metaphors, behaviour, change, therapy	43
	2. Metaphor, chronic pain	16
Cochrane	1. Metaphors, chronic pain	1
	2. Metaphor therapy & pain	2
	3. Metaphor therapy & behavioural change	4
One Search (University of Brighton)	Metaphor therapy, behavioural change & pain	1214 (Journal articles only).
PsycNET	Metaphor therapy	49
Science Direct	1. Metaphors & pain	37
	2. Metaphors & behavioural change	170
	3. Metaphor therapy & chronic pain	1388
Prospero	Metaphors, therapy, pain	No ongoing studies found

Table 3: Scoping search results

Inclusion Criteria

1. All qualitative English language journal articles and academic texts from January 2000 to March 2019.

2. Adults with persistent pain of all presentations inclusive of psychological distress. Persistent pain was defined in accordance with the International Association for the Study of Pain (IASP) Task Force Treede et al (2015, p.1004), "pain in 1 or more anatomic regions that persists or recurs for longer than 3 months and is associated with significant emotional distress or significant functional disability (interference with activities of daily life and participation in social roles)."

3. Verbal, non-verbal and multimodal metaphor therapy approaches.

4. All qualitative and mixed methods study designs.

Key outcomes of interest

Any positive or adverse health-based outcome related to the following measures:

a. Pain

b. Use of pain medications

c. Function

d. Work return

e. Sleep

f. Fatigue

g. Anxiety

h. Depression

i.   Knowledge & understanding

j.   Behavioural change

k.   Communication

l.   Self-efficacy

m. Resilience

n.   Empowerment

This list highlights the complex, multi-dimensional nature of pain. Yelland (2011) suggests each of these therapeutic factors represents a desirable outcome for people in pain. Many of these measures do not exist independently of each other (Louw and Puentedura, 2013). As such, it is important to include a variety of factors that might capture potential therapeutic gains or adverse changes noted within the literature.

Diagram 1 shows the steps taken in identifying the six qualitative studies for review through a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram.
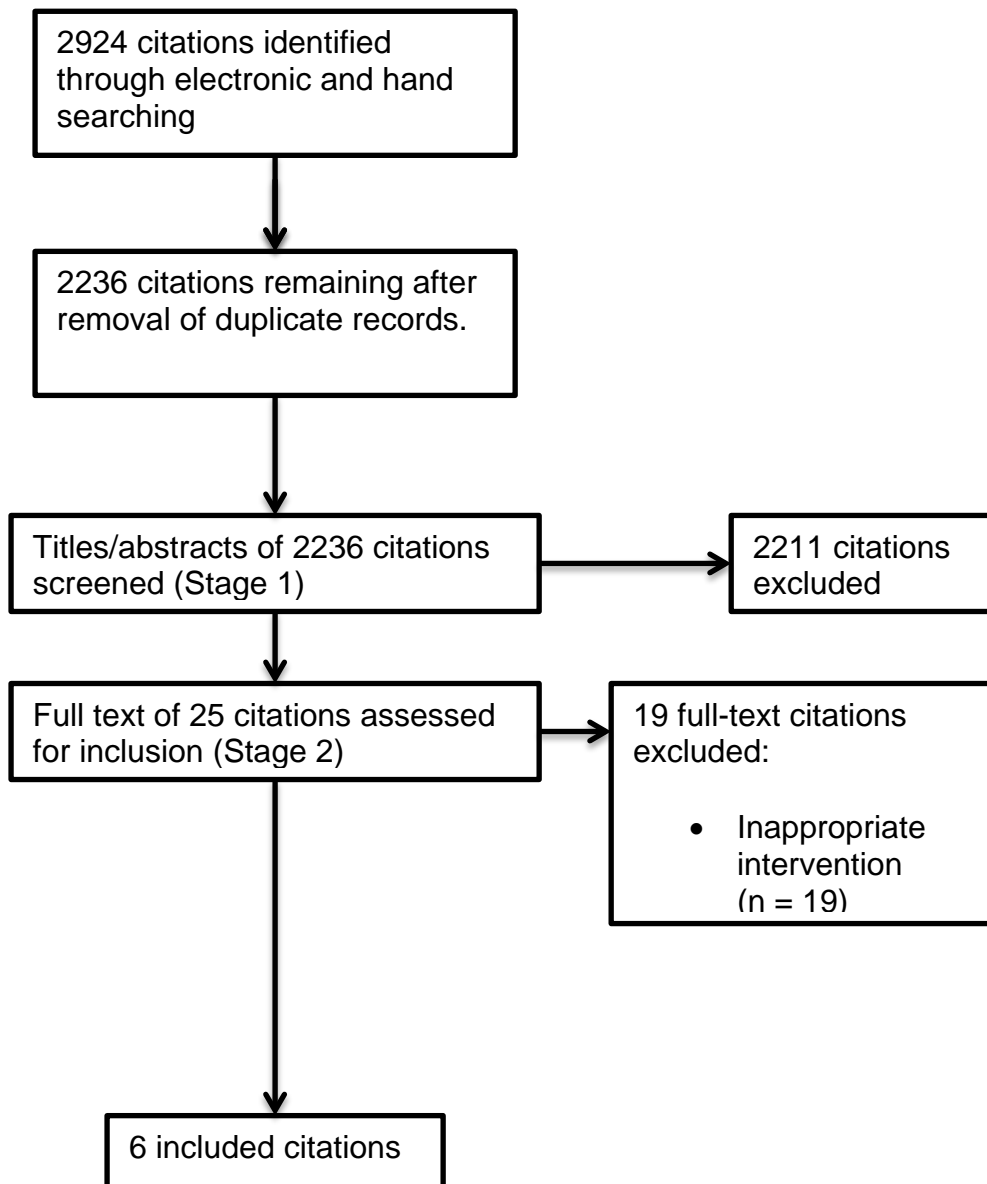
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│ 2924 citations identified    │
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│ Full text of 25 citations    │ ───────▶│ 19 full-text citations│
│ assessed for inclusion       │         │ excluded:            │
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Diagram 1: PRISMA diagram of systematic review inclusion or exclusion

Details regarding each of the six included studies are shown in Table 4.

Author & year	Study title	Condition studied	Data collection	Methodology
Bullington et al (2003)	Meaning out of chaos: a way to understand chronic pain.	Musculoskeletal (MSK)	Focus group	Interpretative analysis
Clarke et al (2012)	"I feel so stupid because I can't give a proper answer…" How older adults describe chronic pain: a qualitative study	MSK	Qualitative interviews	Framework analysis
McFarland, Barlow & Turner (2009)	Understanding metaphor to facilitate emotional expression during a chronic disease self-management course.	Diabetes Multiple sclerosis Myalgic encephalo-myelitis Haemophilia Still's disease	Semi-structured interviews	Interpretive-phenomeno-logical analysis (IPA)
McMahon et al (2012)	"Governed by the pain": narratives of fibromyalgia.	Fibromyalgia	Qualitative interviews	Narrative analysis
Padfield et al (2010)	A slippery surface…can photographic images of pain improve communication in pain consultations?	MSK Fibromyalgia	Mixed methods	Thematic analysis
Solberg, Nysether & Steinsbekk (2012)	Patients' experiences with metaphors in a solution-focused approach to improve self-management skills: A qualitative study.	MSK Diabetes	Semi-structured focus group interviews	Not stated

Table 4: Studies included for review

The Cochrane Collaboration Qualitative Methods Group (Hannes et al, 2013) suggests meta-ethnography provides a suitable method for the interpretation of synthesised qualitative evidence in order to develop explanatory theories or models. Considering the frequently elusive and implicit use of metaphors within discourse (Geary, 2011), it is essential to apply a method that permits interpretation of the data, leading to the generation of relevant themes and the construction of conceptual models.

Findings

Of the six studies identified, two explored metaphors expressed by people living with pain (Clarke et al, 2012, McMahon et al, 2012), two focused on metaphors generated by healthcare professionals (Bullington et al, 2003, Solberg, Nysether and Steinsbekk, 2012), and two researched more collaborative approaches to metaphor delivery (McFarland, Barlow and Turner, 2009, Padfield et al, 2010).

Table 4 shows only two of the six included studies (Bullington et al, 2003; Clarke et al, 2012) focused solely on MSK conditions. The four remaining studies broadened their inclusion of conditions to incorporate diabetes, multiple sclerosis, myalgic encephalo-myelitis, haemophilia, Still's disease (McFarland, Barlow and Turner, 2009; Solberg, Nysether and Steinsbekk, 2012), and fibromyalgia (McMahon et al, 2012).

With the evidence pointing towards a need for specificity and sensitivity regarding culturally relevant and generationally appropriate metaphors (Geary, 2011, Gurung, 2013, Loftus, 2011), it is essential to gain a greater

understanding of the demographic differences amongst the participants across the six studies and how these variables might impact on the outcome of this review. Table 5 displays details regarding the participants in each of the six studies.

Author and year	Number of participants	Gender	Age range, years	Cultural background	Duration of study
Bullington et al (2003)	3	Not stated	Not stated	Not stated	Six months
Clarke et al (2012)	23	16 female 7 male	Median = 73	16 Caucasian 7 Chinese descent	Six weeks
McFarland, Barlow & Turner (2009)	10	9 female 1 male	Median = 47	Not stated	1-2 hour No follow up
McMahon et al (2012)	10	10 female	Mean = 48	10 White, British	47-120 minutes. No follow up
Padfield et al (2010)	64	Not stated	Not stated	Not stated	Not stated
Solberg, Nysether & Steinsbekk (2012)	16	9 female 7 male	37 - 67	Not stated	4 month follow up

Table 5: Participant details

The results of the CASP quality appraisal process are shown in Table 6. These findings are further considered within the discussion section.

Author and Year	Was there a clear statement of the aims of the research?	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?	Have ethical issues been considered?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?	How valuable is the research?
Bullington et al (2003)	Yes	Yes	Can't tell	No	Can't tell	No	No	Can't tell	Yes	Contribution to existing knowledge discussed
Clarke et al (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Links to current practice
McFarland, Barlow & Turner (2009)	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes	Practice implications discussed
McMahon et al (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Clinical implications considered
Padfield et al (2010)	Yes	Yes	Can't tell	Can't tell	Yes	No	Can't tell	Yes	Yes	New areas for research identified
Solberg, Nysether & Steinsbekk (2012)	Yes	Yes	Can't tell	Yes	Yes	No	Yes	Yes	Yes	No discussion of wider context

Table 6: Results of the Critical Appraisal Skills Programme (CASP) checklist for qualitative research (2006).

Following detailed analysis of each study by both reviewers, and subsequent determining of how each study related to one another using a meta-ethnographic approach (Noblit and Hare, 1988), four themes of *expression, connection, understanding and control* emerged relating to the therapeutic value of metaphors for people in pain (Table 7).

Within meta-ethnography, a line of argument is developed to produce an explanatory framework based on extracted themes and concepts. Noblit and Hare (1988) outline seven steps, which provide a framework for combining findings from individual interpretative studies in order to produce a new interpretation. The following seven steps were used as a guide throughout this review:

1. **Getting started.** Following the formation of the research question a structured plan/timetable and a research protocol as suggested by Boland, Cherry and Dickson (2014) were established.

2. **Deciding what is relevant to the initial interest.** The focus of the synthesis was defined, relevant studies were located, and decisions were made regarding inclusion and quality assessment.

3. **Reading the studies.** Following Stage 1 screening of titles and abstracts further appraisal and assessment of 25 full texts was carried out using The Critical Appraisal Skills Programme (CASP) checklist for qualitative research (2006). The six studies chosen for review were read in detail several times by both reviewers with time allowed for reflective documentation.

4. **Determining how the studies are related.** Each study was assessed for their methodological similarities and differences (Table 4), and for any demographic distinctions between the participants within each study (Table 5). The emergence of conceptual themes emanated from repeated thematic analysis of the six studies.

5. **Translating the studies into one another.** Noblit and Hare (1988) suggest comparisons should be made between the conceptual themes that emerge from each study. This was achieved by first comparing the themes noted within the first two studies, then subsequently synthesising the findings in order to compare each of the four remaining studies.

6. **Synthesising translations.** Atkins et al (2008) reviewed a range of published meta-ethnographies and found that authors used a diverse assortment of methods to synthesise emerging themes. As there is no clearly defined way of implementing this step, a series of repeated links and overarching themes were formed through on-going reflection, and further analysis of each study's findings.

7. **Expressing the synthesis.** The synthesised results of the review were presented in diagrammatic form as a conceptual model showing the overall balance of findings (Diagram 2).

Although marked distinctions were found between each of the four emerging themes, each theme has several interconnecting links. When viewed within a wider context, the combined themes create an overriding sense of the desire people in pain have to use metaphors in order to create meaning and overcome pain's resistance to expression.

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Emerging theme	Bullington et al (2003)	Clarke et al (2012)	McFarland, Barlow & Turner (2009)	McMahon et al (2012)	Padfield et al (2010)	Solberg, Nysether & Steinsbekk (2012)
Expression	6	4	6	5	9	3
Connection	7	5	6	2	6	2
Understanding	3	3	4	2	2	2
Control	4	2	4	6	2	4

Table 7: Frequency of theme identification

Furthermore, Table 8 displays the extent to which each of the therapeutic factors outlined within the inclusion criteria were found to have an impact on patient outcomes across the six included studies within this review. Positive effects were noted regarding metaphors' capacity to promote behavioural change, improve knowledge and understanding, improve communication, and to build self-efficacy, resilience and empowerment. However, no qualitative evidence was found to show that the metaphors experienced by the participants across the studies had any impact on pain, function, sleep or mood.

Therapeutic factor	Impact on outcome	Supporting evidence
Pain	No stated effect	
Use of pain medications	No stated effect	
Function	No stated effect	
Work return	No stated effect	
Sleep	No stated effect	
Fatigue	No stated effect	
Anxiety	No stated effect	
Depression	No stated effect	
Knowledge & Understanding	Positive effect	Bullington et al (2003) McFarland, Barlow & Turner (2009) Padfield et al (2010)
Behavioural change	Positive effect	Bullington et al (2003) Clarke et al (2012) McFarland, Barlow & Turner (2009) Padfield et al (2010)
Communication	Positive effect	Bullington et al (2003)

		Clarke et al (2012) McFarland, Barlow & Turner (2009) McMahon et al (2012) Padfield et al (2010)
Self-efficacy	Positive effect	McMahon et al (2012) Padfield et al (2010) Solberg, Nysether & Steinsbekk (2012)
Resilience	Positive effect	Bullington et al (2003) McMahon et al (2012) Padfield et al (2010) Solberg, Nysether & Steinsbekk (2012)
Empowerment	Positive effect	Bullington et al (2003) Clarke et al (2012) Padfield et al (2010) Solberg, Nysether & Steinsbekk (2012)

Table 8: Therapeutic impact of metaphor use

Expression

The evidence from all six studies points to a sense of emotional relief when finding a tangible means of expressing pain. A clear theme of expression was noted 33 times across the included studies (Table 7).

McFarland, Barlow and Turner (2009) suggest emotions, attitudes and meanings can be revealed through the expressive liberation that metaphors bring. Shinebourne & Smith (2010) believe metaphors offer a safe bridge through which people in pain can express emotions that are too distressing to communicate literally. By using Interpretive phenomenological analysis (IPA) to analyse qualitative interview data from ten lay-tutors, McFarland, Barlow and Turner (2009) discovered the tutors, who themselves lived with persistent pain, used metaphoric terms as a framework to comprehend the difficult-to-label emotional states of participants attending a chronic disease self-

management course. Terms such as 'letting off steam', 'feeling low' and 'feeling blue' were encouraged by the lay-tutors in order to elicit further metaphoric means of expression by people in pain. One tutor described how living with pain is an "emotional time bomb." (McFarland, Barlow and Turner, 2009, p.257). Such an explosive and destructive internal experience requires an adequate medium for release and 'off-loading'. Metaphors were used as an expressive tool for deactivating and reframing the internal emotions to liberate people in pain.

Across all six studies, people in pain utilised metaphors to release their inner thoughts and feelings that were otherwise disordered and indescribable. Each of the ten participants in McMahon et al's (2012) study expressed their on-going frustration at their inability to explain and describe their pain. However, despite the difficulties the participants faced when attempting to verbalise how they felt, they each used metaphors to express their narratives.

Of the included studies, only Clarke et al (2012) explored the cultural differences that exist when people in pain use metaphors. By studying Chinese and Caucasian participants they found that, due to their English language constraints, Chinese participants employed numerical scales to express pain. However, when communicating with Chinese clinicians, they would use words and metaphors such as, "I want this arm off" to express their experience (Clarke et al, 2012, p.4). Interestingly, one of the Caucasian participants also utilised a numerical scale to describe his pain. Although, in order to do so, his numerical scale incorporated an 'earthquake' metaphor:

"Aye, it's there…to put it on a Richter Scale nothing to five, if I sit down and relax it's one, if I get up and walk it's five." (Clarke et al, 2012, p.4).

In an attempt to bridge the communication chasm within pain consultations, Padfield et al (2010) used a booklet of 64 photographic images which had been collaboratively produced with patients to visually express their pain. The participants were asked to choose images that represented their experience of pain in order to foster discussion with clinicians during the consultation. A questionnaire showed 86% of the participants related at least one image to their pain. 67% felt the images facilitated dialogue, whilst 82% of the clinicians reported improved communication. Padfield et al (2010, p.149) feel these metaphoric images offer, "a narrative space for people to step into, the possibility of some kind of identification and empathy with the other…some kind of slippery surface for further narrative."

Connection

Repeated narratives from the participants within each study highlighted how the experience of living with pain produces broken connections between one's internal sense of self and one's disintegration with culture and society. Bullington et al (2003) found people in pain were able to rediscover a sense of identity and ownership through metaphoric expressions. One participant spoke of feeling like she had been "run over by a truck." (Bullington et al, 2003, p.328). However, when given time to discuss her experience further, her sense of chaos and disassociation transformed into a sense of meaning

and cohesion, one of being "put together again." (Bullington et al, 2003, p.328).

Similarly, McFarland et al (2009) discovered how lay tutors, who themselves live with persistent pain, used metaphors as a linguistic tool for disclosing and acknowledging emotions in others. One participant highlighted how her metaphors had not only enabled her to express her experience, but they had also led to a connective liberation. Rather than "keeping the lid on things that had been there for years" she was able to share her thoughts and emotions, which felt "incredibly freeing." (McFarland et al, 2009, p.257).

This sense of connective liberation was also found by Padfield et al (2010). Through their use of metaphoric images of other people's pain experiences, both patients and clinicians felt an improved sense of connection. This therapeutic alliance emerged within different contexts. One patient expressed how reassured she felt upon discovering how "other people feel the same." (Padfield et al, 2010, p.147).

Understanding

Throughout each reviewed study, people in pain used metaphors as a means of understanding their experience. The theme of understanding was particularly noted when striving to formulate a reflective narrative to explain how and why pain had changed their lives. Journey metaphors enabled people in pain to consider and make sense of their personal biographies with

some drawing emotional comparisons between who they were, and who they had become (Clarke et al, 2012). For some, meaning was framed within the context of an arduous and challenging journey (McMahon et al, 2012). For others, the journey towards understanding enabled an optimistic, cognitive reconstruction with different paths to explore (Solberg, Nysether & Steinsbekk, 2012).

Several of the reviewed studies discovered a variety of metaphors to enable a shared understanding of long-term health conditions (Clarke et al, 2012, McFarland et al, 2009, Padfield et al, 2010, Solberg, Nysether & Steinsbekk, 2012). Metaphors were found to facilitate a recognition of emotions, which in turn enabled others to gain an understanding of individual perceptions. One participant in Padfield et al's (2010, p.146) study felt the photographic "pictures made it easier, more precise and to the point." By relating the metaphoric images of other people's perceptions of pain, the participants' within Padfield et al's (2010) study became better equipped with the tools to make sense of their own experience.

By combining visual images with a journey metaphor; Solberg, Nysether & Steinsbekk (2012) found the 'Captain of the ship' metaphor enhanced the learning process when understanding self-management of pain. By creating an easy to remember, practical solution to overcoming challenges, the participants reported an improved awareness of their own responsibility towards self-management of pain. This insight remained at a four month follow up, which points to the educational capacity of metaphors to embed an experiential dimension to the learning experience. Padfield et al (2010)

suggest the metaphoric images used within their study acted as a catalyst that helped people elicit memories and experiences in order for them to construct meaning.

Control

The participants throughout the studies expressed their need for control through a divergent range of metaphors. McMahon et al (2012) found an overwhelming lack of control in their narrative exploration of women living with fibromyalgia. Feelings of hope, frustration, anger, fear and despair were cathartically expressed through a variety of metaphors. Whilst some used journey metaphors to convey how "everything seemed to go downhill", others constructed meaning through perpetual "battle and struggle" metaphors (McMahon et al, 2012, p.1362). Other participants expressed their fear and lack of control through agency metaphors showing pain as an external, insidious force, "it takes you to dark places", "the pain comes back to haunt you" (McMahon et al, 2012, p.1362).

Optimistic expressions of control were noted by Solberg, Nysether & Steinsbekk (2012) with the 'Captain of the ship' metaphor leading to participant reflections and behavioural change towards effective self-management. Upon reflection, participants were able to extend this metaphor and generate their own expressions in order to consider a move towards self-efficacy. One participant emphasised how she had felt empowered by changing from being a passive member of the "crew" to becoming the "Captain" of her own journey (Solberg, Nysether & Steinsbekk, 2012, p.400). This example highlights how healthcare professionals can employ dialogical

journey metaphors to elicit behaviour change and enable people in pain to regain control (Loftus, 2011).

Discussion

The findings of this review show metaphors do provide some people in pain with therapeutic value. Whilst this finding is in line with many of the opinions noted throughout the literature (Biro, 2010, Bourke, 2014, Loftus, 2011, Shinebourne and Smith, 2014), no previous attempts have been made to systematically review the evidence surrounding the use of metaphors within pain management. As such, the findings of this review add an in-depth rigour to a longstanding debate that is largely based on opinion and speculation. When we consider the complexities of pain perception (Linton, 2005), the demands of an escalating pain epidemic (Van Hecke, Torrance and Smith, 2013), and the communication challenges within healthcare (Frankel and Levinson, 2014), this review highlights the potential benefits of metaphoric expressions for people in pain.

However, although these findings show that metaphors can provide a potentially liberating cascade of events, the findings should be interpreted with some caution.

Debate continues as to whether it is appropriate or even possible to synthesise qualitative research from different epistemological perspectives (Boland, Cherry & Dickson, 2014). However, considering repeated calls for a more narrative approach to research (Dow, Roche and Ziebland, 2012; Foreman, 2014; Frank, 1995), the systematic review of diverse, qualitative

studies is greatly needed. Anjum (2016) considers the need for a radical, ontological shift away from evidence-based medicine and towards person-centred healthcare where regard for n=1 is paramount. Whilst this review upholds the need for evidence-based medicine as a supplementary framework, the research question necessitates a philosophical stance that looks beyond a specific, positivist foundation.

Consideration must also be given to the diverse assortment of conditions that were studied across the included studies. Table 4 highlights the range of conditions explored by the authors. Despite the variety of conditions reviewed, many of the participants spoke with remarkable similarity about their experience of living with a long-term condition. Although it could be argued that this review might have benefited from narrowing its focus to include only painful musculoskeletal conditions, the consistent ways in which people living with different conditions expressed their experience through metaphors points to the need for a more contextualised, panoramic view of pain.

Although this review has found a promising therapeutic impact when people in pain and clinicians use metaphors, Table 8 shows a lack of evidence for metaphors' ability to have a direct impact on pain reduction, function, sleep, fatigue, anxiety and depression outcomes. However, this finding is unsurprising as the reviewed studies used a variety of in-depth qualitative methods, none of the studies applied specific, quantitative outcome measures to determine if any positive or adverse health-based outcome had been achieved. Whilst future quantitative study designs are needed in order to determine these particular outcomes, this particular qualitative review has

helped us better understand how people in pain use metaphors to express their experience.

An expressive dilemma

Despite the longstanding and on-going debate regarding the use of metaphors within pain management (Stewart, 2014), the six reviewed studies offer a relatively distorted view concerning the application and usefulness of metaphors within clinical settings. Although the findings of this review are encouraging, each of the included studies overlooks the many concerns that are widely discussed throughout the literature regarding metaphor use within healthcare.

Many authors have expressed concerns regarding metaphors' potential to oversimplify and misinterpret the complexities of contemporary pain science (Carpenter, 2007, Reisfield and Wilson, 2004, Wiggins, 2012). Whilst this review shows that metaphors might help to make sense of pain, this does not mean that all metaphors provide an accurate, realistic understanding of the science. Honesty and transparency are required if pain education is to facilitate a purposeful, accurate reframing. On one hand, metaphors can offer people in pain a connective link towards self-control and empowerment. On the other, they may have a detrimental influence by adding confusion to an already complex and worrying pain experience (Neilson, 2015; Sontag, 1978).

Considering the findings of this review, and the available evidence from both sides of the debate, Diagram 2 shows a finely balanced, conceptual model,

which symbolises both the potential therapeutic gains that metaphors have for people in pain, and their potential for detrimental influences.
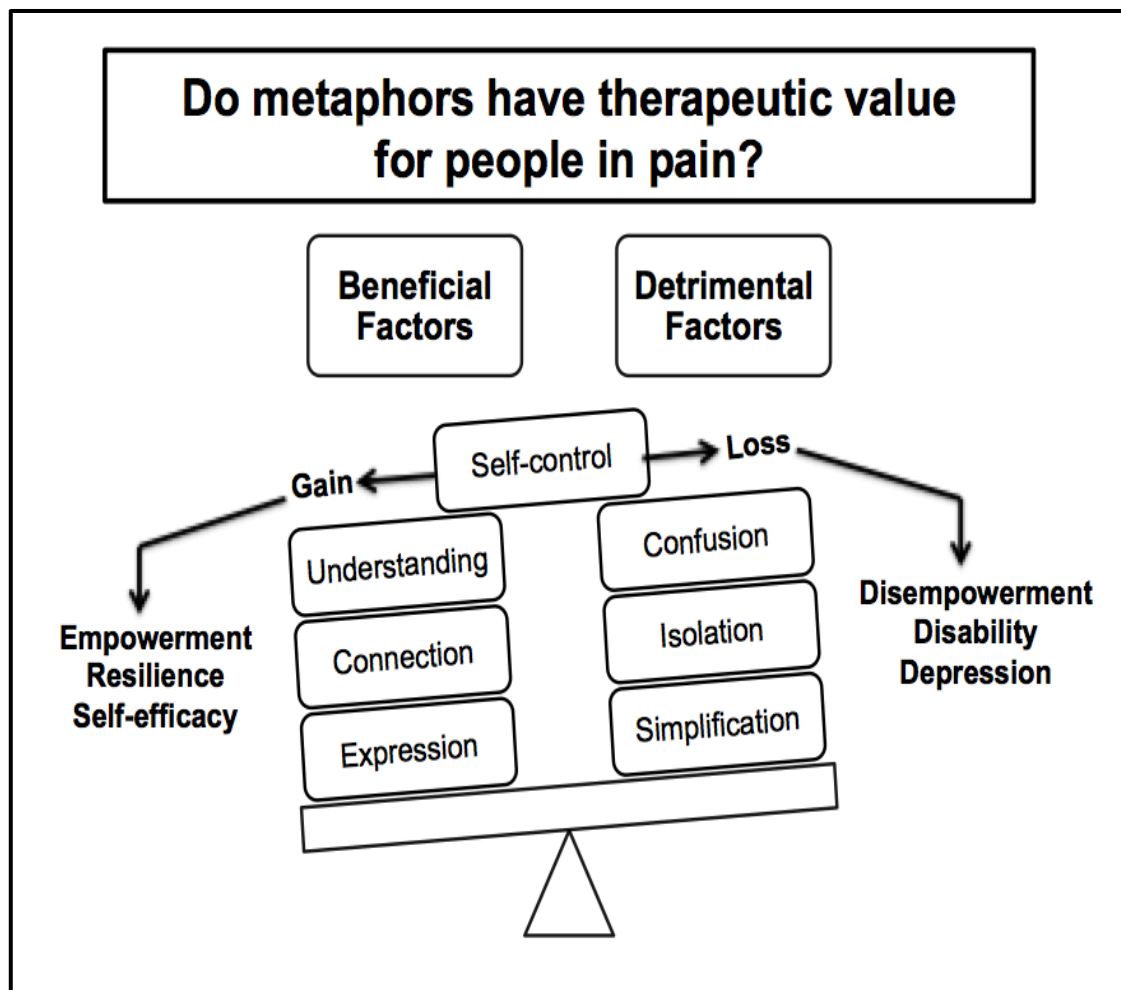

Diagram 2: A conceptual model for metaphor use within healthcare.

In itself, this balanced scale model highlights the use of metaphors when attempting to conceptualise research findings. By tipping the balance towards the beneficial factors found within this review, this model aims to provide an optimistic awareness of the value of metaphors for people in pain, whilst also highlighting the need for caution.

Scarry (1985) argues that pain is unsharable. Furthermore, this inability to express pain often leads to social isolation and scepticism from those attempting to understand the experience. Scarry's (1985) reasoning sits in stark contrast with the finding of this review regarding connection. If pain is unsharable as Scarry (1985) suggests, then metaphors would not be capable of liberating people in pain by forming social connections. Biro (2010) suggests that pain acts like a lingusitic brick wall, which prevents us from communicating the experience to others. It is not surprising then that when some people in pain attempt to escape this sense of disconnection and isolation they generate metaphors. In this sense, the findings of this review suggests that metaphors can act as freeing, expressive tools that have the ability to chip away at Biro's (2010) brick wall. Paradoxically, some metaphors may reinforce this brick wall and further isolate people in pain. We must also accept that, for some, pain is an intensely private and untransmittable experience. One in which we cannot expect to gain a tangible, shared understanding through metaphors. As with any method of healthcare delivery, metaphors must not be viewed as a panacea.

Sociocultural considerations

It is crucial to consider the lack of cultural diversity between the participants across the studies. If we accept that metaphors, when appropriately co-constructed, can help us make sense of the world, we must also examine their sociocultural implications for pain reconceptualisation. The complexity of divergent cultural interpretations of metaphoric expressions adds to the already challenging task facing clinicians when attempting to explain pain

(Gurung, 2013). Only Clarke et al (2012) included participants outside of Western cultures. However, the seven Chinese participants within Clarke et al's (2012) study were interviewed separately through an interpreter. This poses the risk of misinterpretations of important data that could be lost in translation, whilst also potentially creating an unnatural clinical environment.

Conclusion

This review has found that metaphors may have therapeutic value for people in pain. The evidence shows that both people in pain and healthcare professionals use metaphors to express, connect, understand and regain control. This review adds to a long-standing and ongoing debate regarding the use of metaphors within healthcare. This debate has so far been largely based on opinions and speculation. As such, this review provides a more in-depth and rigorous understanding of metaphors' role within pain management. However, although the findings of this review point to the positive influence of metaphors when working with people in pain, it also highlights the need for continued caution. The studies included within this review displayed a lack of consideration regarding the potential, detrimental effects of metaphors for people in pain.

Further research is needed to explore how metaphors can be best applied within practice settings. Furthermore, despite the promising findings from this review, additional questions remain regarding the potential, longer-term implications of metaphoric expressions on pain, anxiety, depression and function.

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Appendix

Research protocol

Background

The longstanding debate surrounding metaphors and pain is based largely on opinions. Much has been written about this subject with conflicting speculations regarding the clinical effectiveness of metaphor use within healthcare. No systematic reviews have been conducted to explore if metaphors have therapeutic value for people in pain.

Review Question	Who	What	How	Where
Do metaphors have therapeutic value for people in pain?	People in pain	Therapeutic value: • Pain • Use of pain medications • Function • Work return • Sleep • Fatigue • Anxiety • Depression • Knowledge & understanding • Behavioural change • Communication • Self-efficacy • Resilience • Empowerment	Metaphor therapy (Verbal, non-verbal & multimodal) Patient and clinician generated metaphors	All qualitative study designs

Table 2: Who, What, How and Where?

Review question	Do metaphors have therapeutic value for people in pain?
Population	Adults with persistent pain experiences, inclusive of psychological distress.
Intervention	Metaphor therapy involving clinician and patient generated metaphors including verbal, non-verbal and multimodal metaphors.
Comparator	Standard literal dialogue & language.
Outcomes	Positive or adverse health-based outcome. Any relevant objective health-based clinical outcome measure.
Setting	Not specified
Study design	All qualitative studies

Table 3: PICO table

Summary of existing literature

A lack of quantitative studies exists with few RCTs. A range of qualitative work has been conducted with encouraging findings for metaphor use within healthcare. However, most studies are opinion-based. No systematic reviews have been conducted regarding metaphors and pain. Considering the demand of the global pain epidemic and the well-documented challenges facing both people in pain and healthcare professionals, it is essential to develop our understanding of metaphor's value within clinical practice.

Research Question

1. Do metaphors have therapeutic value for people in pain?

Aims

1. To review the evidence for the potential therapeutic use of metaphors within pain management.

2. To explore current treatment approaches

3. To guide future research interests.

Search strategy

Medline, Cochrane, One Search, PsycNET, Science Direct and Prospero.

Methodology

Meta-ethnography to synthesise qualitative studies.

Quality Assessment

Critical Appraisal Skills Programme (CASP) checklist for qualitative research (2006).