

Cancer-related pain: a review of patient education to challenge a dominant biomedical view

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Summary Points

1. This study explored the way that clinicians use education to explain cancer-related pain to service users. A review of the existing literature focussed on whether the most up to date science of pain was used & whether this helped to communicate the complexity of the experience.
2. A biomedical approach continues to dominate the management of cancer-related pain when an evidence base exists for expanding its management using high quality education.
3. This review revealed a field in its inception, but it provides a starting point to focus & develop the evidence base, in communicating a more complex & multidimensional pain experience for service users.

Introduction

Cancer-related pain is a significant & growing problem for those living with & surviving cancer, requiring biopsychosocial (BPS) management independent to treatment of underlying disease. Best practice pain management has been established in the field of chronic non-cancer pain (CNCP), starting with education that is grounded in pain science. Consideration of this approach for cancer-related pain management is scarce, yet there is strong rationale for its use. The aim of this study was to explore the use of pain science in explaining cancer-related pain to patients through education, facilitating communication of a BPS phenomenon.

Methods

An **exploratory narrative review** was used to unveil a practice in its inception & deepen understanding of the field (Greenhalgh et al. 2018). All relevant **literature was identified using 7 target concepts of pain education (search completed June '21)**. A descriptive synthesis of findings was interpreted & critiqued. Methodological quality was included to assess the impact on findings, not as criteria for exclusion.

Results

Pain science education is poorly established in the cancer pain management literature. **8 studies** (4 RCTs, 2 pilot, 2 feasibility) **met the inclusion criteria**. Study sample sizes of 9 – 127, 238 unique participants, 112 received targeted pain education. Conclusive findings from a small evidence base of variable design & quality were limited, but positive individual outcomes provide rich detail for clinical application & a plausible basis for further research.

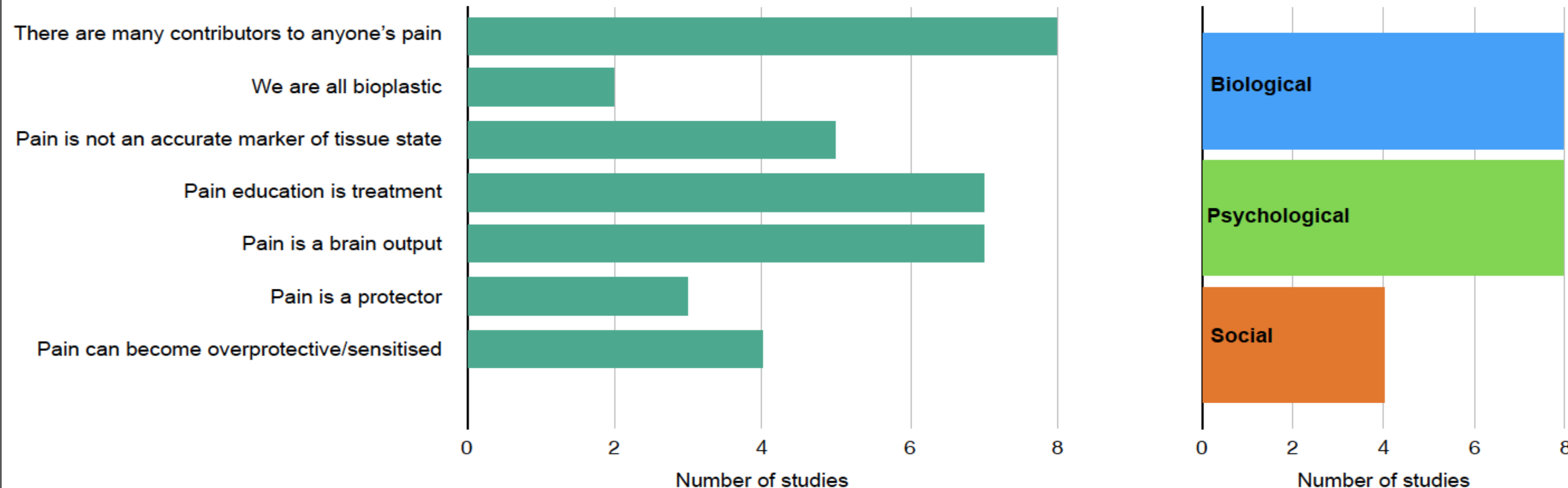


Figure 2: Number of studies including each target concept of pain education

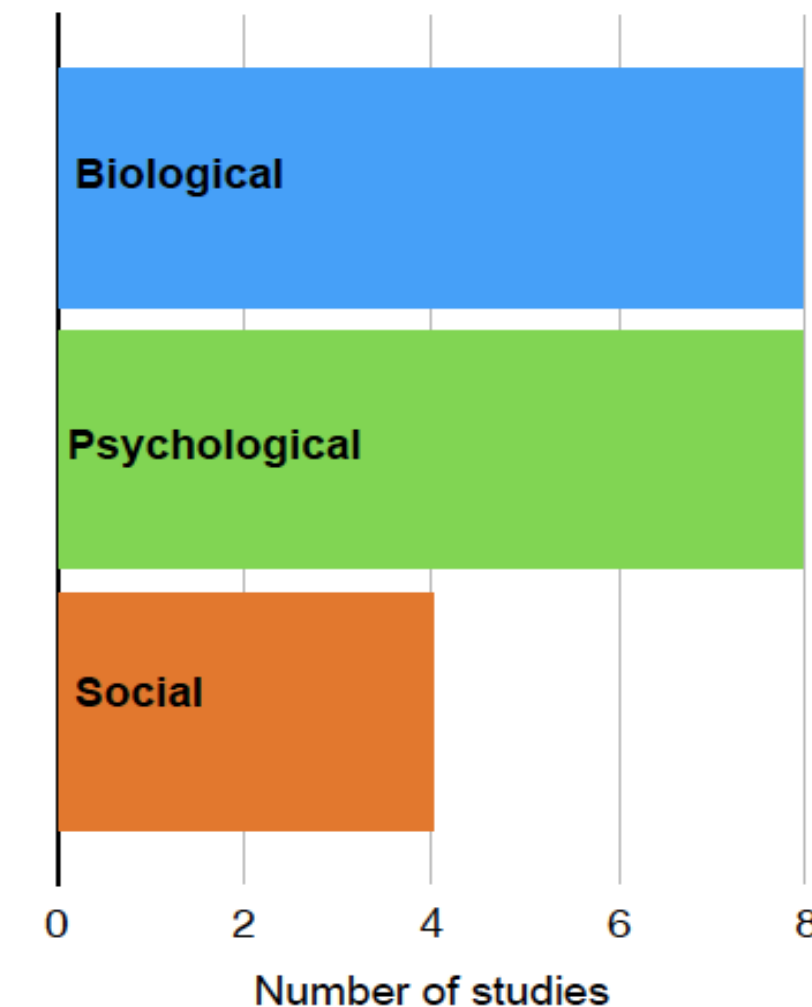


Figure 3: Evidence of BPS drivers of pain communicated during intervention

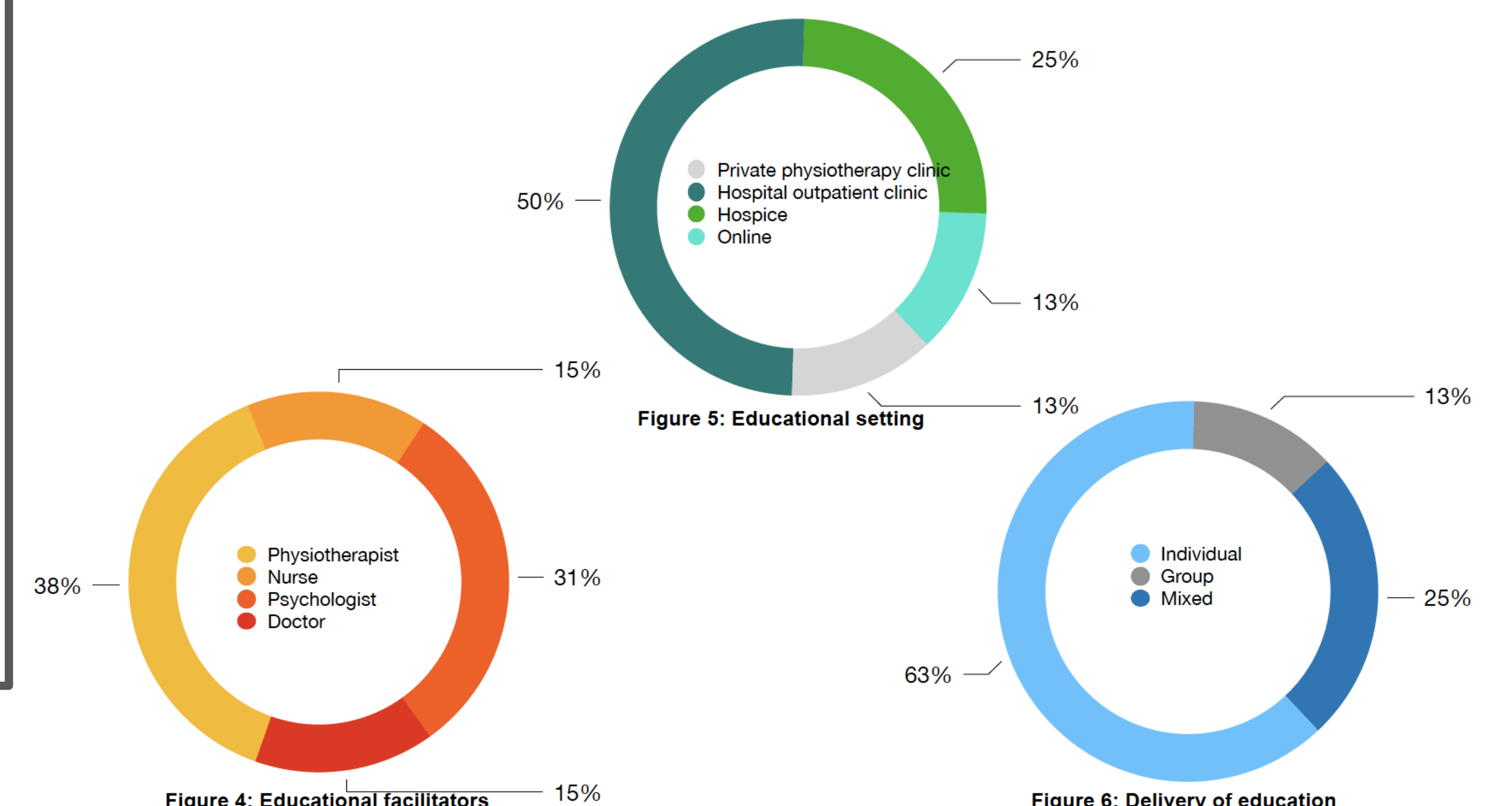


Figure 4: Educational facilitators

Figure 5: Educational setting

Figure 6: Delivery of education

"I will be able to wash under my arms independently"
Frank, patient.
..keen to be independent ... movement & education ...particularly helped achieve his goal (Health Foundation 2017, p8)

Outcome measurement		
Measures used	Study results	Analysis
Extensively reported	Pain intensity did not decrease significantly (1 exception)	Similar to best practice in CNCP
Consistently broad & holistic	Knowledge & use of self-management techniques did improve	Function & valued goals instead of simply pain intensity
3-15 used Mean = 6 / study	Personal goals were achieved	Empowering participants to proactively manage pain
F/up variation 1 week - 18 months	Medication use reduced	Efficacy not shown to be directly related to format (similar to the CNCP literature)
	Psychological symptoms significantly improved (1 exception)	Effectiveness appears better correlated to meeting participant needs

How a patient is treated is implicitly, if not explicitly informed by the clinician's model or understanding of what pain is

(Kiverstein, Rathbone, Thacker 2021)

Discussion: Implications for practice

- **Considerable planning & skill** required in providing education grounded in pain science in the context of a cancer pathway
- Physiotherapy is a key player. Drawing on a **specialist MDT** is optimal
- **Palliative care** offers additional expertise to be harnessed for all stages of the disease trajectory
- **High quality education** should consider individual pain experience, alongside pathology, pain mechanisms & disease stage
- Educational **design & intensity can be correlated with disease stage**, utilising brief technological intervention in acute stages, to specific pain management programmes in advanced disease & survivorship (under-utilised outside of CNCP)
- **Provision is lacking for the burden of survivorship:** Inspiration should be taken from the grey literature where use of contemporary science is combined with an empowering message of self-management in multimedia formats, closely resembling materials from CNCP

& Future research

- Using **target concepts of pain** is a pragmatic approach to define & differentiate the pain science literature
- Consistent reporting of **participant details** to tailor interventions
- Transparent reporting of **educational content** to assist evaluation & application for practice
- **Qualitative & mixed-method studies** to fairly measure efficacy
- **Longer follow-up** for shorter interventions to check continued efficacy
- Complex intervention design to enhance rigor

Conclusion

To the author's knowledge, this is **the first review to explore the use of pain science in explaining cancer-related pain to patients through education**. It provides a basis to illuminate this field & focus & develop the evidence-base for clinical practice. A biomedical model continues to dominate the management of cancer-related pain when **an evidence-base exists for reconceptualising & communicating a BPS phenomenon through high quality education**. The evidence base represents some progress, but is in its inception. The future potential could be significant.