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## Research

**Physiotherapists report improved understanding of and attitude toward the cognitive, psychological and social dimensions of chronic low back pain after Cognitive Functional Therapy training: a qualitative study**Aoife Synnott<sup>a</sup>, Mary O'Keeffe<sup>a</sup>, Samantha Bunzli<sup>b</sup>, Wim Dankaerts<sup>c</sup>, Peter O'Sullivan<sup>d</sup>,  
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## KEY WORDS

Physical therapy  
Qualitative  
Biopsychosocial  
Low back pain  
Treatment  
Training

## ABSTRACT

**Question:** What are physiotherapists' perspectives on managing the cognitive, psychological and social dimensions of chronic low back pain after intensive biopsychosocial training? **Design:** Qualitative study design using semi-structured interviews to explore physiotherapists' perceptions of their identification and treatment of the biopsychosocial dimensions of chronic low back pain after intensive Cognitive Functional Therapy (CFT) training. **Participants:** Thirteen qualified physiotherapists from four countries who had received specific CFT training. The training involved supervised implementation of CFT in clinical practice with patients. Interviews were audio-recorded and transcribed verbatim. An interpretive descriptive analysis was performed using a qualitative software package. **Results:** Four main themes emerged from the data: self-reported changes in understanding and attitudes; self-reported changes in professional practice; altered scope of practice; and increased confidence and satisfaction. Participants described increased understanding of the nature of pain, the role of patient beliefs, and a new appreciation of the therapeutic alliance. Changes in practice included use of new assessments, changes in communication, and adoption of a functional approach. Since undertaking CFT training, participants described a greater awareness of their role and scope of practice as clinicians in identifying and addressing these factors. **Conclusion:** Physiotherapists expressed confidence in their capacity and skill set to manage the biopsychosocial dimensions of chronic low back pain after CFT training, and identified a clear role for including these skills within the physiotherapy profession. Despite this, further clinical trials are needed to justify the time and cost of training, so that intensive CFT training may be made more readily accessible to clinicians, which to date has not been the case. [Synnott A, O'Keeffe M, Bunzli S, Dankaerts W, O'Sullivan P, Robinson K, O'Sullivan K (2016) Physiotherapists report improved understanding of and attitude toward the cognitive, psychological and social dimensions of chronic low back pain after Cognitive Functional Therapy training: a qualitative study. *Journal of Physiotherapy* 62: 215–221]

© 2016 Australian Physiotherapy Association. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).**Introduction**

Chronic low back pain is a costly and debilitating musculoskeletal disorder that imposes a significant burden on both the person and society.<sup>1,2</sup> The societal and other costs of chronic low back pain are such that establishing an efficacious management approach to chronic low back pain is a healthcare priority.<sup>3,4</sup>

Chronic low back pain is no longer considered a purely structural, anatomical or biomechanical disorder of the lumbar spine. Instead, there is strong evidence that chronic low back pain is associated with a complex interaction of factors across the biopsychosocial spectrum. These not only involve structural or biomechanical factors, but also cognitive (eg, unhelpful beliefs, catastrophising, maladaptive coping strategies, low self-efficacy), psychological (eg, fear, anxiety, depression) and social (eg, work and family issues)

factors.<sup>5</sup> Whilst the presence of cognitive, psychological and social factors are regarded as predictors of poor prognosis, when targeted effectively, these factors are considered important mediators for improved patient outcomes.<sup>6–8</sup> This is on the basis of trials showing that successful outcomes, even after a purely physical intervention, are often mediated by changes in cognitive and psychological factors (eg, fear, catastrophising, self-efficacy, beliefs), not changes in physical factors (eg, posture, muscle thickness), which are often the main targets for treatment.<sup>9,10</sup>

Consequently, chronic low back pain treatment guidelines<sup>11,12</sup> generally acknowledge a shift toward a biopsychosocial management approach. In this approach, the cognitive, psychological and social dimensions of chronic low back pain are considered in addition to the physical and pathoanatomical dimensions of pain.<sup>13,14</sup>

<http://dx.doi.org/10.1016/j.jphys.2016.08.002>1836-9553/© 2016 Australian Physiotherapy Association. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

The available research indicates that physiotherapists theoretically endorse the proposed biopsychosocial approach to treatment, yet very few are adopting this approach in clinical practice, despite training in cognitive behavioural principles.<sup>12,15</sup> A recent systematic review<sup>16</sup> found that physiotherapists lacked confidence in their ability to identify, communicate about and manage cognitive, psychological and social dimensions of chronic low back pain in practice. Physiotherapists reported feeling that neither their initial training nor currently available professional development equipped them to successfully deal with these factors in practice. The physiotherapists emphasised a need for training on integrating these factors into patient management.

A growing body of research is exploring the impact of training directed at altering physiotherapists' ability to manage cognitive, psychological and social factors in chronic low back pain.<sup>17-19</sup> It remains unclear whether such training equips physiotherapists with the requisite skill set to appropriately target these factors in practice.<sup>18</sup>

Few treatment approaches in the domain of physiotherapy explicitly integrate cognitive, psychological and social factors in the management of chronic low back pain. Cognitive Functional Therapy (CFT) is a novel, multidimensional, patient-centred intervention that directly explores and manages cognitive, psychological and social factors deemed to be barriers to recovery in chronic low back pain.<sup>5,20</sup> The CFT approach centres on the retraining of maladaptive movement patterns, reconceptualising patient pain beliefs, and addressing any relevant cognitive, psychological, social or lifestyle factors.<sup>20</sup> Training in CFT aims to equip physiotherapists with the required skills through training workshops that place an emphasis on practical experimentation and demonstration with live patients.<sup>5</sup>

Quantitative research has established that patient outcomes improve with CFT delivered by trained physiotherapists.<sup>5,21</sup> However, physiotherapists' experiences after completing such training have not yet been qualitatively explored. It is important to establish such perspectives because, while CFT may be beneficial to patients, if therapists are unwilling or unconfident to administer it, it may not be an approach that is incorporated regularly, effectively, or with ease in the clinical setting.

Therefore, the study question for this qualitative study was:

What are physiotherapists' perspectives on treating the biopsychosocial dimensions of chronic low back pain after receiving intensive biopsychosocial training?

## Methodology

### Study design

A qualitative, interpretive description design was chosen.<sup>22</sup> Interpretive description is a non-categorical methodological approach that was developed purposely to provide healthcare practitioners with a conducive framework for exploring clinically occurring phenomena in healthcare.<sup>23</sup> Interpretive description allows exploration of complex experiential clinical phenomena<sup>23</sup> and provides direction in the creation of an interpretive account using techniques of reflective, critical examination.<sup>22,24</sup> An interpretive description design was deemed compatible with the objectives of this study because the theoretical standpoint of this design centres on the ability of interpretive description to provide generalisable insights into the current clinical practices of healthcare practitioners, which may aid in guiding future clinical approaches.<sup>24</sup> Due to the individual experiences of physiotherapists in their management of chronic low back pain, semi-structured interviews were employed. The authors are clinical and research physiotherapists with an interest in biopsychosocial models of pain. Authors KOS, POS and WD acted in the capacity of CFT trainers and mentors of the physiotherapist participants in this study.

The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist guided the reporting of this study.<sup>25</sup> To ensure

that the questions had a valid and meaningful theoretical scaffolding, the questioning route or topic guide for this study was generated based on a literature review of research articles in the area.<sup>24</sup> The route was then refined by discussion within the research team to ensure the questions, content and structure were suitably open-ended, neutral and sensitive.<sup>26</sup>

### Participants

CFT trainers (inclusive of authors KOS, POS and WD) ([www.pain-ed.com](http://www.pain-ed.com)) nominated physiotherapists whom they deemed competent in the delivery of CFT, after training, and email addresses for individual contacts were provided. A recruitment email containing an information leaflet and consent form was emailed to potential participants. Fourteen physiotherapists were invited to participate.

Participants represented a purposive sample of English-speaking physiotherapists who had completed CFT training. All participants had received CFT training from CFT trainers ([www.pain-ed.com](http://www.pain-ed.com)) (inclusive of authors KOS, POS and WD). Training included both workshop attendance, in which they observed CFT trainers assessing and treating live patients, and supervision of clinical practice. All participants had participated in at least two CFT workshops (average of nine workshops completed to date, average duration of 12 hours), and were supervised by CFT trainers for at least four sessions of clinical practice with patients. The key criterion for inclusion was that a CFT trainer had observed the participant assessing and treating multiple patients and deemed that the participant was competent in the administration of CFT.

### Data collection

Semi-structured telephone and Skype interviews were completed by a researcher (AS) who was unknown to the participants and was guided by a flexible question route. The questioning route covered: changes in practice as a result of CFT training; the participant's confidence and competence in identifying, discussing and addressing cognitive, psychological and social factors with patients; and the participant's confidence in establishing a strong patient-therapist alliance. Interviews lasted from 45 minutes to 1 hour in length. Interviews were recorded using computer audio software<sup>a</sup> and audio taped with a voice recorder.

During the interviews the researcher took notes, as needed, and statements of relevance and contextual field notes were written verbatim. This aided in the identification of the point of data saturation, as it was evident when no new material or concepts arose.<sup>27</sup> Data saturation was achieved after the completion of 11 interviews, with 13 conducted in total.

At the conclusion of each interview, the researcher debriefed the participant on the main content of the interview, and time was permitted for any additional commentary to facilitate the emergence of new unanticipated information.<sup>26</sup>

### Data analysis

Interviews were transcribed verbatim. Specialist qualitative research software<sup>b</sup> was used to aid in sorting the data.<sup>28</sup> Three transcripts were randomly selected and initial inductive codes were formed individually by three authors (AS, KOS and MOK). The three initial code lists were then amalgamated and a comprehensive code list was finalised, in view of the codes most representative of the dataset informed by background reading related to the research question. The finalised code list was then applied to all transcripts by AS.

Coded data were categorised using the qualitative research software and – through a process of repetitive interpretation, synthesising and theorising – themes were identified.<sup>22</sup> Transcripts were then re-read several times and the selected themes were finalised based on consensus discussion between AS, KOS and MOK. The software aided in determining the intensity and

coverage of codes that contributed to the formation of these themes.<sup>28</sup> Four categories were identified to account for all identified themes. Throughout data collection and analysis, widely accepted strategies for ensuring quality in qualitative analysis were maintained, including auditability, fit and transferability.<sup>29</sup> Finalised transcripts with a summary of selected themes were then emailed to participants for validation with no amendments received from participants.<sup>30</sup>

## Results

### Compliance with the study protocol

Fourteen initial recruitment emails were sent. One physiotherapist did not reply to the invitation. Therefore, 13 participants were enrolled in the study and completed an interview.

### Participants

The participants included nine men and four women, from four countries. Participants had an average of 13 years of experience since qualification. [Table 1](#) details the demographic characteristics of the study participants.

### Key themes

Four main themes were identified in the data: self-reported changes in understanding and attitudes; self-reported changes in professional practice; scope of practice; and increased confidence and perceived patient and therapist satisfaction. [Box 1](#) presents the categories constituting each theme.

### Theme 1: Self-reported change in understanding and attitudes

#### New understanding of the multidimensional nature of pain

Many participants stated that CFT training improved their understanding of the multidimensional nature of pain, as prior to training, a biomedical approach to treatment dominated their practice.

*But the cognitive part has been the greatest change... understanding the influence of sleeping poorly, being stressed... I mean back then [before training] I probably realised it somewhere in the back of my head but I didn't act on it. (P6)*

In recognition of the multifactorial nature of pain, participants reported a change in practice where they now consistently explored cognitive, psychological and social dimensions of a patient's pain and were cognisant of the importance of promoting the patient's understanding of pain.

*Previously I didn't have an awareness of the psychosocial factors... Now I systematically explore stress, fear, catastrophising, worrying about life, belief in the future, readiness to change. (P4)*

#### Heightened awareness of the influence of patient beliefs and expectations

In several interviews, participants acknowledged the influence of patient beliefs that often made the identification and management of cognitive, psychological and social factors challenging, including rigid biomedical belief systems among patients.

**Table 1**  
Participant characteristics.

Gender	Time since qualification (yr)	Workplace setting	Time in current work setting (yr)	Experience with chronic low back pain caseload (yr)	Country of practice	CFT training workshops completed (n)	Sessions implementing CFT under supervision (n)
Male	5	Private	5	5	Belgium	7	5
Male	10	Private	5	10	Australia	15	12
Female	12	Public	7	7	Denmark	7	4
Male	12	Public	7	10	Denmark	7	4
Male	12	Private	10	10	Australia	15	20
Male	14	Public	3	12	Ireland	3	10
Male	14	Public	12	9	Ireland	2	10
Female	14	Public	1	12	Ireland	15	12
Female	14	Private	10	13	Ireland	12	4
Female	15	Public	5	4	Denmark	6	6
Male	16	Public	10	15	Denmark	6	6
Male	18	Private	13	18	Australia	15	10
Male	19	Private	5	15	Australia	15	10

CFT = Cognitive Functional Therapy

Specific participant codes, eg, (P1, P2) have been omitted from the table of demographics to ensure confidentiality and anonymity due to the small pool of specialised physiotherapists available for recruitment. It should not be assumed that order of appearance in the table relates to participant numbering.

### Box 1. Themes and categories constituting each theme.

Self-reported changes in understanding and attitudes	Self-reported changes in professional practice	Scope of practice	Increased confidence and satisfaction
<ul style="list-style-type: none"> <li>• New understanding of the multidimensional nature of pain</li> <li>• Heightened awareness of the influence of patient beliefs and expectations</li> <li>• Increased awareness of the importance of the therapeutic alliance</li> </ul>	<ul style="list-style-type: none"> <li>• Adoption of new screening tools</li> <li>• Altered communication style</li> <li>• Adoption of a functional behavioural approach</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded role of the physiotherapist</li> <li>• Role boundaries</li> </ul>	<ul style="list-style-type: none"> <li>• Increased confidence</li> <li>• Perceived patient and therapist satisfaction</li> </ul>

*There is a belief that manipulating their back is the only thing that can help, and then it's quite difficult to introduce this biopsychosocial model because they kind of deny the presence of these psychosocial factors. (P13)*

Patient expectations, reflecting patient beliefs, were frequently cited as fuelling these difficulties.

*Some people want a quicker fix... for them their back is just another problem in their life and they want you as a therapist to deal with that, not them as a patient to deal with that. (P5)*

This heightened awareness of the role that beliefs of the patient play when implementing CFT provided participants with confidence to address those beliefs. In turn, many of the participants were not fazed by the limitation the negative beliefs posed, but instead were happy to address them.

*Sometimes they don't want to hear what you have to say. They'll just say 'yeah, my disc is the problem, I just know I have a prolapse'... that's a barrier that's hard to move... but one I'm happy to start to change. (P2)*

### **Increased awareness of the importance of the therapeutic alliance**

All participants in this study regarded a strong therapeutic alliance as an intrinsic ingredient for addressing cognitive, psychological and social factors.

*Well the relationship I think... I do believe that it creates a more open environment for the patient to feel heard... If they don't feel there's an alliance there, you can ask all the questions in the world but they won't tell you anything. (P1)*

Participants described how an individualised approach to treatment aided in the development and maintenance of rapport, and how this facilitated a deeper insight into the individual cognitive and psychological drivers of pain for each patient.

*I think that individual interaction is highly important... rather than take them as being just another person with a low back pain problem... show that you are understanding of their viewpoint and individual pain... suss out what really makes them tick. Then I believe you make it work. (P10)*

### **Theme 2: Self-reported changes in professional practice**

#### **Adoption of new screening tools**

Several participants reported regularly using validated psychosocial screening tools after completing the CFT training. Tools used included the Orebro Musculoskeletal Pain Questionnaire and the STarTback Tool<sup>31</sup> for the identification of individuals' barriers to recovery.

*So we get a score from 0 to 10 on how depressed are you, how much fear avoidance do you have... It makes you think if you score between 7 and 10 on some of these questions, it's of course relevant. (P6)*

For many participants, the results of these screening tools informed their route of questioning during patient interviews.

*I might use the question to explore a particular problem... so you can go 'Well look you answered this in such a way, tell me a little bit more about it.' (P1)*

#### **Altered communication style**

After completing the CFT training, participants reported a shift in their communication style from a rigid structured approach to an open and unrestrictive style. Participants identified how an open communication style promoted an easiness and fluidity in the

exploration of the cognitive, psychological and social dimensions with patients.

*Now I think I'm much more open-ended, so I kind of ask open-ended questions like 'What's your story?' you know, or 'What brings you here?' (P1)*

### **Adoption of a functional behavioural approach**

The majority of participants described observing functional behaviours to gain insight into relevant cognitive and psychological factors (such as distress, anxiety, and fear avoidance) since completing CFT training. The observation of functional behaviours may vary between individuals, but will be likely to include targeting activities such as rolling in bed, sitting, standing up from sitting, walking, bending and lifting. Participants described this information as guiding the physiotherapy assessment process.

*Sometimes you get people in that don't wear laces on shoes because they won't bend down to their laces... and it gives you an idea of 'Right, well, I better ask this person to do some bending and see what they look like.'... You have a look at how they move on a day-to-day basis as opposed to just from a clinical basis. (P1)*

Since completing CFT training, participants reported assessing and changing functional behaviours – such as assessing and changing bending or sitting, if reported as painful by the patient – to increase the patient's awareness of the relevance of cognitive and psychological factors in their pain experience.

*If you [as a patient] think your disc is vulnerable and you get extreme pain from forward bending, and within minutes you can actually move into a forward bending position pain free, most people would be ready to change that belief. (P6)*

### **Theme 3: Scope of practice**

#### **Expanded role of the physiotherapist**

Following the CFT training, participants described a clear understanding of how traditional hands-on approaches could be used in combination with newly developed skills to address cognitive, psychological and social factors. All participants commented on their ideal professional positioning as physiotherapists to combine their hands-on skills with the newly learned biopsychosocially orientated approach to successfully address the cognitive, psychological and social dimensions of pain.

*As physios we can put our hands on patients and assure them nothing is physically wrong... and with the training we can complement our hands-on and exercise expertise to treat things like anxiety. (P12)*

#### **Role boundaries**

Alongside this new understanding of their role, participants articulated an understanding of the limits or boundaries of their role. For example, participants acknowledged that addressing social factors (eg, workplace interventions) was an area that prompted participants to consider the boundaries of their role.

*I personally find interacting with people's workplaces really tough, partly because I think there isn't necessarily a relationship between me as a therapist and their workplace... We can't give people a new job if they get fired because of their back pain. (P10)*

Additionally, all participants identified situations in which addressing certain psychological factors, particularly those associated with severe psychological trauma, were beyond their scope of practice.

*If someone has a post-traumatic stress disorder or had been abused, some of those instances are extremely depressing for*

*patients and may be beyond our professional boundaries to be managing... so I would refer onto someone with more specialised training. (P12)*

In considering their scope of practice in these situations, participants acknowledged these issues and their relevance for the patient's pain, yet described their understanding that they were not appropriately qualified to treat these issues in practice.

*I can identify it, I can talk with the patient and help them consider the relevance of it to their pain, but when it is really traumatic for the patient then I am not capable enough of addressing this problem... It is because I am not trained in it. (P13)*

#### **Theme 4: Increased confidence and satisfaction**

##### **Increased confidence**

Most participants described increased confidence in their ability to identify and address these factors in practice.

*I feel I've got enough grounding in research and training to say I feel completely confident in doing it. (P11)*

More specifically, many participants described how they were now confident to challenge the patient's belief system, even if this led to some conflict.

*Now I'm more inclined to say 'Listen, hold on a minute. Anyway I've just got to re-examine your point of view on this' and that can sometimes lead to conflict... but I think you sometimes need conflict for conceptual change. (P1)*

##### **Perceived patient and therapist satisfaction**

Overall, participants acknowledged that the CFT training had contributed to improved therapist satisfaction, patient outcomes and overall job satisfaction.

*I think a lot of the patients since I started using the CFT type approach is positive in that they feel we're addressing the problem... I have a feeling that I'm doing something different and helping them a lot more. (P7)*

#### **Discussion**

The primary objective of this study was to gain an insight into physiotherapists' perceptions of the identification and treatment of the cognitive, psychological and social dimensions of chronic low back pain after CFT training. Four main themes emerged from the data: changed understanding and attitudes; changes in professional practice; altered scope of practice; and increased confidence and satisfaction. Participants described increased understanding of the nature of pain, the role of the patient's beliefs and a new appreciation of the therapeutic alliance. Changes in practice included use of new assessments, changes in communication and adoption of a functional approach. Participants described greater awareness of their scope of practice since undertaking CFT training. Finally, participants reported increased confidence and job satisfaction as a result of addressing cognitive, psychological and social factors.

The therapeutic relevance of cognitive factors, such as patient beliefs, to the success of an intervention has been explored extensively within the literature.<sup>32-34</sup> In the present study, participants clearly articulated a perception that cognitive factors were modifiable by physiotherapy intervention. However, participants acknowledged that addressing cognitive factors could sometimes be challenging or difficult. Nevertheless, participants explicitly described feeling equipped to challenge patients' belief systems after participating in CFT training. This is in contrast to a recently conducted systematic review,<sup>16</sup> where cognitive factors such as patient beliefs and expectations were often perceived by

physiotherapists to be clinically unmodifiable in light of a predominantly biomedical skill set. This may point to a relationship between the attributes attained from training (newly acquired therapeutic tools, understanding and confidence) and the perceived degree of modifiability of cognitive factors.

Additionally, within this study there was no evidence of a negative characterisation of patients based on their attitudes or beliefs. This is in direct contrast to that described in a previous systematic review,<sup>16</sup> where physiotherapists were seen to stigmatise cognitive dimensions of pain secondary to a lack of understanding into the relevance of such factors on a patient's pain presentation. The attributes attained from training may have aided in eliminating stigmatisation in light of new insights, greater empathy and a greater understanding of the role of the therapeutic alliance.

In contrast to previous studies,<sup>16,35</sup> participants in the present study reported an increased awareness of the influence of cognitive, psychological and social factors on chronic low back pain.<sup>16,36</sup> Participants described being motivated to systematically incorporate exploration of these factors in all interactions with chronic low back pain patients. Participants described using a more functional behavioural examination and management approach and changes in their interaction style in keeping with the ethos of CFT.<sup>4,21</sup> In previous studies, physiotherapists have described sporadic use of unstructured questions based on instinct or professional judgement, which often resulted in important cognitive, psychological and social factors being missed. This may indicate that physiotherapists need to be multi-skilled in their practice. They may need to understand the biopsychosocial model of chronic low back pain, be skilled communicators and be able to perform a competent yet flexible assessment of functions and limitations to optimise patient-centred care. Depending on the factors that are relevant to the patient, physiotherapists may need to be comfortable with altering their assessment and approach to put emphasis on certain components of therapy (eg, education, exercise). This may require upskilling in communication skills: listening; empathy; encouragement; patient education, including use of analogies and simple language; individualising care to suit a person's preferences and needs; and giving patients time to discuss their story. Patients see these skills as very important to outcome,<sup>37</sup> CFT aims to encompass and teach such skills.

A number of studies have reported that physiotherapists perceive the management of cognitive, psychological and social factors as extending beyond their scope of practice.<sup>16,35</sup> This has resulted in the widespread avoidance of the assessment and management of these factors within clinical practice.<sup>16</sup>

Participants in this study clearly articulated a more multi-dimensional view of their scope of practice and confidence in addressing cognitive, social and psychological factors. This is in contrast to the 'fear-avoidant' status applied to the profession in the past when confronted with cognitive, psychological and social issues.<sup>38</sup> The extension in perceived scope of practice in comparison to previous research is interesting, with participants in the present study identifying the limit of their professional role as not extending to the treatment of deep psychological trauma and depression. This is an appropriate limitation because the objective of CFT training is to identify when it is appropriate to refer onwards for specialised consultations.<sup>20</sup> However, participants in the present study did not perceive it as appropriate to immediately transfer care and discharge from physiotherapy, as performed by physiotherapists in previous studies when such psychological traumas were highlighted.<sup>39-41</sup> Instead, participants in this study perceived it as appropriate to remain involved in helping the patient to identify the links between such traumas and their pain disorder as part of multi-disciplinary care.

Whilst participants perceived cognitive and psychological barriers as being largely modifiable, work-related barriers were regarded as particularly challenging, and modifying them was regarded as extending beyond their professional remit. This is similar to a recent study, which found that physiotherapists were

satisfied to listen to workplace factors implicit in a patient's pain, yet perceived no role in their management.<sup>35</sup> Risk of chronic low back pain has been shown to increase with workplace factors such as low job satisfaction, night shift work, perceived lack of support from colleagues or superiors, and perceived lack of a pleasant and supporting environment.<sup>42,43</sup> While physiotherapists seem to be comfortable assessing physical factors in work, like sitting, bending and lifting, these have been shown to have weak relationships with chronic low back pain.<sup>44–46</sup> Instead, difficulties with integrating the management of workplace factors, as mentioned above, into physiotherapy practices have regularly been highlighted.<sup>47,48</sup> Currently, more than 68% of patients with chronic low back pain do not discuss workplace factors in the manifestation of their pain with a physiotherapist because they do not consider this as within the physiotherapist's role.<sup>49</sup> Physiotherapists may not actively seek to identify strategies to modify work-related issues in chronic low back pain because they are not routinely highlighted in consultations by patients as pertinent barriers to recovery. To date, clinic-based interventions have not routinely included addressing work-related issues, which often involves liaising with employers and other stakeholders. In turn, this continues to be a limitation of the clinical profession that was not addressed by CFT training for many of the physiotherapists involved in this study.

Participants perceived that the increased focus on the cognitive, psychological and social dimensions of pain in practice proved professionally stimulating. This is similar to the results found by Sanders et al,<sup>50</sup> in which physiotherapists perceived their existent work practices to be more rewarding once tools to treat complex pain presentations were taught.<sup>50</sup> Additionally, participants perceived that this targeted intervention was mutually beneficial for patients. Research has highlighted that patients with chronic low back pain seek explanations for the origin of their pain, so as to provide a legitimisation of their pain as long as a psychosomatic origin is not inferred.<sup>51,52</sup> The fact that CFT aims to explain the often important role of cognitive and psychological factors in pain, whilst legitimising the validity of the subsequent pain, may help overcome this concern.<sup>51,52</sup> Similarly, the emphasis on functional movement rehabilitation may be more acceptable to patients who yearn for physical treatment rather than a purely 'psychological' approach;<sup>32</sup> this might be especially important in facilitating patient adherence – at least initially.

The participants' reported confidence and competence in identifying and treating the cognitive, psychological and social dimensions of pain is in stark contrast to that described by physiotherapists in previous qualitative reviews.<sup>16,35</sup> Participants in the present study collectively perceived that the attainment of evidence-based therapeutic tools through training proved beneficial, as they were better equipped and more confident to address these factors in practice. Furthermore, this professional confidence may indirectly bode favourably for patient outcomes, because perceiving the physiotherapy professional as confident and expert remains a patient priority.<sup>53</sup> What remains largely novel about the CFT training is that it incorporates the use of live patient assessment and treatment sessions. Being shown *how* to implement a CFT approach may have increased the participants' confidence and clinical competence. While previous studies have employed the use of vignettes, recent research has demonstrated that vignettes do not serve as a valid tool for therapist education.<sup>54</sup>

There are a number of methodological considerations that may adversely influence the generalisability of the research. Firstly, the participants in this sample were recruited for having achieved competency standards set out in CFT training guidelines. Consequently, the study captured the experiences of physiotherapists who were deemed capable in delivering the approach. Those initially selected for intensive CFT training may also have had a specific interest and/or experience in treating those with chronic low back pain.

Participants' reflexive accounts of clinical behaviour may have been influenced by social desirability, particularly as participants

were aware of those involved in recruitment.<sup>55</sup> This may have resulted in inaccurate reporting of participant perceptions, despite reassurances of confidentiality. An alternative approach may have been to employ clinical vignettes; however, these have been shown to be of limited validity in understanding healthcare practitioners' clinical behaviours.<sup>54</sup>

Intensive CFT training may be an effective tool to increase the perceived confidence and skillset of physiotherapists involved in assessing and managing cognitive, psychological and social barriers to recovery in people with chronic low back pain. Physiotherapists who are deciding whether to undertake such training may be encouraged by knowing that their peers who were deemed competent after the CFT training also reported confidence and satisfaction with the approach.

In summary, physiotherapists expressed confidence in their capacity to identify and manage the cognitive, psychological and social factors in chronic low back pain after CFT training, secondary to gaining an understanding of the multidimensional nature of pain and an expansion of their clinical skill set. Despite this, further clinical trials are needed to justify the time and cost of training, so that intensive CFT training may be made more readily accessible to clinicians, which to date has not been the case. While participants perceived commonly encountered cognitive factors as modifiable, addressing workplace factors remains challenging, and may be an area to target in future physiotherapist training.

**What is already known on this topic:** Chronic low back pain is associated with a complex interaction of factors across the biopsychosocial spectrum, which are often predictors of poor prognosis. Training for physiotherapists in Cognitive Functional Therapy improves patient outcomes.

**What this study adds:** After the training, physiotherapists expressed confidence in their capacity and skill set to manage the biopsychosocial dimensions of low back pain and identified a clear role for including these skills within the physiotherapy profession.

**Footnotes:** <sup>a</sup>Audacity open-source software, The Audacity Team, Pittsburgh, USA. <sup>b</sup>NVIVO 10 qualitative software, QSR International Pty Ltd, Melbourne, Australia.

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