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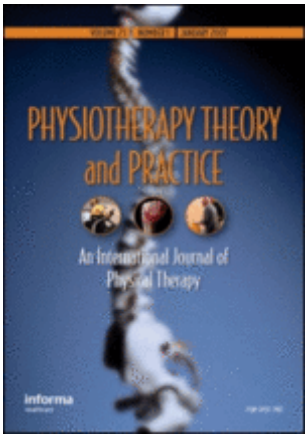

An adventurous learning journey. Physiotherapists' conceptions of learning and integrating Cognitive Functional Therapy into clinical practice.

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INTRODUCTION

Low back pain (LBP) is a leading cause of disability throughout the world (Hartvigsen et al., 2018) and current clinical practice has failed to effectively manage it (Buchbinder et al., 2018). Major guidelines on the management of LBP recommend a biopsychosocial (BPS) management approach (Koes et al., 2010; NICE, 2016), and despite recent studies indicating better understanding of the BPS framework in physiotherapy, transferring research findings into practice is a well-known problem. Unfortunately, professionals' adherence to evidence-based guidelines is poor (O'Sullivan, O'Keeffe, and O'Sullivan, 2017) and both undergraduate and postgraduate curricula pay very little attention to integrating psychological (cognitive and emotional), social and environmental factors into the management of LBP (Ehrström, Kettunen, and Salo, 2018; Foster and Delitto 2011). As a result, many clinicians report feeling inadequately skilled to treat patients with persistent pain and struggle to deal with the psychosocial factors. They often also stigmatize their patients with persistent pain (Synnott et al., 2015; Toye, Seers, and Barker 2017; Zangoni and Thomson, 2017). Furthermore, health care professionals, including physiotherapists, often use the BPS model dualistically and prioritize biomedical findings. Only when no diagnosis can be found do they turn to psychosocial explanations. This indicates a clear need for training health care professionals to adopt a non-dualistic biopsychosocial approach to help them better support patients with persistent pain (Toye, Seers, and Barker 2017).

A number of approaches have been developed to apply the BPS framework in physiotherapy practice in the management of musculoskeletal disorders. A recent systematic review demonstrated that physiotherapist-led, psychologically informed LBP treatments provided small effect sizes, with the exception of an RCT that used an intervention called Cognitive Functional Therapy (CFT) (Guerrero, Maujean, Campbell, and Sterling, 2018). The optimal

way to train physiotherapists to deliver psychologically informed interventions remains unknown, as the results of previous attempts to direct physiotherapists' practice behavior towards the BPS approach have been conflicting. Although attending BPS-orientated workshops has shown to positively change physiotherapists' beliefs in the short term (Domenech et al., 2011; O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Overmeer, Boersma, Denison, and Linton 2011), actual translation into a change in clinical behaviors and patient outcomes has been challenging (Fritz, Söderbäck, Söderlund, and Sandborgh, 2018; Overmeer, Boersma, Denison, and Linton, 2011; Sandborgh, Åsenlöf, Lindberg, and Denison, 2010). For example, an eight-day university course on the cognitive behavioral approach for physiotherapists was successful in changing physiotherapists' beliefs and attitudes, but it did not improve patient outcomes (Overmeer, Boersma, Denison, and Linton, 2011). The authors concluded that the learning process requires time and experiences of practice and clinical supervision, which short courses cannot provide.

Qualitative research provides a deeper understanding of these issues and to date, only a few qualitative studies have explored physiotherapists' views on changing their practice into a BPS approach in the management of LBP (Karstens et al., 2018; Sanders, Ong, Sowden, and Foster, 2014). Three specific studies (Cowell et al., 2018; O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts 2013; Synnott et al., 2016) have explored physiotherapists' views on adopting a CFT approach. CFT is an example of a BPS method that challenges more traditional biomechanical / pathoanatomical physiotherapy approaches. It is an integrated physiotherapist-led cognitive and behavioral intervention for individualizing the self-management of persistent LBP, once serious and specific pathology has been excluded and has shown promising results (O'Sullivan, Dankaerts, O'Sullivan, and O'Sullivan, 2015; Vibe Fersum et al., 2013). It uses a BPS clinical reasoning framework to explore, identify and manage cognitive, emotional, social, physical and lifestyle barriers to recovery (O'Sullivan et al., 2018; Synnott et al., 2016). CFT training aims

to equip physiotherapists with these skills through a combination of written resources, training workshops that include practical experimentation, and demonstrations with live patients, as well as direct clinical supervision and feedback (O'Sullivan et al., 2018; Vibe Fersum et al., 2013). All three qualitative studies (Cowell et al., 2018; O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Synnott et al., 2016) found that after CFT training, physiotherapists reported feeling more confident in their capacity and skills to manage the BPS dimensions of non-specific persistent LBP. This included increased confidence in identifying patients' psychosocial factors and modifying their unhelpful beliefs, understanding the importance of therapeutic alliance and listening skills, and increased focus on everyday functional movements. However, the effects of these changes on patient outcomes are not known. The physiotherapists in the Synnott et al. (2016) and Cowell et al. (2018) studies had undergone intensive CFT training, which included clinical supervision, and the trainers deemed the physiotherapists in the Synnott et al. (2016) study competent in delivering CFT. The twelve physiotherapists in the O'Sullivan, O'Sullivan, O'Sullivan and Dankaerts (2013) study were interviewed after participating in nine days of CFT workshops, but without clinical supervision. As the study included physiotherapists who had changed their beliefs to a greater extent than average, some of whom had previous knowledge of CFT, these findings may not represent the perspective of other physiotherapists who attended the CFT workshops and reported less change in their back-pain beliefs.

Given the limitations and challenges documented in the studies above, it seems that a greater understanding is needed of physiotherapists' experiences of learning and integrating CFT into clinical practice. To gain further knowledge of this process, a qualitative study was conducted in parallel with a feasibility study exploring the implementation of the CFT approach in Finnish primary health care. To date, the training of physiotherapists to deliver CFT in clinical trials

has been intensive and has included direct supervision and feedback (Synnott et al., 2016; Vibe Fersum et al., 2015), which may be a barrier to broad implementation across the profession. It is not known whether less intensive approaches are effective in training physiotherapists in CFT in a non-native English-speaking country. To keep the training in line with the usual delivery of continuing education courses, we conducted a training intervention that consisted of four to six days of workshops combined with a web-based platform offering optional individual learning tasks to support learning. Importantly, the training included no clinical supervision of the physiotherapists. We investigated the views of all the physiotherapists who participated in the workshops.

A learning process is always an individual experience and is different for each participant. However, previous studies have paid little attention to the variation between the physiotherapists' different kinds of experiences of learning and integrating CFT. The aim of the present study was to identify and explore physiotherapists' conceptions of learning the principles of CFT and integrating it into clinical practice.

METHODS

Study design

To explore the physiotherapists' conceptions of learning about and integrating CFT into clinical practice, we employed a qualitative research design (Åkerlind, 2017) involving semi-structured interviews of twenty-two physiotherapists who attended a four-day CFT workshop in April 2016. We chose a phenomenographic approach as this allowed us to explore the variation in the conceptions of the participating physiotherapists (Åkerlind, 2005; Åkerlind, 2017).

Physiotherapists' training

The aim of the training intervention was to: 1. present a multi-dimensional framework for understanding the biopsychosocial nature of LBP, 2. provide training in communication skills to explore the cognitive, emotional and behavioral aspects of LBP, and 3. develop an understanding of how to deliver CFT to patients with persistent LBP (O'Sullivan et al., 2018). It consisted of lectures, group discussions and patient demonstrations in line with previous studies, to enhance learning (O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Main et al., 2012). The more detailed content of the initial training intervention is presented in Table 1 and the CFT approach is described in further detail in O'Sullivan et al. (2018). The continuation of learning after the training sessions was supported by providing optional individual learning tasks (reporting of patient cases) and additional reading materials on a web-based platform. A two-day booster session was held in January 2017, which 12 of the physiotherapists attended. The booster session included four patient demonstrations that we used to deepen the physiotherapists' knowledge of the application of CFT (Table 2). The workshops were delivered by Peter O'Sullivan (initial workshop); Kasper Ussing (booster workshop), who also delivered the CFT part of the training; and Steven J. Linton, who delivered the communication and psychosocial part of the training in the initial workshop.

Table 1. Content of initial four-day workshop here

Table 2. Content of two-day booster session here

Participants

The participants represented a purposive sample of 22 of the 23 physiotherapists who participated in the initial CFT training workshop. One physiotherapist dropped out of the project

after the initial workshop because she changed jobs. We invited primary health care (public health care and occupational health care) study sites from across Finland by contacting the physical and rehabilitation medicine specialists of the hospital districts or the persons in charge of treating musculoskeletal problems in occupational health care. The sites were only included if they were interested in participating in the feasibility study and committed to reimbursing the travel and salary costs of their personnel. The participating physiotherapists were selected from the involved units by the persons in charge, and the researchers did not influence this selection.

The first author contacted all the physiotherapists by email and all 22 agreed to participate in the interviews. They were from all over Finland and worked in both public outpatient clinics (14) and occupational (8) health care units. Three of them were men and 19 women, with a mean age of 47 years (33–61). They had an average of 20 (9–31) years of clinical experience after graduation. Appendix 1 shows detailed information on the participants' gender, age, work experience, health care setting and amount of CFT training.

Data collection

The first author, who was not involved in planning and delivering the workshops, collected the data in spring 2017 after the end of the training intervention. She was present during the workshops to understand the process of the training but was otherwise unknown to the participants. The semi-structured interviews took place at the physiotherapists' workplaces according to their wishes. They were conducted in Finnish and only the interviewer and the interviewee were present. The quotations were later translated into English by a professional translator. The interviews began by asking: "Tell me about your process of learning CFT and implementing it in clinical practice" and "How do you see CFT now – what does it mean to you?", and continued dialogically according to the interviewees' answers (see interview guide Appendix 2.) The interview guide was pilot tested by a member of the research group who was

not involved in this study but had undergone CFT training. The interviews lasted 62 minutes on average (47–81) and were audio-recorded and transcribed verbatim (clean, word-to-word) by the first author (Åkerlind, 2008; Brinkmann, 2013). The resulting data consisted of 368 pages (font =Times New Roman 12, spacing = 1.5). Participant validation of the transcripts/findings was not carried out (Åkerlind, 2005).

Data analysis

In the present study, we aimed to outline the variation among physiotherapists' conceptions of learning and integrating CFT into clinical work. We chose a phenomenographic approach because it enables systematic identification and description of qualitatively different ways of experiencing a phenomenon (Marton and Pong, 2005; Åkerlind, 2005) and the identification of the variation in the physiotherapists' conceptions and of the hierarchical structure of the conceptions (Åkerlind, 2005; Åkerlind, 2008). Phenomenographic studies aim to elucidate the second order perspective; to present the participants' conceptions in categories of description that illustrate the variation in how the participants understand the phenomenon in question (Marton and Pong, 2005; Åkerlind, 2017).

The phenomenographic analysis followed the principles presented in the literature (Marton and Pong, 2005; Åkerlind, 2005; Åkerlind, 2008). Phenomenography is a data-driven approach, which means that all findings arise from the data (Åkerlind, 2005). Although the categories of description were derived from the physiotherapists' interviews, they do not directly represent different types of individuals: They describe the variation in the physiotherapists' understanding of the process of learning and integrating CFT on the collective level (Marton and Booth, 2009). In other words, we abandoned the boundaries separating the individuals and focused on the pool of meanings discovered in the data (Åkerlind, 2005; Marton and Booth, 2009). In the present study, this means that the physiotherapists may have expressed more than

one conception or may have had conceptions that belonged to different categories, related to different themes.

The analysis process began by the first author listening to the interviews and reading the transcripts several times to become familiar with the data and to identify the meaningful units. The selected quotes made up the data pool from which the similarities and differences, as well as the structural relationships, were identified. The initial coding of the data was conducted using a Microsoft Word (Microsoft Corp, Redmond, Washington, USA) document and the themes were found by sorting the printed quotes into piles and examining borderline cases (RH & AP). As the themes emerged, we compared and contrasted the selected quotes in an iterative manner. During this process, we observed that each theme varied hierarchically and by comparing the variation of the themes, we defined the categories of the phenomenon. During the analysis, the results were discussed ~~in the larger study group~~with all of the authors and in a group of qualitative researchers ~~professionals familiar with qualitative research methods~~, and the consistency between the original data and our findings was constantly evaluated to minimize the influence of our own interpretations. The categories of description were organized hierarchically – some conceptions were more complex or more complete than others. These categories of description represented the expanding awareness of the phenomenon of learning and integrating CFT into clinical practice. During this process, the categories' critical aspects were identified. These critical aspects of awareness highlight the transitions between the categories of description and describe what is needed to move from the understanding of one category of description to a more complex one (Åkerlind, 2005; Åkerlind, 2008).

We obtained ethical approval from the Northern Ostrobothnia Hospital District Ethics Committee. Before conducting the interviews, we explained the nature of the study to the participating physiotherapists. The interviewees provided their informed consent. The reporting

of the study adhered to the consolidated criteria for qualitative research (COREQ) guidelines (Tong, Sainsbury, and Craig, 2007).

RESULTS

The phenomenon of learning and integrating CFT into clinical practice, as reported by the physiotherapists, was captured by five hierarchical categories of description: I) Recognizing the difference of the new approach; II) The new approach challenging current practice; III) Waking up to explore; IV) Commitment to the new approach; and V) Expanding the application of the new approach. These categories were hierarchically structured, and the latter categories represent more developed conceptions of learning and integration of the CFT approach than the former categories. They varied on the basis of four themes: 1) Membership of work community; 2) Learning journey; 3) Transition to new working methods; and 4) Professional role as a physiotherapist (Table 3, Figure 1).

The abbreviations at the end of the quotes identify the participating physiotherapists and page number of the transcript. The variation of the themes within each category of description are highlighted by the name of each theme in **bold** and the name of each theme of variation in *italics* throughout the results section (see Table 3).

Insert Table 3 here.

Category I Recognizing the difference of the new approach

This category describes physiotherapists' perceptions of learning about CFT and the realizations that arose, especially at the beginning of the learning journey during the workshop and after returning to the clinic. This highlighted the great difference of the CFT approach; the physiotherapists' previous ways of working, and the ways in which their colleagues still worked. As a result, they reported feeling isolated in their work communities and resistance

towards the approach and the training, and insecurity about their skills. They also reported doubting whether this was the right way in which to work. Some were unable to accept the proposed change in their work, and their learning journey did not continue beyond the conceptions described in this category.

The first identified theme of variation was **membership of the work community**, which in this category consists of *loneliness in one's work community*. The physiotherapists felt isolated in their work communities, as others did not understand their new way of working, and they had insufficient opportunities to share their thoughts due to a combination of busy workdays and a lack of physiotherapists in the same unit.

"This is quite a lonely job; I can't share these thoughts with anybody." V24

"In practice [during the workdays] there is not time to discuss but if there would be a forum where we could share our experiences…" Q13

The second theme of variation, **the learning journey**, in this category focused on *resistance* towards the new approach and training style. The resistance came as a surprise to some of the participants and it was seen as a barrier to learning during the workshop. They understood that the trainers wanted to wake them up, but a few of them found the way of training somewhat abrasive and the patient demonstrations a manifestation of a "guru culture". Most physiotherapists were able to overcome the resistance, but for some it prevented their learning journey from properly starting.

"During the first two days, I shared a room with X and we had quite tough discussions in the evenings and went for walks to ventilate and it felt quite surreal, I just couldn't accept it even though the patient cases were clear…my reaction was strong and it took me by surprise that I reacted so strongly, when thinking about it in hindsight… I don't know, maybe changing one's own thoughts and beliefs was just so hard…" C1

"My memory is that we didn't go through some of the key things in communication, but it was just him [POS] showing off in front of us, just like this video presenting this man who got better, which… in my opinion, diminished his credibility, with him boosting his messages with stuff just like healers and preacher healers do…they have these videos as well, so it doesn't contribute anything" B17

In this category, the third theme, **transition to new working methods** was related to the physiotherapists feeling *insecure* about applying CFT in their practice and changing their own way of working. Through experience they accepted parts of it, but they felt they had insufficient training and practice to become confident, because they considered most of their patient population unsuitable for the CFT approach (e.g. patients with acute pain). They also reported insecurity about their clinical reasoning skills in the BPS framework and about their knowledge of pain science and psychosocial factors. Applying certain aspects of the CFT approach was perceived as difficult and the uncertainties reported by the physiotherapists varied.

"I just wish I had more of these [low back pain] patients, there are so many patients with shoulder pain and I would need to be able to practice this broader approach" G14

"Sometimes…I feel like that is this too psychological this approach that I am not ready to think about these things with the patient so deeply and to reflect her thoughts like I don't have that kind of training I can't do that" I3

"Well, maybe it was drawing the summary…I haven't done it many times so far… maybe it felt kind of the hardest thing…somehow I don't trust myself to make it visible so the patient can see what the cause and effect relationships are… that kind of uncertainty…" O9

Despite the various challenges to adopting the approach, the physiotherapists reported that their **professional role as a physiotherapist** had changed. In this category, they reported having started to *look at their patients in a different way*, understanding that there was no one correct

way to move. They noticed that many LBP patients needed relaxation rather than exercises that created more tension and started to observe different aspects in their patients' movement behaviors.

"It's kind of a relief that you don't always need to think that you must do something but you are allowed be laid-back and to relax, there is no right and wrong… no wrong kind of a body and there is no right or wrong kind of sitting posture or…for example during our first day of training that we had a year ago, there were many little things, just basics on how to turn relaxed and lift and be relaxed…" E3

"Well, firstly observing the patient …with new eyes, with me immediately looking if he's tensing some part of his body or if he's relaxed. Is there some avoidance behavior to do with his tension… it starts with … observing his basic movement: how he sits, how he undresses, how he is, and it already gives some direction to the whole interview part." F2

Category II Towards integrating the new approach

The focus of this category was on the practical challenges that the physiotherapists faced when trying to integrate their newly learned skills into their practice. There were multiple barriers to the integration of these skills even though they wanted to change their practices, and in this category, old and new ways of working were often combined.

The physiotherapists' understanding and experiences of **membership of their work community** expanded from the first category to the second. They started reflecting on the *organizational processes as barriers* to integrating CFT into practice. They reported a lack of capacity to deliver CFT due to short appointment times, being constantly in a hurry and unclear referral pathways. Some also reported feeling the need to adhere to old protocols that they no longer saw as valid.

"It is usually maximum one hour and I should also do the documentation before the next patient arrives so… this lack of time…these patients would need much more time." G8

"If we do this kind of thing [CFT] we need to have some kind of [psychological] support for these patients if they haven't gotten into contact yet, like I don't feel like a professional in those things even though I feel that I communicate with the patients quite well…we have lots of small groups and some pain groups and breathing groups but it's not the same, these people need individual [management]… well, I think seeing the need to get these things working was certainly the biggest transformation in this process." E3

"… mostly… in the beginning we had certain structures for doing this kind of preventive assessment and all the materials and templates were there… with this kind of risk-based model of patients' own opportunities to influence the situation and motor control tests that I now feel are less important, but I still need to give the material to the patient and I feel that I don't want to so I need to fight it because I see that the old materials are not what I would like to give the patient." C12

The physiotherapists faced *personal challenges during the journey*. They reported not being able to fully engage in learning, despite recognizing the need for change, because of a lack of English language skills, difficult life situations and other commitments. **Their learning journey** was not progressing in the way they wanted.

"Firstly, the English language is not one of my strengths… I looked more at the examples [patient demonstrations] and tried to learn from them." S1

"But immersing myself and getting into the subject has now been of secondary importance because of, well, being busy at work and thinking about personal stuff, so I would've gotten much more out of this… if I had… studied it." E17

In this category, the **transition to new working methods** meant that insecurity expanded into *combining old and new approaches*. This resulted in an understanding that their previous knowledge could be still utilized and the physiotherapists expressed familiarity with and relatedness to the new approach. The new approach helped them rediscover previously learned but unused tools, such as relaxation exercises.

"That way this approach in it was not unfamiliar…I am not trained in psychophysical physiotherapy but I have used those methods because my colleagues have used them and I have been in that kind of community where I have worked certain amount with psychiatric patients and those methods were partially familiar like those related to relaxation and breathing and generally those related to wellbeing … "K1

"All the things we've gained…experienced so far, they're worth utilizing in the background, nothing is, nothing is kind of excluded; it's just something extra, this approach." T5

In this category, the physiotherapists reported that the new approach challenged them to *change their attitudes and language,* positively affecting the way they practiced. They reported that looking at their patients in a different way expanded to acquiring a more courageous attitude towards pain, giving patients more positive messages, progressing more confidently with exercises and unraveling patients' negative beliefs, meaning a change in their **professional role as physiotherapists.**

"That kind of confidence, that I've looked at those particular red flags and I can be sure that I've gotten the courage to encourage this patient to move, and I dare to make them bend. That's the kind of thing that really gets reinforced because before there's always been … a bit too much respect for the pain, or being afraid … with this training I've gained lots of courage and I've tried to, like, communicate to the patient that there's nothing to be afraid of, that all those sensations aren't necessarily [dangerous]…" P4

"What it means is that I aim to strengthen the person's trust in her own body and tell that the back is strong, a positive outlook on the body and it's use. Confidence and courage… and to bring up positive things about the patient, things that can help the patient move on." V1

Category III Waking up to explore

In this category, the training made the physiotherapist wake up to explore their practice more broadly and after starting to explore ways to make the new approach feasible in their own work environments, they started to seek solutions to how they could be better help their patients. This reflective process, which was painful for many, led physiotherapists outside their comfort zones towards a more multidimensional approach in their practice that considered psychosocial issues and scientific evidence. This was mostly new to the physiotherapists.

The **membership of the work community** was seen in this category as *desire for a common language*. The physiotherapists noticed that the mixed messages that patients received from different professionals, for example interpretation of MRI results, made their work more difficult. They also sought more multidisciplinary work methods than those currently in use in their work communities. The desire for a common language extended beyond their own work community; they also wished to spread evidence-based understanding of LBP more widely among health care professionals and in the media.

"Well, the problem was that he [a patient] had an assessment and opinion from ten different experts, as well as his own… it was really hard to start helping him." D2

"If other professionals could adopt this… and maybe cooperate… in the future we should do multidisciplinary work…that could maybe be fruitful if we spoke the same language and we could promote this together…" M16

"This should be in the news. This is such a wonderful message that everybody should be aware of this." V23

The physiotherapists stated that to get the **learning journey** started, a feeling of *being shaken* was necessary. It is not easy to turn one's thinking upside down, and in the beginning, the physiotherapists felt dumbfounded; the training was an eye-opening experience. For some, the shock was bigger than expected. Others stated that this was the greatest change in their professional thinking, their biggest upheaval since graduation.

"Could I say that sometimes making a change gets easier, you know, when you get properly shaken up, it might be… it can depend on a person, it may be that for me it suited well because I adopted those things quite easily" V16

"Well, those four days, it was like being hit over the head, somehow just like a kind of stunning experience, so really, really like interesting… somehow I kind of woke up and became eager to sort of look at things from a totally different viewpoint." O1

The transition to new working methods was linked to a *critical reflection on one's own way of working*. Some even felt ashamed that they had earlier unhesitatingly believed what was taught at workshops. Now they discovered that some of those statements lacked evidence, which led to observing their previous ways of thinking and working critically, and they hoped to adopt work practices based on evidence in the future.

"Of course I haven't been scientifically oriented, I have just learned by doing and I have thought that what I have learned was right and I have never been able to question whether there would be something wrong… so it was confusing… but it makes sense because he could explain using research and the materials I have been reading…" P3

"I look at the way I worked earlier in a different light…I don't mean that what I've done has been all wrong, but with a certain patient population, with the high-risk ones there, I don't

think we've been able to act in the right way…the approaches we've used earlier, they haven't been the right ones." C17

The physiotherapists' conceptions of their **professional role as a physiotherapist** broadened further in this category and expanded beyond their previous biomedical focus, to consider addressing psychosocial factors. This led them to step *outside their comfort zones*. Many started using the Örebro Musculoskeletal Pain Screening Questionnaire (ÖMPSQ) and the STarT Back Screening Tool (SBST) as shields when starting these conversations, and felt they were now able to listen to distressing patient stories. They understood they did not have to be psychologists to talk about all aspects of life; they could be humans to other humans and obtain permission to use more time for interviews.

"If it works… it is because as a therapist in a situation with the skills I have, I feel that I can't handle this and progress with this, the questionnaire works as…I don't know whether shield is the right word for that" B6

"This phrasing of questions and then the listening itself and getting to grips with those slightly trickier topics so that I'm like ready to listen to them; earlier, if the patient started to talk about them, I pretty quickly tried to shift the focus away, so I was listening and hearing but then again not really…" C3

"After the trip to Lahti [booster session] I told the girls that now I understood that I don't need to be a psychologist, that I can ask questions, but I don't need to be the psychologist in the way it came across on that trip, you know.. it sort of woke up in me" N3

Category IV: Commitment to the new approach

In the fourth category, the physiotherapists started to commit to the new approach with support from their work communities. They reported a growing conviction in the approach, an increasing feeling of competence and an understanding that a strong therapeutic alliance facilitates better patient results. The doubts transformed into enthusiasm and many themes within this category describe enablers of learning and integrating CFT rather than the barriers described in the lower categories.

This category expanded the understanding of learning and integrating CFT into clinical practice to also understanding the importance of commitment to the new approach. In this category, **membership of the work community** meant being enhanced by *a supportive work community*, in which supportive leadership, colleagues with a similar understanding, the opportunity to share clinical experiences, and flexibility in appointment duration all helped in committing to the new approach and sustaining learning as well as changing their practice behaviors.

"It's already a big help that our senior physician knows about this and accepts it … it certainly helps that there are others who've been there [on CFT course] so we can share… I'm allowed to work this way and use this kind of approach, and we're lucky we can plan our own appointment lists, so in principle, when I see there's this kind of patient then I can give them a longer appointment so I won't run out of time straightaway…" R12

"It is good, it is very good to have colleagues who I can share and think together these things, it is very fruitful and it helps continuing one's own learning when I can think about this…" Q17

Committing to the new approach and setting out on the **learning journey** required *becoming convinced* of the approach. Physiotherapists reported that this was facilitated through seeing patient demonstrations. Moreover, watching presentations of scientific evidence, success with their own patients or resolving their own back problems by experimenting and utilizing the CFT approach on themselves were also seen as important, as this made the physiotherapists see that

it worked not only for the trainers, who were experienced in using the approach, but also possibly for the participants.

"Well, there were the patient demonstrations, they've been really good, and no way do I believe that any kind of lectures could open up this approach this well, and there I was, amazed how … this approach kind of … clicked for them, when I listened to these patients at the beginning I was thinking that this is never going to work and then it was just, click, and there it was, you saw that they were responsive and, well, the demonstrations were somehow quite unbelievable." O8

"I have tried to reach relaxation and through relaxation my back is basically painfree…so I have experienced personally this small going astray in this thing and I have personally benefitted and experienced that this ideology is helpful and now I try to tell this joyous message for my patients" F8

The physiotherapists perceived that CFT helped them gain better treatment outcomes and the **transition to new working methods** meant that they felt *more equipped to help* patients with persistent LBP. They saw more complex patient cases as positive challenges and no longer as a source of frustration, and this helped them commit to the new approach. This also increased their enthusiasm towards their work.

"It's had an effect, it's somehow given me the feeling that I can do this…it's challenging but I sort of feel much better equipped and I can, like, say that there's a certain kind of professional pride in knowing and doing something quite valuable…" U13

"One is more… enthusiastic about those back pain patients, earlier I was like oh no, that one comes again.. that… she has pain in the knee and all other aches and pains. I am more courageous to meet the patient because I don't need to think who of my colleagues could I send

her to if I can't do anything with her so I have more courage to handle the situation …my own enthusiasm and efficacy has grown here…" J13

The theme of the **professional role as a physiotherapist** broadened as the physiotherapists reported *getting closer to the patients.* This was possible through new-found, person-centered communication skills, being present and listening to a patient's story and using time for the interview, which were seen as ways to improve treatment outcomes.

"Yes, well, firstly the interviews have become much longer so it takes much more time when you let the patient really talk, I've had to hold myself back so I don't put words in the patient's mouth; I do that sometimes because I'm kind of fast-paced, so sometimes I need to slow down and tell myself to shut up and let the patient tell… their own story." P7

"My way of thinking has been enhanced, that when you listen to the patient and you have time… for that patient, that you listen and that trust. That it is one thing I get praised for - often I have been the first person who has had time to stop among that patient's problems that …well… those seeds sometime sprout from small things I believe in that kind of on the other hand simple things, in the fruitfulness of the beginning of the therapeutic alliance" K3

"Now she's been heard because it's here that we listen so you … you just ask the question and you listen and the same patient can have the experience before of coming to listen when talked to, when talking about his issues and being given instructions, but he's not necessarily asked about very much … that the listening skill in this, in this approach, it's grown, and I've taken the skill of listening over into my everyday life and my own working community as well" T13

Category V Expanding application of the new approach

In the fifth and widest category, the physiotherapists started applying their skills more broadly, adapting the new approach to their own work environments. This resulted in more collaboration, using the skills in the treatment of other musculoskeletal problems, understanding the importance of continuous learning and using creativity in their work. This was also manifested as renewed professional identity and a wider professional role. These conceptions represent a good understanding of the important principles of CFT.

In this category, the physiotherapists understood *the importance of multidisciplinarity* and saw the **membership of their work community** as playing an integral role as a member of a team. Following the training, the physiotherapists reported collaborating more closely with psychologists, psychiatric nurses, physical education instructors, and doctors. This enabled them to help patients navigate the health care system and to know where to refer them if needed.

"Maybe I've learned…to offer more conversational support, for example, through a psychologist or psychiatric nurse, because here the good thing is that you can see a psychologist without a referral, she's said that I can send my patients… and in fact I've cooperated a fair bit with the psychologist." K4

"The experience for the patient that he gets the multidisciplinarity and he gets the help for sure much better in that situation" M17

The physiotherapists described their **learning journey** as a *continuous adventurous journey* that continued beyond the official end of the training intervention, and that becoming convinced about the approach was not the end of the journey. The initial four-day workshop was seen as a good start to becoming familiar with the approach, but the physiotherapists stated it took time and practice for things to fall into place. Those who participated in the booster session saw it as important to consolidate and advance their learning. They described the journey as a wave

motion: feeling tired from time to time and regressing back to old routines, but then receiving support to continue the journey again.

"Then about the booster session, I think it was absolutely essential because it cleared up a lot of thoughts and I'd managed to try it out a bit in practice… I could sort of absorb the knowledge, I was at that point that, like, now I want to learn all of this, I wanted to even the first time, but I just couldn't manage it so well, only now I see it was good that the training was longer … after that it's felt like it clarified my thinking a lot more" A3

"Well, this year's been a kind of a journey of adventure, the whole time I feel like I'm continuously studying and learning this…" V15

"If I reflect back on this period, I see it's started with small steps and they've become bigger as I've adopted the tools and in a way it's became partly a routine, but I don't mean I've reached my target in any way or am somehow skilled in using this method, but I sort of feel I've learned and made progress" K4

The **transition to new working methods** in this category was represented by newly learnt skills taking on a personal shape. The physiotherapists felt they were given *permission for creativity,* enabling wide use of their personality and skills. They reported feeling liberated after not having to strictly work according to certain rules and formulae anymore and were instead able to be more patient-centered.

"It's somehow a creative space nowadays…what I find amazing is that there are no specific [rules]… I don't know beforehand what's going to happen next… compared to earlier when we had certain kinds of practices … we did certain kinds of tests with all the patients…" V13

"In my opinion this [CFT] has enabled that I can even use myself creatively…" D14

The physiotherapists reported that their **professional role as a physiotherapist** and their outlook had changed from that of an "expert" to that of an "enabler". This included helping patients develop greater awareness of their cognitive processes and behaviors and helping them regain body awareness while acting as a coach. The *professional identity of the physiotherapists was renewed*. They felt motivated when the patients figured things out by themselves and the physiotherapists could support their self-efficacy and saw the value of patients being able to contact them if needed.

"Well, it's always when you get somebody to figure things out and if I manage to do that then it's a very powerful motivating factor because so much can happen in that person's thinking about the use of the body as well… it's these moments that are awfully motivating and I don't think those sorts of strong experiences of successfully helping someone are even necessarily possible with a more traditional or other way…"A9

"And also those instructions for the future and follow-up and that kind that they feel, those people that they can come and always contact me if they need.. that they have somebody they can trust and who they can return to" G4

SUMMARY OF THE FINDINGS AND CRITICAL ASPECTS BETWEEN THE CATEGORIES

Insert Figure 1 here

We identified a number of key aspects that changed between the categories, which can be considered essential for the learning journey towards adopting CFT and which should be considered when planning support for physiotherapists during this process. The first critical aspect which changed between Categories I and II, was the ability to overcome resistance and to change one's views. This included accepting new ideas and implementing parts of the new approach alongside old ways of working. The process of learning and integrating CFT into

clinical practice evolved further between Categories II and III, and the critical aspects that changed between these categories arose from the experience of being shaken, the ability to critically reflect on one's own ways of thinking and working. This meant also stepping outside one's comfort zone to further explore the possibilities of the new approach. The critical aspects that helped the learning journey continue further from Category III to IV were support from the work community and gaining confidence in one's own skills through experiential learning, which led to becoming convinced of the new approach. Finally, the critical steps from Category IV to V that led towards expanding the application of the new approach were multidisciplinary collaboration, the use of one's creativity at work, and understanding the importance of continuous learning. Learning did not stop after the training intervention ended; it became an ongoing journey.

DISCUSSION

The main finding of this phenomenographic study is that physiotherapists' conceptions of learning and integrating CFT into clinical practice vary greatly. The results show that a number of factors influenced the physiotherapists' learning journey. The critical aspects between the categories of description can be understood as stepping stones towards more complete perceived learning and integration of CFT into clinical practice. The physiotherapists participating in our study worked in different kinds of work communities, had different backgrounds, levels of work experience, and opportunities to engage in learning. These factors possibly contributed to the variation of the physiotherapists' conceptions.

The process of learning and integrating CFT into clinical practice described by the participating physiotherapists has many commonalities with the Normalization Process Theory (NPT), which helps explain barriers and enablers of the adaptation of new approaches as well as the activities people engage in when attempting to change their ways of working. NPT proposes

that implementation is operationalized through four mechanisms: coherence, cognitive participation, collective action and reflexive monitoring (May and Finch, 2009). These mechanisms can be seen in our study in the process in which the physiotherapists attempted to establish coherence between their previous practices and the new approach, described below.

First of all, the physiotherapists reported that they had previously received biomedically-focused training, and that the CFT approach was very different to that which they had been taught during their undergraduate training and further education workshops. In the beginning, during the initial workshop, almost everybody felt considerably challenged, which created a great deal of cognitive dissonance and resistance. Earlier studies exploring physiotherapists' experiences of adopting a BPS approach for the management of LBP have not reported this. Sanders, Ong, Sowden and Foster (2014) reported thoughtful obedience from physiotherapists, but no resistance. This may partially be due to the biomedical background and no previous knowledge of CFT among the physiotherapists participating in our study, whereas in many previous studies (Cowell et al., 2018; O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Synnott et al., 2016), at least some of the participants had earlier knowledge of the BPS approach and were competent in CFT or had much more extensive training. Furthermore, many other psychologically informed physiotherapy approaches concentrate on teaching cognitive behavioral therapy methods in addition to previous skills, whereas CFT directly challenges the biomedical beliefs related to physiotherapy practice. This may partly explain our findings.

Based on the conceptions of the physiotherapists in our study, if the resistance towards the new approach and other barriers could not be overcome, no coherence was found, which led to discontinuing the learning journey and not adopting the CFT approach. The first critical aspect, cognitive flexibility was important for overcoming resistance and changing one's attitudes and beliefs, and required cognitive participation (May and Finch 2009). The physiotherapists who were able to overcome this resistance reported that confusion and the feeling of being shaken

were important drivers of changing their ways of working. Reflective monitoring of their own practice and thinking was crucial at this level. It seems important that, in addition to the content of the CFT approach, the course provided new tools to reflect on one's own practices and to critically assess information that was delivered by other professionals, the media and journals. Self-reflection is seen as necessary for health care professionals treating people with musculoskeletal problems (Nijs et al., 2013). This might be critical for keeping the lifelong learning journey moving forward and is an important factor for all training interventions to take into account.

In addition to earlier biomedically-oriented training, we identified a number of barriers to learning and adopting CFT, some of which were similar to those in earlier studies that have explored physiotherapists' experiences of applying psychologically informed care in clinical practice. For example, Karstens et al. (2018) explored physiotherapists' views on adopting a stratified treatment approach in Germany and reported a lack of clear referral pathways as a barrier to adopting the approach, very like our results. Another study (Sanders, Ong, Sowden, and Foster, 2014) explored the same approach in the UK and also recognized the lack of a common language among health care professionals, manifested as confusing messages to patients and a barrier to implementation. We, like most other qualitative studies in this field (Cowell et al., 2018; Fritz, Söderbäck, Söderlund, and Sandborgh, 2018; Karstens et al., 2018; Sanders, Ong, Sowden, and Foster, 2013) observed that a lack of time and a limited number of patient appointments were also common barriers. The economic benefits of spending more time with complex LBP patients must be demonstrated to justify spending this extra time with them. Previous studies (Foster and Delitto, 2011; Nielsen, Keefe, Bennell, and Jull, 2014) also support the importance of appropriate referrals to psychological health professionals. In contrast to these, the physiotherapists in our study also reported a lack of support and feelings of isolation in their work communities, as well as the expectation to follow clinical protocols that they no

longer considered evidence based. Previous research has reported that clinical mentoring, which our physiotherapists did not receive, is an enabler of and is crucial to changing one's practice. (Cowell et al., 2018; Synnott et al., 2016)

Implementation studies have identified that when change in practice happens, it also occurs at the level of the whole work community and collective action is needed (May and Finch 2009), whereas changing an individual's beliefs and competences is not sufficient to bring about changes in clinical behaviors. If physiotherapists feel lonely in the process of change, they easily regress back to their old ways of working (Piirainen and Viitanen, 2010). Therapist drift is a known phenomenon and is described in psychotherapy literature (Waller, 2009), highlighting that clinicians do not always deliver therapy according to its principles, despite having undergone training. The physiotherapists in our study also noticed this phenomenon. When they encountered problems, they reported feeling insecure about the CFT approach and went back to their old, familiar ways of working, which felt safer. Overmeer, Boersma, Denison and Linton (2011) state that it might even be unrealistic to expect a single physiotherapist to change outcomes among patients with complex problems, and that this requires collective action and a broader change at an organizational level.

Personal challenges in learning CFT, as reported by the physiotherapists in our study, and which have not arisen in earlier studies, should be considered when planning support for the participants of future interventions. Lack of English language skills, difficult personal situations and commitment to other studies were all reported as barriers to learning.

In line with previous studies (Nielsen, Keefe, Bennell, and Jull, 2014; Synnott et al., 2016) and the NPT (May and Finch, 2009), our results show that this process takes time and that physiotherapists go through an evaluation of whether or not the new approach fits their current practice. For some, this resulted in adaptation (May and Finch, 2009), which meant combining

their new and old ways of working, and not using the new approach regularly. In contrast, others reported having fully adopted the CFT approach and that it had become normalized in their practice (May and Finch, 2009). Like us, Sanders, Ong, Sowden and Foster (2014) observed that the physiotherapists were convinced to change their practices by trying out the new approach and reflecting critically on their work. Also in line with previous studies (Nielsen, Keefe, Bennell, and Jull, 2014; O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Synnott et al., 2016), although most of our participants reported convincing scientific evidence and live patient demonstrations as the most important enablers of learning, some physiotherapists experienced these demonstrations and the style of presenting the evidence as negative.

A more complete perceived change in one's practice towards the CFT approach seems to have been reinforced by support and collaboration in the work community, by becoming convinced and gaining confidence and by successes with patients with complex problems through an experiential learning process. Furthermore, the idea of being creative in one's work and continuously learning also seem to have been important. One aspect that was unique to our study was that the physiotherapists reported becoming convinced through applying principles of CFT to themselves (if they suffered from LBP).

We do not know whether the physiotherapists changed their practices. This we will explore in future studies. It has been proposed that new knowledge is implemented at individual, group and organizational levels (Piirainen and Viitainen, 2010; Zidarov, Thomas, and Poissant, 2013) through participating in an iterative process that instead of proceeding linearly, includes phases of more and less active progression. The physiotherapists in our study described this process as a wave motion – the adoption of CFT elements did not occur in a linear manner.

During the training, the physiotherapists recognized the need to change their practices into a more person-centered approach to care, which closely reflects the expectations of patients with LBP who seek care from health care professionals (Holopainen et al., 2018). In line with previous studies (O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Synnott et al., 2016), most of the physiotherapists in our study reported an increased awareness of the influence of cognitive, psychological and social factors on persistent LBP. Other studies that have trained physiotherapists to adopt the assessment and management of psychosocial factors in their work have noticed similar problems to those encountered by some of the physiotherapists in our study. For example, the use of screening for psychosocial risk factors in LBP is widely recommended (Lin et al., 2019), but many physiotherapists found this challenging. In line with the conceptions of some of the participants in our study, many other studies have reported the lack of knowledge regarding psychosocial issues and interventions as a barrier to more widely implementing this perspective in physiotherapy practice (Beissner et al., 2009; Foster and Delitto, 2011; Main and George, 2011; Nielsen, Keefe, Bennell, and Jull, 2014; Singla, Jones, Edwards, and Kumar, 2015). Even though the physiotherapists in our study were taught how to use the questionnaires, many of them had not started using them or only used them occasionally. This is similar to the results of a study by Sanders, Foster, and Ong (2011), in which general practitioners who were taught to use a subgrouping tool reported barriers to its use: time constraints and other organizational pressures, and a lack of coherence related to the new way of working. However, in our study, the questionnaires were reported as being enablers of discussion of psychosocial issues, as they worked as shields.

As shown in previous research (Matthias et al., 2010; Toye, Seers and Barker, 2017), primary care providers often view caring for patients with persistent pain as burdensome, and our participants stated that this had been their experience before the CFT training. However, many reported that using the BPS approach to treat LBP felt professionally stimulating and rewarding

after receiving training and saw more complex patients as welcome challenges. Others have also reported this (Nielsen, Keefe, Bennell, and Jull, 2014; Sanders, Ong, Sowden, and Foster, 2014; Synnott et al., 2016). Many reported greater motivation in their work and renewed professional identity. However, even after the training, some of the physiotherapists in our study did not feel adequately prepared to deal with complex patients and wished for more training, as in Sanders et al.'s study (Sanders, Ong, Sowden, and Foster, 2014).

Most of our participants reported using a more functional examination and management approach, changing their communication to contain more positive messages and a person-centered communication style, similar to previous CFT studies, (O'Sullivan, O'Sullivan, O'Sullivan, and Dankaerts, 2013; Synnott et al., 2016). In our study, some physiotherapists found a new role as an enabler of their patients' own realizations. Enabling patients to find their own solutions to their health issues as opposed the physiotherapist telling them what to do is considered a more powerful way to change patient behaviors (Nijs et al., 2013).

RECOMMENDATIONS FOR THE FUTURE

The results of this study can be used as a tool for developing pedagogical practices in continuing education in physiotherapy. The critical aspects in the learning process identified in our study could be considered when planning future training interventions for physiotherapists. First, we recommend providing physiotherapists with adequate support when they experience cognitive dissonance and encouraging critical reflection. Secondly, including the whole workplace in the training, increasing flexibility in workplace practices and supportive leadership are important. Steps should also be taken to support the continuation of learning and applying the BPS approach at the workplace to reinforce physiotherapists' confidence in their skills and motivation to learn more. More active collaboration between health care professionals should be encouraged. Continuing support for using the BPS approach and creativity in one's work is

recommended. Steps should be taken to mandate the use of screening tools for all patients, in line with best practice recommendations (Lin et al, 2019)

Learning about CFT and integrating it into clinical practice is a process, and many of the physiotherapists in our study stated that without the booster sessions, individual learning tasks and support from colleagues, the learning journey would have ended, as changing their practices was not easy. The results of our study support previous research that has found that physiotherapists' professional development courses of two or three days are unlikely to be sufficient for changing clinical practice. A longer process is recommended (Keefe, Main and George, 2018; Mesner et al, 2016). Therefore, future studies in the field of physiotherapy should also concentrate on exploring the effect of training work communities, instead of only individual physiotherapists, and include auditing of clinical notes and supervision of and feedback for participants.

Optimizing clinical training in order to help implement new knowledge and skills into clinical practice is a key priority in the management of persistent LBP. For example, funding for training interventions, more effective treatment pathways and culture change in work communities are needed. The current literature seems to support clinical mentoring, but more research on implementation interventions is needed, as this requires considerable time and effort. Whether this investment is cost-effective remains to be seen. Future studies should compare training interventions with and without clinical supervision and mentoring to see whether this is important for changes in practice and improved patient outcomes.

STRENGTHS AND LIMITATIONS

The information power of this study is sufficient (Malterud, Siersma, and Guassora, 2015). The first author, who conducted the interviews, had training and experience in qualitative research

and interviewing, and the quality of the dialogue between the interviewees and interviewer was good. She is a physiotherapist and has good knowledge of the CFT approach. The aim of the study was fairly specific and involved a specific group of informants – the physiotherapists who participated in the CFT training intervention. The fact that the whole group of physiotherapists who completed the training was included is a strength of this study. The themes raised by the interviewees were rather broad, which is explained by the large number of participants, as well as the analysis method, which explored the variation of understanding the phenomenon in question. The study was theoretically well informed, although the feasibility of the CFT approach in the context of the Finnish health care system has not previously been explored. Health care systems and the basic training of physiotherapists vary in different countries and this affects the organizational factors that can be perceived as barriers to or enablers of adopting a BPS approach. The results cannot be directly transferred to other cultures, although many findings are consistent with previous research.

The illustration of the results using authentic quotations increases the validity of the study. The authors are clinical and research physiotherapists, a professor of clinical psychology and a professor of Physical and Rehabilitation Medicine with an interest in an individual BPS-oriented approach to managing LBP. POS and SL were the trainers in this intervention and RH and JK were present during the workshops. The diverse backgrounds of the research group improved quality and rigor and subjected the analytical process to group reflexivity. The credibility of the study was also strengthened by the first author writing preconceptions before starting the study, as well as by discussion in the group on how professional backgrounds, beliefs and attitudes towards the topic may have influenced the analysis process, and regular discussions on the analysis process. The reliability of the research was also supported by one author (AP) not being familiar with the CFT approach and not being included in the training

intervention, and by the results being discussed in the group of researchers familiar with the phenomenographic research method but having no previous knowledge of the CFT approach.

One limitation of this study was that we only arranged workshops for the participants and there was no opportunity for clinical supervision and mentoring. It is also unclear whether these physiotherapists actually changed their practices or whether the intervention had a positive effect on patient outcomes. A strength of our study was that our training intervention was closer to a normal professional development workshop setting than previous training for physiotherapists that have delivered CFT interventions in randomized controlled studies (Vibe Fersum et al., 2013), and that we interviewed all the participating physiotherapists, who reported different kinds of responses to training. This also further enhanced the transferability of the results.

There was a gender bias towards women in this study; however, this is reflective of the workforce in Finland: in 2017 women comprised 77% of new physiotherapy students in 2007 (Kuusi, Jakku-Sihvonen, and Koramo, 2009) and 82% of graduate physiotherapists in Finland (Valvira, 2017).

CONCLUSIONS

The participating physiotherapists' conceptions of learning and integrating CFT into clinical practice varied greatly. They reported that the CFT training intervention led them towards a more biopsychosocial, multidimensional understanding and care of patients with persistent LBP. The participants reported a range of responses to the training, suggesting that for some, the training was insufficient to support adequate changes in their practice behavior and that for others it was a lifechanging experience. The journey was not without challenges, but where they were overcome, a new way of working was possible, and physiotherapists reported

increased work motivation. However, it is not yet known whether the changes the physiotherapists reported influenced their clinical practices and patient outcomes.

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1h 45min	Overview of evidence of management of low back pain (LBP), multidimensional framework for understanding and exploring the biopsychosocial nature of LBP, beliefs and attitudes. (Lecture)
2h 45min	Physical, psychosocial and lifestyle risk factors (Lecture), Utilization of screening tools to identify psychosocial risk factors
1h 30min	Interview and examination
1h 30 min	Communication training
7h	Management planning, interventions (including management of fear avoidance behaviour, mal-adaptive movement patterns, pain behaviours, graded activity, graded exposure), problem solving, complex cases. (Lecture + group discussions, practicing the use of clinical reasoning form)
1h 30 min	Case studies
7h	Patient demonstrations (4 patients with 2 follow-up visits)

Table 1. Content of the initial four-day workshop

Table 2. Content of the two-day booster session

1h 30min	Questions and answers session, discussion on participants' difficulties / obstacles and successes in integrating cognitive functional therapy into clinical practice
2h	Management of low risk patients, movement patterns, challenging beliefs (lecture, group discussion)
7h 30min	Patient demonstrations (4 patients) with discussion and practice of the use of the clinical reasoning form

Table 3. Themes of variation and categories of description of phenomenon of learning and integrating Cognitive Functional therapy into clinical practice

	Categories				
Themes of variation	**I Recognizing difference of new approach**	**II Towards integrating the new approach**	**III Waking up to explore**	**IV Commitment to new approach**	**V Expanding application of new approach**
Membership of work community	Loneliness in work community	Organizational traditions as barriers	Desire for common language	Supportive work community	Importance of multidisciplinarity
Learning journey	Resistance	Personal challenges during journey	Being shaken	Becoming convinced	Continuous adventurous journey
Transition to new working methods	Insecurity	Combining old and new approach	Critical reflection on one's own work	Better equipped to help	Permission for creativity
Professional role as a physiotherapist	Looking at patients in different way	Changing attitudes and language	Stepping outside one's comfort zone	Closer to patient	Renewed professional identity

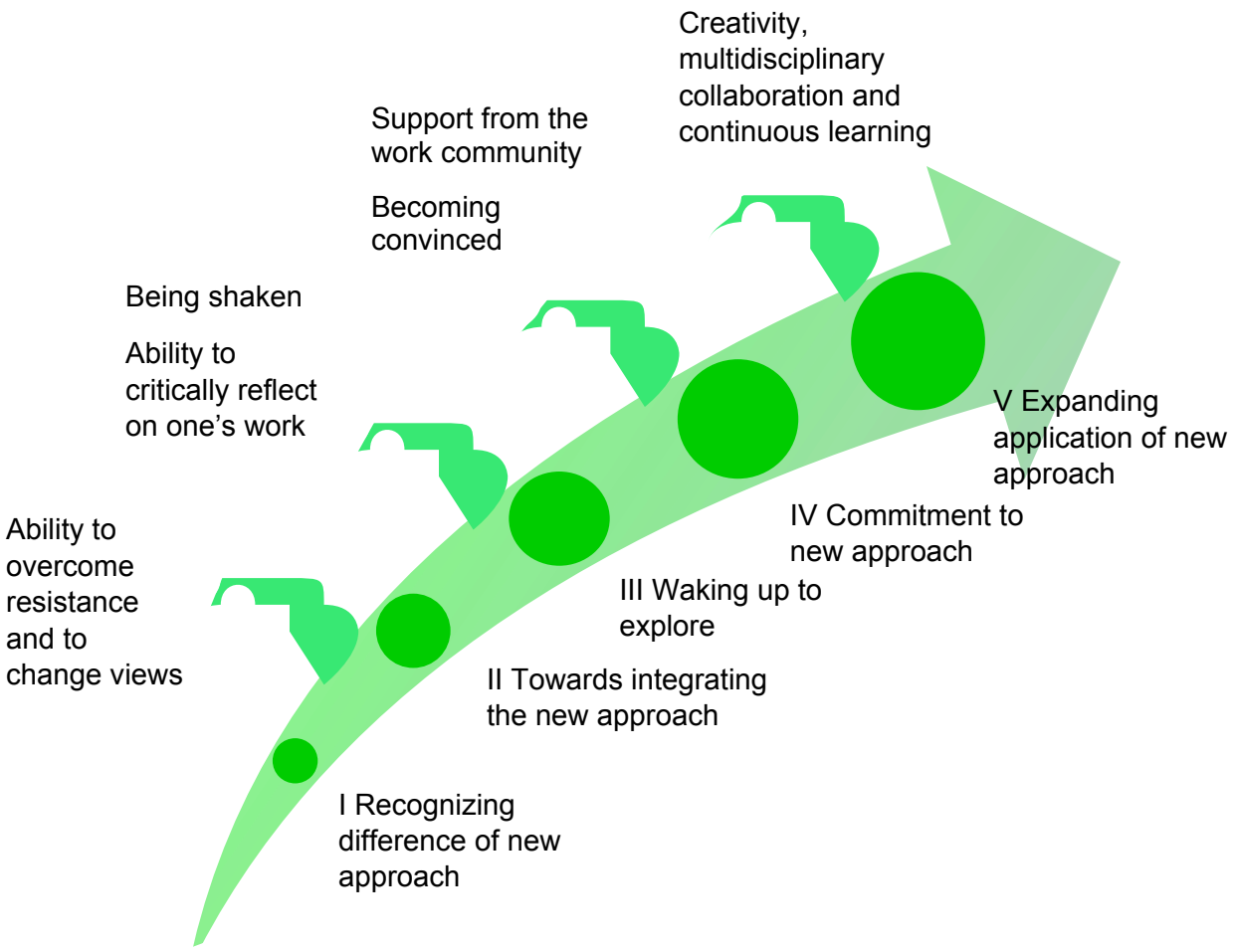

Figure 1: The critical aspects between the categories of description of the phenomenon of learning and integrating CFT into clinical practice.

Appendix 1. Participants' characteristics

*OHC=occupational health care, PHC=primary health care, outpatient clinic

Physiotherapist	Female /Male	Age	Years of practice	Type of health care unit	Days of Cognitive Functional Therapy training by the time of interview
A	F	37	15	OHC	6
B	M	34	9	OHC	4
C	F	35	10	OHC	6
D	F	52	25	OHC	6
E	F	52	27	PHC	4
F	M	55	31	PHC	6
G	F	55	30	PHC	4
H	F	47	28	PHC	4
I	F	43	19	PHC	4
J	F	34	10	PHC	4
K	F	55	30	PHC	4
L	M	40	15	PHC	4
M	F	39	16	OHC	6
N	F	38	12	OHC	6
O	F	52	29	PHC	6
P	F	50	24	PHC	4
Q	F	33	11	PHC	6
R	F	40	16	PHC	6
S	F	61	30	OHC	6
T	F	52	15	OHC	6
U	F	45	15	PHC	4
V	F	53	27	PHC	6

Appendix 2

Interview guide

Key questions:

How do you see CFT now – what does it mean to you?

Tell me about your process of learning CFT and implementing it in practice.

Following themes were flexibly addressed if not otherwise brought up by the interviewee

Expectations of training – were they realized? How?

Did the training change beliefs and attitudes, understanding of low back pain? Were your beliefs challenged? How?

Did the training influence your working methods? Communication, interview, assessment, treatment? Did it affect the skills for building a therapeutic alliance? How?

Did your patients notice a change? Did this training affect your patients? How?

What promoted the learning/implementation of the CFT approach?

What hindered the learning/implementation of the CFT approach?

Did it affect your personal well-being / professional identity? How?

Did it increase your confidence in assessing psychosocial factors with your patients? And treating according to the assessment?

Did it affect your confidence in your skills for treating patients with persistent pain (low back pain)?

What was easy/helpful?

What was difficult/unhelpful?

What promoted learning?

Was the amount of training sufficient? What was the impact of the booster session/ web-based tasks?

Are you willing to develop further? What is needed to develop further?