Individualised cognitive functional therapy compared with a combined exercise and pain education class for patients with non-specific chronic low back pain: study protocol for a multicentre randomised controlled trial

Mary O’Keeffe,1 Helen Purtill,2 Norelee Kennedy,1 Peter O’Sullivan,3 Wim Dankaerts,4 Aidan Tighe,5 Lars Allworthy,6 Louise Dolan,7 Norma Bargary,2 Kieran O’Sullivan1

ABSTRACT

Introduction: Non-specific chronic low back pain (NSCLBP) is a very common and costly musculoskeletal disorder associated with a complex interplay of biopsychosocial factors. Cognitive functional therapy (CFT) represents a novel, patient-centred intervention which directly challenges pain-related behaviours in a cognitively integrated, functionally specific and graduated manner. CFT aims to target all biopsychosocial factors that are deemed to be barriers to recovery for an individual patient with NSCLBP. A recent randomised controlled trial (RCT) demonstrated the superiority of individualised CFT for NSCLBP compared to manual therapy combined with exercise. However, several previous RCTs have suggested that class-based interventions are as effective as individualised interventions. Therefore, it is important to examine whether an individualised intervention, such as CFT, demonstrates clinical effectiveness compared to a relatively cheaper exercise and education class. The current study will compare the clinical effectiveness of individualised CFT with a combined exercise and pain education class in people with NSCLBP.

Methods and analysis: This study is a multicentre RCT. 214 participants, aged 18–75 years, with NSCLBP for at least 6 months will be randomised to one of two interventions across three sites. The experimental group will receive individualised CFT and the length of the intervention will be varied in a pragmatic manner based on the clinical progression of participants. The control group will attend six classes which will be provided over a period of 6–8 weeks. Participants will be assessed preintervention, postintervention and after 6 and 12 months. The primary outcomes will be functional disability and pain intensity. Non-specific predictors, moderators and mediators of outcome will also be analysed.

Ethics and dissemination: Ethical approval has been obtained from the Mayo General Hospital

Strengths and limitations of this study

- This will be the first randomised controlled trial to compare the clinical effectiveness of a novel individualised treatment called cognitive functional therapy with a combined exercise and pain education class in people with non-specific chronic low back pain (NSCLBP).
- Methodological qualities of the trial include: three intervention sites, blinded assessment and concealed allocation, an active comparison group, long-term follow-up, appropriate sample size calculation, treatment fidelity measures and a planned intention-to-treat analysis.
- Only patients with NSCLBP greater than 6 months will be included, and while inclusion and exclusion criteria are broad, the study results will not be generalisable to all people with low back pain.
- Therapist and patient blinding is not possible.

INTRODUCTION

Non-specific chronic low back pain (NSCLBP) is a very common and costly musculoskeletal disorder, resulting in significant personal, social and economic burden.1–3 There is strong evidence that NSCLBP is associated with a complex interaction of factors. These include physical factors (e.g., maladaptive
postures and movement patterns, altered body perception, pain behaviours and deconditioning,4–8 cognitive factors (eg, unhelpful beliefs, catastrophising, hypervigilance, maladaptive coping strategies, poor self-efficacy),9–14 psychological factors (eg, fear, anxiety, depression),15–18 lifestyle factors (eg, physical inactivity, sleep problems, chronic life stress),19–22 neurophysiological factors (eg, peripheral and central nervous system sensitisation),23–27 and social factors (eg, socioeconomic status, family, work and culture).28,29 Despite this complex interaction of factors in NSCLBP, with many of these factors being potentially modifiable, most current interventions neither target multiple aspects of an individual’s pain experience nor individualise the targeting of such factors for each patient.30,31 Therefore, it is not surprising that treatments such as manual therapy, exercise, medications, relaxation, cognitive behavioural therapy and acceptance and commitment therapy, while reducing disability and enhancing quality of life to an extent, are not superior to each other and have a limited impact on pain in the long term.32–38

Cognitive functional therapy (CFT) is a novel, patient-centred behavioural intervention which addresses multiple aspects in NSCLBP. This approach focuses on changing patient beliefs, confronting their fears, educating them about pain mechanisms, enhancing mindfulness of the control of their body during pain provocative functional tasks, training them to reduce excessive trunk muscle activity and change behaviours related to pain provocative movements and postures.39 In a recent randomised controlled trial (RCT) among people with moderate NSCLBP, this approach was significantly more effective than combining manual therapy and exercise.39 Similar results were demonstrated for a high-risk group of patients with NSCLBP treated with CFT in a recent single-centre cohort study in Ireland.40 However, a range of RCTs have suggested that class-based treatments are as effective as individualised treatment in musculoskeletal pain populations,41–52 including NSCLBP. In addition, many people with chronic musculoskeletal pain, including NSCLBP, appear to be either over-treated or treated inefficiently, without this additional one to one intervention necessarily improving their outcome.53–57 Therefore, it is important to examine whether an individualised intervention, such as CFT, is demonstrative of clinical-effectiveness as compared to a relatively cheap comparison treatment such as a combined exercise and pain education class.

OBJECTIVES
Primary objective
The primary objective is to examine the clinical effectiveness of CFT, based on whether participants in the CFT arm report significant improvements in the short, medium and long term on measures of functional disability and pain intensity, relative to those allocated to combined exercise and pain education classes.

Secondary objectives
The secondary objectives include examining whether CFT has a significant effect on costs relative to classes in the short, medium and long term, and examining mediators (back pain beliefs, fear, coping, self-efficacy, sleep, depression, anxiety, stress and treatment satisfaction) as well as moderators and predictors (demographic information (age, sex, duration of CLBP), socioeconomic status, baseline risk of chronicity, number of pain areas and general health symptoms) of treatment effect across both interventions.

METHODS AND ANALYSIS
Design and setting
The design is a three site RCT comparing individualised CFT and a class-based intervention. The sites are two primary care centres (Ballina Primary Care Centre and Claremorris Primary Care Centre) and one public hospital (Mayo General Hospital) that receives referrals from both medical consultants in secondary care and primary care general practitioners (GPs) in Ireland. Any modifications to the protocol which may impact on the conduct of the study will require a formal amendment to the protocol. Such amendment will be agreed on by the project management committee (MOK, KOS, NK, POS, HP and NB) and approved by the relevant ethics committee prior to the implementation of the modifications. Minor administrative changes to the protocol will be agreed on by the project management committee and will be documented in a memorandum.

Ethical considerations
Ethical approval has been granted by the relevant hospital research ethics committee (MGH-14-UL). Written informed consent will be obtained from all participants included in the study. Participants will be informed that they are not obliged to take part in the study and are free to withdraw at any time, without any negative consequences on their future care. All efforts will be made to protect the privacy of the participants, and to keep their names and personal information confidential at all times. This will be achieved by referring to all participant records and information only by their assigned research code. No significant adverse reactions are anticipated in the study, but these will be monitored. Both interventions will involve some exercise. This involves a very small risk of increased stiffness and soreness initially. However, all exercise will be performed at a speed and intensity under the participant’s own control. The suitability of exercise for the participants will be assessed at entry to the study by the treating physiotherapist.

Recruitment and participants
Participants who are referred to the physiotherapy service in each site will be screened individually for 15–20 min. Participants meeting the eligibility criteria will be recruited. All participants will be given the
option of receiving usual care physiotherapy (individualised) or taking part in the study. Those interested in participating will be presented with written information about the study, including its aims and procedures (see online supplementary file 1). Here it is clearly stated that there are two active intervention arms and that, based on current knowledge, it is not known which intervention is superior. The patients will provide written informed consent prior to randomisation (see online supplementary file 2). The inclusion/exclusion criteria are described in table 1.

### Treatment allocation and randomisation

To ensure concealment of allocation, patients will only be randomised to receive the individualised CFT or the class-based intervention after it is clear that they meet the inclusion criteria. Allocation will be picked from an opaque envelope. The envelope will contain only two pieces of paper. Participants will be asked to pick one piece of paper from the envelope. One piece of paper will have the letter ‘C’ for class and the other, letter ‘I’ for individual CFT. The number of participants who choose to withdraw from the study at this, or any other, stage will be recorded. Participant progress through the study is shown in figure 1.

### Baseline assessments

At the initial screening assessment when patients are screened for eligibility, all will have to complete the ODI to ensure they meet the criteria for inclusion. If eligible, and participants consent to participate after random allocation, they then complete the remaining sections of the questionnaire (see below) before their first intervention session which is within 2 weeks of the date of screening. In the event that their appointment is longer than 2 weeks after the initial screening session, they will recomplete all the questionnaires on the day of the first intervention session. The second of these baseline assessments will be used as baseline. In the event of an individual’s ODI being less than 14%, they will remain in the study since they have already been randomised.

### Interventions

All interventions will be provided by three physiotherapists (AT, LD and LA), with one physiotherapist working in each location. The treating physiotherapists have been trained to deliver the interventions to enhance standardisation of interventions. Training involved a blended learning approach, including interactive lectures and seminars, as well as clinical workshops where the management of NSCLBP as a multidimensional biopsychosocial disorder was discussed. Both interventions use a biopsychosocial approach.

The specific training for the CFT intervention involved the treating physiotherapists (1) observing CFT-trained tutors (http://www.pain-ed.com) assess and treat real patients with NSCLBP using CFT, and (2) assessing and treating patients with NSCLBP in front of the same CFT tutors. The specific training for the class-based intervention involved the development of a series of six classes, each including exercise and education. Discussions between the three treating physiotherapists and two of the study authors (KOS and MOK) will take place to ensure effective and consistent delivery across sites.

---

**Table 1** Inclusion and exclusion criteria for study participation

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Aged between 18 and 75</td>
<td>▶ Primary pain area is not the lumbar spine (from T12 to buttocks)</td>
</tr>
<tr>
<td>▶ Chronic low back pain for at least 6 months duration</td>
<td>▶ Leg pain as the primary problem (eg, nerve root compression or disc prolapse with true radicular pain/radiculopathy, lateral recess or central spinal stenosis)</td>
</tr>
<tr>
<td>▶ Score of 14% or more for disability on the Oswestry Disability Index (ODI)</td>
<td>▶ Less than 6 months after lumbar spine, lower limb or abdominal surgery</td>
</tr>
<tr>
<td>▶ Independently mobile (with or without aids), to be capable of participating in a rehabilitation programme</td>
<td>▶ Pain relieving procedures such as injection-based therapy (eg, epidurals) and day case procedures (eg, rhizotomy) in the past 3 months</td>
</tr>
<tr>
<td>▶ Be able to speak and understand English well enough to be able to complete the questionnaires independently</td>
<td>▶ Pregnancy</td>
</tr>
<tr>
<td></td>
<td>▶ Rheumatological/inflammatory disease (eg, rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, lupus erythematosus, Scheuermann’s disease)</td>
</tr>
<tr>
<td></td>
<td>▶ Progressive neurological disease (eg, multiple sclerosis, Parkinson’s disease, motor neuron disease)</td>
</tr>
<tr>
<td></td>
<td>▶ Scoliosis (if considered the primary driver of pain)</td>
</tr>
<tr>
<td></td>
<td>▶ Unstable cardiac conditions</td>
</tr>
<tr>
<td></td>
<td>▶ Red flag disorders like malignancy/cancer, acute traumas like fracture (less than 6 months ago) or infection, spinal cord compression/cauda equina</td>
</tr>
</tbody>
</table>
For both intervention arms, treating physiotherapists piloted the interventions until they were deemed competent to deliver the interventions. Treating physiotherapists were also provided with additional resources to support both the interventions, including written and web-based resources (eg, http://www.pain-ed.com) regarding the biopsychosocial nature of pain, the limited role of imaging in NSCLBP, and the role of behavioural changes such as activity, stress management and sleep hygiene in managing NSCLBP.

**Experimental intervention: individualised CFT**

The CFT intervention will be one to one, will involve hearing the full patient story regarding their pain, and the intervention will be targeted to meet the participants’ individual needs. All participants randomised to this group will undergo a comprehensive one-to-one interview and physical examination by the treating physiotherapist. This detailed examination will be essential in order to broadly identify the modifiable multidimensional drivers of pain and disability (pain provocative cognitive, movement and lifestyle behaviours) for each participant.

During the interview, participants will be asked to provide information about their history of pain, pain area and nature, pain behaviour (aggravating/easing movements and activities), their primary functional impairments, disability, activity levels, lifestyle behaviours and sleep patterns. Participants will also be questioned about their level of fear of pain and any avoidance of activities, work and social engagement. Their degree of pain focus, pain coping strategies, stress response and its relationship to pain, and their pain beliefs will also be established as will be any history of anxiety and...
depression. Finally, their beliefs and goals regarding management of their disorder will be ascertained.39 40 59

The physical examination will involve analysis of the participants’ primary functional impairments (eg, pain provocative, feared and/or avoided movements and functional tasks as reported during the interview), in order to identify maladaptive behaviours which include muscle guarding, ‘abnormal’ movements and postures, avoidant patterns and pain behaviours. They will also be assessed regarding their level of body control and awareness (body perception), as well as their ability to relax their trunk muscles and normalise pain provocative postural and movement behaviours, and the effect this has on their pain.39 40 59

Treatment will be provided in the local physiotherapy department at each site. The initial session will last approximately 1 h and follow-up sessions will range from 30 min to 1 h. Treatment frequency will vary pragmatically with each patient, though it is expected that appointments will start weekly and reduce in frequency over time. Similarly, treatment duration will vary from approximately 4 to 16 sessions. While 16 is the anticipated upper limit of sessions, eight is the expected average. The duration, and number, of treatments will be recorded. Each patient will receive an individualised targeted intervention directed at changing their individual cognitive, movement and lifestyle behaviours considered to be provocative and maladaptive of their disorder.63 31 60 There will be four main components to the intervention. These will be:

1. A cognitive component will focus on the factors identified from the examination that are considered to contribute to their pain disorder. This will include discussing the multidimensional nature of persistent pain as it pertains to the individual—and how beliefs, emotions and behaviours (movement and lifestyle) can reinforce a vicious cycle of pain sensitisation and disability. The various factors of the vicious cycle will be outlined in a personalised diagram for each participant based on the findings from the examination. Where considered appropriate, patients will be advised to read resources and watch patient videos on http://www.pain-ed.com and will be given leaflets on sleep, relaxation and mindfulness, the role of spinal imaging, such as MRIs, and regarding exercise and physical activity if these are considered relevant to their pain presentation by the treating physiotherapist.

2. Specific functional training will be designed to normalise maladaptive and provocative postural and movement behaviours as directed by the patient’s individual presentation. This will involve a behavioural modification approach to rehabilitation where patients will be taught strategies aimed to enhance their body awareness and control in order to relax, and modify postures and tasks they report as being pain provocative. Where considered appropriate, patients will be given audio resources (eg, mindfulness CDs) to facilitate this process.

3. Targeted functional integration into daily life activities which are avoided by, and/or provocative for, the patient. This will 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.

4. Physical activity and lifestyle advice will include promotion of gradually increasing physical activity based on their preference and presentation, advice on sleep hygiene, stress management strategies and social re-engagement.39 40 59

A key component underlying each of these four stages which may facilitate patients achieving a positive outcome will be maximising the contextual or ‘non-specific’ aspects of treatment. This will include using motivational interviewing techniques,61 as well as establishing and demonstrating empathy with the patient to enhance patient–therapist rapport and interaction.62 All instructions for participants will be written, when deemed appropriate by the physiotherapist and/or requested by the participants.

Control intervention: combined exercise and pain education class

This class-based intervention will not involve individual assessment or consideration of the patient’s story. All participants in this class will receive the same intervention and it will not be specifically targeted to their individual needs.

The class-based intervention will consist of six classes over 6–8 weeks, each lasting approximately 1 h and 15 min, with up to 10 participants in each class. It will have biopsychosocially orientated sessions involving education, exercise and relaxation/mindfulness. Everybody will have the opportunity to ask questions and answers will be provided for the whole class. It differs from the individualised CFT in that it is not targeted to the individual, it does not involve one-to-one attention, and everybody gets the same advice and functional activation exercises. Each class will start with a 15 min discussion, using a different focus/topic each week. The topics to be covered will include explaining contemporary understanding of pain and the role of the nervous system,63 the multidimensional nature of CLBP and common myths about CLBP, posture and ergonomics, exercise, relaxation and sleep. All talks will involve the use of visual aids (eg, slides, flipcharts) and a copy of the slides from every class will be provided to participants. The second part of the class will be a 40 min gradually progressive exercise circuit involving aerobic, flexibility and strengthening exercises, similar to the class-based intervention delivered in a previous RCT.64 The exercises will be step-ups, squats, sit to stands, marching/jogging on spot, wall push-ups, hip lift/bridging, knees to chest/lumbar flexion, rolling knee to side/lumbar rotation, the cat stretch and the hip flexor lunge stretch. Participants will be instructed to do the exercises at their own desired pace. No special equipment will be needed.
All participants will be given a copy of these exercises to do at home and will be encouraged to do these once a day. Finally, a 5 min relaxation/mindfulness component will take place at the end of each class. In addition, all participants will be advised to watch patient videos and read resources on http://www.pain-ed.com, and will receive the aforementioned leaflets on sleep, relaxation and mindfulness, the role of spinal imaging, such as MRI, and on exercise and physical activity. Efforts will be made to enhance the ‘non-specific’ aspects of treatment by creating an open atmosphere, encouraging patient interaction, engagement and opportunity for questions and input.

OUTCOME MEASURES
All outcome measures will be self-reported and will be conducted preintervention (see online supplementary file 3), postintervention (see online supplementary file 4) as well as 6 and 12 months (see online supplementary file 5) after randomisation. The primary outcome measures selected for this study are based on the Initiative on Methods, Measurement and Pain Assessment in Clinical Trials (IMMPACT) recommendations for outcome measures for chronic pain clinical trials. The rate of attrition among the participants during their completion of the intervention will be recorded.

Primary outcomes
The two primary outcomes of interest will be functional disability and pain intensity. Functional disability will be measured using the ODI, a validated 10-item questionnaire. Pain intensity will be assessed using the Numeric Rating Scale, a validated 0–10 scale. Participants will asked to rate their pain on average during the past week; 0 representing no pain and 10 representing pain as bad as you can imagine. Both will be assessed at all time-points (baseline, postintervention, as well as 6 and 12 months after randomisation).

Secondary outcomes
The secondary outcome of interest will be costs. Treatments and tests received, hospitalisations and tests, medications, equipment, aids and informal care, travel costs, employment status and work absenteeism will be assessed. The number and length of treatment sessions will also be documented by the treating physiotherapists. This will be assessed at 6 and 12 months (see online supplementary file 6).

Mediators of outcome
▸ Beliefs: Beliefs about back pain will be assessed using the nine-item Back Beliefs Questionnaire.
▸ Fear: this will be measured using the four-item physical activity subscale of the Fear-Avoidance Beliefs Questionnaire.
▸ Coping: this will be measured using the five-item coping subscale of the Coping Strategies Questionnaire.
▸ Self-efficacy: this will be assessed using the 10-item Pain Self-Efficacy Questionnaire.
▸ Sleep, depression and anxiety: these will be assessed using the single item questions regarding these measures on the Subjective Health Complaints Inventory.
▸ Stress: this will be measured using the seven-item stress subscale of the Depression, Anxiety and Stress Scale.
▸ Satisfaction: participant satisfaction with treatment will be assessed using a single item from the 18-item Patient Satisfaction Questionnaire. “The care that I have been receiving here is just about perfect”. 1=Strongly Agree, 2=Agree, 3=Unsure, 4=Disagree, 5=Strongly Disagree.

Non-specific predictors and moderators of outcome
▸ Demographic information: Participants’ age, sex, duration of NSCLBP will be obtained.
▸ Socioeconomic status: this will be assessed using the Socioeconomic Index. This questionnaire provides information about education, employment status, income, ability to pay bills, self-perceived health and satisfaction with number of friends. While aspects of some of these (eg, education) are unlikely to change, some (eg, work status, self-perceived health) may actually be targets of treatment.
▸ Risk of chronicity: this will be measured using the 10-item short-form Orebro musculoskeletal screening questionnaire.
▸ Number of pain areas: this will be assessed using the Nordic Musculoskeletal Screening Questionnaire.
▸ General Health: general health symptoms will be assessed using the 13-item version of the Subjective Health Complaints Inventory and scored as simply the presence or absence of the 13 items. Demographic information will be obtained at baseline only, while the remaining predictors and moderators will be assessed at all the time points.

Timing of outcome measurement
The aforementioned patient self-report outcomes will be collected at baseline (except satisfaction and costs) and immediately after the intervention by the treating physiotherapist. Costs will only be assessed 6 and 12 months after randomisation. Participants will then be sent copies of the same questionnaires by a blinded assessor (MOK) 6 and 12 months after their randomisation. If a participant does not respond to follow-up, they will be telephoned on up to two occasions each time to ask if they wish to complete the questionnaires.

Blinding
Questionnaires at all time points will be self-completed by the patient. Single blinding will be achieved by
having an independent blinded assessor perform the follow-up assessments after 6 and 12 months. Questionnaires will be posted back to the blinded assessor. The blinded assessor will not be treating any of the participants, nor be aware of their group allocation. The statistician conducting the primary data analysis will also be blinded to group allocation. Blinding of the treating physiotherapists and participants will not be possible because they will know the intervention arm to which they have been allocated.

Data and treatment fidelity
A fidelity evaluation where the treating physiotherapists are observed while assessing and treating actual patients from the RCT will be conducted. For every participant in the study, the type and number of treatments received will be recorded. In addition, there will be session-by-session documentation of treatment content for the CFT arm by the treating physiotherapist. Standardised and regular training as well as monitoring and feedback will be given to the physiotherapists to facilitate successful delivery of both treatments. Physiotherapists will complete a series of standardised questionnaires (see online supplementary file 7) assessing their beliefs and attitudes towards CLBP and pain presentations (Health Care Professionals Pain and Impairment Relationship Scale,76 The Pain Attitudes and Beliefs Scale For Physiotherapists,77 The Practitioner Confidence Scale,78 The Attitudes to Back Pain Scale in Musculoskeletal Practitioners,79 and The Neurophysiology of Pain Questionnaire).80 The physiotherapists will also be asked to complete a clinical vignette81 and to provide demographic details, information about their physiotherapy training and general health. To assess quality of communication and interaction, some sessions from both intervention arms will be observed and audio recorded. These recorded sessions will also involve the physiotherapist, patient(s) and an observer completing the Working Alliance Theory of Change Inventory.82 Physiotherapists will complete the Communication Assessment Tool.83 Qualitative interviews will be carried out with 8–15 participants from each treatment arm, depending on data saturation. Stratified sampling for these patient interviews will take place and be based on reaching the minimal clinically important difference (MCID) of ODI (30%)84 at 6-month follow-up. Participants will then be randomly selected and interviews will be conducted 6 to 12 months following randomisation to get their views on the care they received.

Statistical analysis
Descriptive statistics will be used to summarise participant characteristics in the individualised CFT and class-based intervention. An intention to treat analysis using linear mixed models will be used to compare pain intensity and functional disability between the intervention arms and account for the correlation within-subject over time, while adjusting for differences in participant characteristics at baseline where appropriate. Sensitivity analyses and per protocol analysis will be used to explore whether adherence to the intervention influences the effect of the intervention on the primary outcomes. The analysis of the secondary outcomes will involve linear and non-linear mixed models for continuous and categorical responses where appropriate. Variable selection techniques will be used to identify the most parsimonious set of participant characteristics for inclusion as explanatory variables in each model. An analysis of the potential mediating effects of the secondary outcomes on treatment will be undertaken using the approach of Baron and Kenny.85 In addition, baseline variables will be assessed as non-specific predictors or moderators of treatment by including main and interaction terms in the models. The 5% level of statistical significance will be used throughout the analyses. In addition, the level of clinical significance will be also be reported by comparing any changes in outcome measures to the recognised MCID values84 for standardised outcome measures. A responder to treatment is defined as a >30% improvement on the ODI.84 All data will be analysed using the IBM SPSS Statistics V. 21 (Armonk, New York, USA) and R 3.1.1.86 Data will be inputted by one researcher (MOK) and a second researcher will randomly double-check 10% of the inputted data to ensure accuracy.

A thematic analysis approach will be used to analyse the qualitative interviews. When all the audio recordings have been transcribed verbatim, the transcripts will be imported into NVIVO 10. The analytic process will be adapted from Sandelowski and Barroso.87 It will involve the following three stages: (1) Extraction of findings and coding of findings for each interview, (2) Grouping of findings (codes) according to their topical similarity and (3) Abstraction of findings—analysing the grouped findings to identify additional patterns, overlaps, comparisons and redundancies to form a set of concise statements, which capture the content of all findings.

Analysis of costs to the participant after intervention
The cost analysis of participants after intervention will be undertaken at the follow-up times, 6 and 12 months after initial randomisation. The aims of the analysis will be to identify, measure and compare individual costs incurred by the participants in both groups. Concomitant care, interventions and tests received, hospitalisations and tests, medications, equipment, aids and informal care, travel costs, employment status and work absenteeism will be assessed by a postal questionnaire at these follow-up times and statistical analyses will compare differences between the treatment groups.

Sample size estimation
Based on the previous RCT using CFT,89 a sample size calculation estimates that a sample size of 64 in each group will have 80% power to detect a difference in means of 5.0 (disability) and 1.0 (pain) between the two arms of the study, assuming that the common SD is 10.0 (disability).
and 2.0 (pain), and using a two-sided 5% significance test. Pilot data collection suggests a slightly larger dropout rate from the class-based intervention. Consequently, allowing for a 40% dropout rate requires a sample size in each arm of 107, or an overall sample size of 214.

DATA AND SAFETY MONITORING

The Clinical Therapies Department at the University of Limerick, Ireland, will serve as the data coordinating centre responsible for data collection forms, coordination of data transfer and data analysis. Health of participants will be monitored through attending their interventions in the three sites. If any adverse events do take place, and in the unlikely event that harm is suffered, the project management team will liaise with local health service providers. All adverse events will be documented in the final written report of this study. All study data will be stored securely in the University of Limerick. All paper-based documents and data will be stored in a secure filing cabinet. All electronic data will be secured on a password-protected laptop. All documents that contain names or personal identifying information will be stored separately from other study data and identified by code number. Access to files will be limited to research staff involved in the study. The statistician for the final analysis will receive depersonalised data where the participants’ identifying information will be replaced by an unrelated sequence of numbers. There are no current plans for granting public access to the full protocol, participant-level data set or statistical code. However, if researchers wish to access the data set (eg, for conduct of secondary analysis or meta-analysis) the project management committee will try to facilitate this.

DISSEMINATION

Results will be presented at international scientific conferences and in peer-reviewed publications. An open-access version of the study results will be made available through the University of Limerick’s institutional repository. Trial participants will also be offered an opportunity to obtain the anonymised, overall study results.

CONCLUSION

This will be the first RCT to compare the clinical effectiveness of individualised CFT and a combined exercise and education class for people with NSCLBP. The study results will provide valuable information about the role of these interventions and has the potential to inform the clinical management of NSCLBP. A 36-month follow-up will be conducted if the 12-month follow-up results suggest this would be useful and if funding is available.

Author affiliations

1Department of Clinical Therapies, University of Limerick, Limerick, Munster, Ireland
2Department of Mathematics and Statistics, University of Limerick, Limerick, Munster, Ireland
3School of Physiotherapy and Exercise Science, Curtin University, Perth, Western Australia
4Musculoskeletal Research Unit, Department of Rehabilitation Sciences and Physiotherapy, University of Leuven, Leuven, Belgium
5Ballina Primary Care Centre, Ballina, Mayo, Ireland
6Physiotherapy Department, Mayo General Hospital, Castlebar, Mayo, Ireland
7Claremorris Primary Care Centre, Claremorris, Mayo, Ireland

Contributors MO and KO have been primarily responsible for study conception, design, analysis plan, funding acquisition and implementation. NK, WD and PO contributed to the conceptualisation and design of the study and implementation. MO drafted the background, methods and Discussion sections of the manuscript and coordinated manuscript preparation and revision. KO, PO and WD trained the treating physiotherapists. MO and KO developed the paper-based resources to be used for both interventions. PO, KO and WD have developed the http://www.pain-ed.com online platform which will be available to support both physiotherapists and patients during the study. AT, LA and LD contributed to the design of the interventions, data collection process and will perform the treatment interventions in the study. HP and NB performed the power size calculation, produced the statistical analysis plan and will perform the final study analysis. All authors provided critical evaluation and revision of the manuscript and have given final approval of the manuscript accepting responsibility for all aspects.

Funding This work is sponsored by the Irish Research Council (IRC).

Competing interests None declared.

Patient consent Obtained.

Ethics approval Ethical approval has been granted by the Mayo General Hospital Research Ethics Committee.

Provenance and peer review Not commissioned; externally peer reviewed.

Open Access This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/

REFERENCES

10. Darlow B, Fullen BM, Dean S, et al. The association between health care professional attitudes and beliefs and the attitudes and beliefs,


73. Rannestad T, Skjeldstad FE. Socioeconomic conditions and number of pain sites in women. BMC women’s health 2012;12:7.


**Title of research project:** The effect of cognitive functional therapy on patients with non-specific chronic back pain: a multi-centre randomized trial

**Introduction:**
This research aims to assess the effect of cognitive functional therapy and exercise classes on improving pain symptoms and function in people with back pain.

**Procedure:**
After being deemed as suitable for treatment by your physiotherapist, you will be assigned to one of two treatments. Both treatments have been shown to result in reduced pain and disability but we want to examine which is more effective. Both treatments involve exercise, education and relaxation. Both treatments will be completed at the local site. You will be asked to complete a number of questionnaires before, and at the end of your treatment. In addition, you will be asked to fill in the questionnaires in the future; 6 months and 12 months after completing your treatment. The data from these questionnaires will be collated locally in the hospital you are attending, and then forwarded to a group of researchers in the University of Limerick. Only your treating physiotherapist and the research investigators will have access to your name and contact details in order to post the questionnaires to you, after 6 and 12 months. They will keep this information confidential. These researchers will analyse the data from a number of hospitals around Ireland collectively.

**Benefits:**
Participation in this research project will allow the researchers to better understand if the two types of physiotherapy treatment are effective in helping you achieve your goals of reducing pain and improving function.

**Risks:**
There are no associated risks involved in participating in this research project, apart from a mild risk of some initial soreness due to beginning exercise. You may still take part in treatment, even if you do not wish to be part of this study.
Inclusion Criteria:

You must be referred by your physiotherapist to take part in one of the treatments.

- Patients must have chronic back pain greater than 6 months
- Patients must be over 18 and under 75.
- Patients must be mentally and physically capable of participating in a treatment programme.
- Patients must not be pregnant

Confidentiality:

Your identity will only be known to the treating physiotherapist on site and by the research investigators who have to post the questionnaires to you at 6 and 12 months after starting treatment. They will keep this information confidential. Your name will not be published and your information will not be disclosed to anyone outside of the physiotherapists who are directly dealing with your care. Following completion of the data analysis, data may be stored for up to 7 years to allow for publication of the results. Thereafter, all data will be destroyed.

Voluntary participation:

If you volunteer to participate in this research project, you are free to withdraw at any time. If you decide to withdraw or to not participate, you will not be penalised in any way.

Attendance:

Since both treatments involve exercise, it is advisable to bring light clothes, comfortable shoes/runners, a bottle of water and a towel if you wish.

Contact Details:

For further information contact Dr Kieran O’ Sullivan, Clinical Therapies, University of Limerick. Email Kieran.osullivan@ul.ie
Title of research project: The effect of cognitive functional therapy on patients with non-specific chronic back pain: a multi-centre randomized trial

I have read the subject information leaflet and the procedures involved in this study have been fully explained to me. Any questions I had, have been answered.

I have volunteered to participate in this study and I am aware that I may withdraw at anytime.

I understand that personal information and results will remain confidential, and will be used for statistical purposes only.

I __________________ agree to participate in this research study.

Signature: ___________________________ Date:________________________
(Patient)

Signature: ___________________________ Date:________________________
(Physiotherapist)

Code: To be entered by local physiotherapist ______________________
Baseline low back pain questionnaires:

Code: To be entered by local physiotherapist __________________
Name: Age: Gender: Male / Female
Address:

Contact no: Date:
Main pain location (s):

Length of current pain episode (months): Time since initial pain onset (months):

Current Medications (Types and dosage/number):

Pain Scale:
This question assesses the severity of any pain you might be experiencing with your back problem. Please answer each of the questions below by circling the appropriate number on the scale.

0 IS EQUAL TO NO PAIN AT ALL, AND 10 IS EQUAL TO PAIN AS BAD AS YOU CAN IMAGINE.

Please rate your back pain by circling the one number that best describes your pain on average in the last week?

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>no pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pain as bad as you can imagine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ODI:
This questionnaire is designed to give us information as to how your back (or leg) trouble affects your ability to manage in everyday life. Please answer every section. Tick (√) one box only in each section that most closely describes you today.

Section 1 - Pain intensity
- I have no pain at the moment.
- The pain is very mild at the moment.
- The pain is moderate at the moment.
- The pain is fairly severe at the moment.
- The pain is very severe at the moment.
- The pain is the worst imaginable at the moment.

Section 2 - Personal care (washing, dressing, etc.)
- I can look after myself normally without causing extra pain.
- I can look after myself normally but it is very painful.
- It is painful to look after myself and I am slow and careful.
- I need some help but manage most of my personal care.
- I need help every day in most aspects of self-care.
- I do not get dressed, wash with difficulty and stay in bed.

Section 3 – Lifting
- I can lift heavy weights without extra pain.
- I can lift heavy weights but it gives extra pain.
- Pain prevents me from lifting heavy weights off the floor but I can manage if they are conveniently positioned, e.g. on a table.
- Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
- I can lift only very light weights.
- I cannot lift or carry anything at all.
Section 4 – Walking
- Pain does not prevent me walking any distance.
- Pain prevents me walking more than one mile.
- Pain prevents me walking more than a quarter of a mile.
- Pain prevents me walking more than 100 yards.
- I can only walk using a stick or crutches.
- I am in bed most of the time and have to crawl to the toilet.

Section 5 – Sitting
- I can sit in any chair as long as I like.
- I can sit in my favourite chair as long as I like.
- Pain prevents me from sitting for more than 1 hour.
- Pain prevents me from sitting for more than half an hour.
- Pain prevents me from sitting for more than 10 minutes.
- Pain prevents me from sitting at all.

Section 6 – Standing
- I can stand as long as I want without extra pain.
- I can stand as long as I want but it gives me extra pain.
- Pain prevents me from standing for more than 1 hour.
- Pain prevents me from standing for more than half an hour.
- Pain prevents me from standing for more than 10 minutes.
- Pain prevents me from standing at all.

Section 7 – Sleeping
- My sleep is never disturbed by pain.
- My sleep is occasionally disturbed by pain.
- Because of pain I have less than 6 hours sleep.
- Because of pain I have less than 4 hours sleep.
- Because of pain I have less than 2 hours sleep.
- Pain prevents me from sleeping at all.

Section 8 - Sex life (if applicable)
- My sex life is normal and causes no extra pain.
- My sex life is normal but causes some extra pain.
- My sex life is nearly normal but is very painful.
- My sex life is severely restricted by pain.
- My sex life is nearly absent because of pain.
- Pain prevents any sex life at all.

Section 9 - Social life
- My social life is normal and causes me no extra pain.
- My social life is normal but increases the degree of pain.
- Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport, etc.
- Pain has restricted my social life and I do not go out as often.
- Pain has restricted social life to my home.
- I have no social life because of pain.

Section 10 – Travelling
- I can travel anywhere without pain.
- I can travel anywhere but it gives extra pain.
- Pain is bad but I manage journeys over two hours.
- Pain restricts me to journeys of less than one hour.
- Pain restricts me to short necessary journeys under 30 minutes.
### Orebro:

<table>
<thead>
<tr>
<th>Question</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How long have you had your current pain problem? Tick (✓) one.</td>
<td></td>
</tr>
<tr>
<td>0-1 weeks (1)</td>
<td>1-2 weeks (2)</td>
</tr>
<tr>
<td>2. How would you rate the pain that you have had during the past week? Circle one.</td>
<td></td>
</tr>
<tr>
<td>No pain</td>
<td>Pain as bad as it could be</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3. Circle the number that best describes your current ability to do light work for an hour.</td>
<td></td>
</tr>
<tr>
<td>Can’t do it because of pain problem</td>
<td>Can do it without pain being a problem</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4. Circle the number that best describes your current ability to sleep at night.</td>
<td></td>
</tr>
<tr>
<td>Can’t do it because of pain problem</td>
<td>Can do it without pain being a problem</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5. How tense or anxious have you felt in the past week? Circle one.</td>
<td></td>
</tr>
<tr>
<td>Absolutely calm and relaxed</td>
<td>As tense and anxious as I’ve ever felt</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6. How much have you been bothered by feeling depressed in the past week? Circle one.</td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>Extremely</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7. In your view, how large is the risk that your current pain may become persistent? Circle one.</td>
<td></td>
</tr>
<tr>
<td>No risk</td>
<td>Very large risk</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8. In your estimation, what are the chances that you will be able to work in 3 months? Circle one.</td>
<td></td>
</tr>
<tr>
<td>No chance</td>
<td>Very large chance</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9. An increase in pain is an indication that I should stop what I’m doing until the pain decreases.</td>
<td></td>
</tr>
<tr>
<td>Completely disagree</td>
<td>Completely agree</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10. I should not do my normal work with my present pain.</td>
<td></td>
</tr>
<tr>
<td>Completely disagree</td>
<td>Completely agree</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

### NMQ12:

Have you at any time during the **past month** had trouble (ache, pain, discomfort, numbness, tingling etc…) in any of the following body regions which affected your normal activity or changed your daily routine for more than one day? Please circle all that apply. If no trouble, circle none.

- Neck
- Lower back
- Upper back
- One or both shoulders
- One or both elbows
- One or both wrists/hands
- One or both hips/thighs
- One or both knees
- One or both ankles/feet
- None
**SHC:**
The following are some common health problems and complaints. Please circle one number from 0 to 3 to report what extent you have been affected by each problem during the last month.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpitations/extra heartbeats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Chest pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Breathing difficulties</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heartburn</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Stomach discomfort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Constipation</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Eczema</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tiredness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness / depression</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sleep problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**FABQ:** Here are some of the things which other patients have told us about their pain. For each statement please circle one number from 0 to 6 to say how much physical activities (such as bending, lifting, walking or driving) affect or would affect your back pain.

<table>
<thead>
<tr>
<th>Statement</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical activity makes my pain worse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Physical activity might harm my back</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I should not do physical activities which (might) make my pain worse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I cannot do physical activities which (might) make my pain worse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CSQ:**
Below is a list of things that people have reported doing when they feel pain. To indicate your answer for each activity, circle one of the numbers on the scale under each item, where 0= never do that, 3=sometimes do that and 6=always do that.

1. When I feel pain, I tell myself I can’t let the pain stand in the way of what I have to do.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do that</td>
<td>sometimes do that</td>
<td>always do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. When I feel pain, no matter how bad it gets, I know I can handle it.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do that</td>
<td>sometimes do that</td>
<td>always do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. When I feel pain, I see it as a challenge and don’t let it bother me.

Never do | sometimes | always
---|---|---
that | do that | do that

4. When I feel pain, although it hurts, I just keep on going.

Never do | sometimes | always
---|---|---
that | do that | do that

5. When I feel pain, I just go on as if nothing happened.

Never do | sometimes | always
---|---|---
that | do that | do that

**SCI:**
This questionnaire is designed to give us information about your occupation, income, education and health. **Tick (✓) one box only** in each section.

**Education:**
- < 10 years □
- 10-12 years □
- 13-15 years □
- >15 years □

**Employment status:**
- Unemployed* □
- Part-time job □
- Full-time job □

*The unemployed group included homemakers, students, retired, and women with a disability pension.

**Annual household income (pre-tax):**
- <€12,500 □
- €12,500 – 37,500 □
- €37,501-62,500 □
- >€62,500 □

**Ability to pay bills:**
- Never problems □
- Problems □

**Self-perceived health:**
- Very poor □
- Poor moderate □
- Good □
- Very good □

**Satisfaction with number of close friends:**
- Satisfied with number of close friends □
- Not satisfied with number of close friends □
PSEQ:
Please rate how confident you are that you can do the following things at present, despite the pain. To indicate your answer circle one of the numbers on the scale under each item, where 0 = not at all confident and 6 = completely confident. Remember, this questionnaire is not asking whether or not you have been doing these things, but rather how confident you are that you can do them at present, despite the pain.

1. I can enjoy things, despite the pain.
   
   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

2. I can do most of the household chores (e.g. tidying-up, washing dishes) despite the pain.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

3. I can socialise with my friends or family members as often as I used to do, despite the pain.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

4. I can cope with my pain in most situations.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

5. I can do some form of work, despite the pain. (“work” includes housework, paid and unpaid work).

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

6. I can still do many of the things I enjoy doing, such as hobbies or leisure activity, despite the pain.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

7. I can cope with my pain without medication.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

8. I can still accomplish most of my goals in life, despite the pain.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

9. I can live a normal lifestyle, despite the pain.

   Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident

10. I can gradually become more active, despite the pain.

    Not at all confident | 0 | 1 | 2 | 3 | 4 | 5 | 6 | completely confident
**S-DASS21:**
Please read each statement and indicate how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement. *The rating scale is as follows:*

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Did not apply to me at all</td>
</tr>
<tr>
<td>1</td>
<td>Applied to me to some degree, or some of the time</td>
</tr>
<tr>
<td>2</td>
<td>Applied to me to a considerable degree, or a good part of time</td>
</tr>
<tr>
<td>3</td>
<td>Applied to me very much, or most of the time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>I found it hard to wind down</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I tended to over-react to situations</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I felt that I was using a lot of nervous energy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I found myself getting agitated</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I found it difficult to relax</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>I felt that I was rather touchy</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
Discharge low back pain questionnaires:

Code: To be entered by local physiotherapist ________________
Name: __________________________ Date: __________________

Current Medications (Types and dosage/number):

Pain Scale:
This question assesses the severity of any pain you might be experiencing with your back problem. Please answer each of the questions below by circling the appropriate number on the scale.

0 IS EQUAL TO NO PAIN AT ALL, AND 10 IS EQUAL TO PAIN AS BAD AS YOU CAN IMAGINE.

Please rate your back pain by circling the one number that best describes your pain on average in the last week?

0 1 2 3 4 5 6 7 8 9 10
   no pain                           pain as bad as you can imagine

ODI:
This questionnaire is designed to give us information as to how your back (or leg) trouble affects your ability to manage in everyday life. Please answer every section. Tick (√) one box only in each section that most closely describes you today.

Section 1 - Pain intensity
☐ I have no pain at the moment.
☐ The pain is very mild at the moment.
☐ The pain is moderate at the moment.
☐ The pain is fairly severe at the moment.
☐ The pain is very severe at the moment.
☐ The pain is the worst imaginable at the moment.

Section 2 - Personal care (washing, dressing, etc.)
☐ I can look after myself normally without causing extra pain.
☐ I can look after myself normally but it is very painful.
☐ It is painful to look after myself and I am slow and careful.
☐ I need some help but manage most of my personal care.
☐ I need help every day in most aspects of self-care.
☐ I do not get dressed, wash with difficulty and stay in bed.

Section 3 – Lifting
☐ I can lift heavy weights without extra pain.
☐ I can lift heavy weights but it gives extra pain.
☐ Pain prevents me from lifting heavy weights off the floor but I can manage if they are conveniently positioned, e.g. on a table.
☐ Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
☐ I can lift only very light weights.
☐ I cannot lift or carry anything at all.
Section 4 – Walking
○ Pain does not prevent me walking any distance.
○ Pain prevents me walking more than one mile.
○ Pain prevents me walking more than a quarter of a mile.
○ Pain prevents me walking more than 100 yards.
○ I can only walk using a stick or crutches.
○ I am in bed most of the time and have to crawl to the toilet.

Section 5 – Sitting
○ I can sit in any chair as long as I like.
○ I can sit in my favourite chair as long as I like.
○ Pain prevents me from sitting for more than 1 hour.
○ Pain prevents me from sitting for more than half an hour.
○ Pain prevents me from sitting for more than 10 minutes.
○ Pain prevents me from sitting at all.

Section 6 – Standing
○ I can stand as long as I want without extra pain.
○ I can stand as long as I want but it gives me extra pain.
○ Pain prevents me from standing for more than 1 hour.
○ Pain prevents me from standing for more than half an hour.
○ Pain prevents me from standing for more than 10 minutes.
○ Pain prevents me from standing at all.

Section 7 – Sleeping
○ My sleep is never disturbed by pain.
○ My sleep is occasionally disturbed by pain.
○ Because of pain I have less than 6 hours sleep.
○ Because of pain I have less than 4 hours sleep.
○ Because of pain I have less than 2 hours sleep.
○ Pain prevents me from sleeping at all.

Section 8 - Sex life (if applicable)
○ My sex life is normal and causes no extra pain.
○ My sex life is normal but causes some extra pain.
○ My sex life is nearly normal but is very painful.
○ My sex life is severely restricted by pain.
○ My sex life is nearly absent because of pain.
○ Pain prevents any sex life at all.

Section 9 - Social life
○ My social life is normal and causes me no extra pain.
○ My social life is normal but increases the degree of pain.
○ Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport, etc.
○ Pain has restricted my social life and I do not go out as often.
○ Pain has restricted social life to my home.
○ I have no social life because of pain.

Section 10 – Travelling
○ I can travel anywhere without pain.
○ I can travel anywhere but it gives extra pain.
○ Pain is bad but I manage journeys over two hours.
○ Pain restricts me to journeys of less than one hour.
○ Pain restricts me to short necessary journeys under 30 minutes.
Orebro:

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How long have you had your current pain problem? Tick (√) one.</td>
</tr>
<tr>
<td>0-1 weeks (1)</td>
</tr>
<tr>
<td>2. How would you rate the pain that you have had during the past week? Circle one.</td>
</tr>
<tr>
<td>No pain</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>3. Circle the number that best describes your current ability to do light work for an hour.</td>
</tr>
<tr>
<td>Can’t do it because of pain problem</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>4. Circle the number that best describes your current ability to sleep at night.</td>
</tr>
<tr>
<td>Can’t do it because of pain problem</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>5. How tense or anxious have you felt in the past week? Circle one.</td>
</tr>
<tr>
<td>Absolutely calm and relaxed</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>6. How much have you been bothered by feeling depressed in the past week? Circle one.</td>
</tr>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>7. In your view, how large is the risk that your current pain may become persistent? Circle one.</td>
</tr>
<tr>
<td>No risk</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>8. In your estimation, what are the chances that you will be able to work in 3 months? Circle one.</td>
</tr>
<tr>
<td>No chance</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>9. An increase in pain is an indication that I should stop what I’m doing until the pain decreases.</td>
</tr>
<tr>
<td>Completely disagree</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>10. I should not do my normal work with my present pain.</td>
</tr>
<tr>
<td>Completely disagree</td>
</tr>
</tbody>
</table>

NMQ12:

Have you at any time during the past month had trouble (ache, pain, discomfort, numbness, tingling etc…) in any of the following body regions which affected your normal activity or changed your daily routine for more than one day? Please circle all that apply. If no trouble, circle none.

- Neck
- Lower back
- Upper back
- One or both shoulders
- One or both elbows
- One or both wrists/hands
- One or both hips/thighs
- One or both knees
- One or both ankles/feet
- None
SHC:
The following are some common health problems and complaints. Please circle one number from 0 to 3 to report what extent you have been affected by each problem during the last month.

<table>
<thead>
<tr>
<th>Health Problem</th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpitations/extra heartbeats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Chest pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Breathing difficulties</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heartburn</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Stomach discomfort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Constipation</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Eczema</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tiredness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness / depression</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sleep problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

FABQ: Here are some of the things which other patients have told us about their pain. For each statement please circle one number from 0 to 6 to say how much physical activities (such as bending, lifting, walking or driving) affect or would affect your back pain.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely disagree</th>
<th>Unsure</th>
<th>Completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical activity makes my pain worse</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Physical activity might harm my back</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. I should not do physical activities which (might) make my pain worse</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. I cannot do physical activities which (might) make my pain worse</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

CSQ:
Below is a list of things that people have reported doing when they feel pain. To indicate your answer for each activity, circle one of the numbers on the scale under each item, where 0= never do that, 3=sometimes do that and 6=always do that.

1. When I feel pain, I tell myself I can’t let the pain stand in the way of what I have to do.

2. When I feel pain, no matter how bad it gets, I know I can handle it.
3. When I feel pain, I see it as a challenge and don’t let it bother me.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do</td>
<td>sometimes</td>
<td>always</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>that</td>
<td>do that</td>
<td>do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. When I feel pain, although it hurts, I just keep on going.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do</td>
<td>sometimes</td>
<td>always</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>that</td>
<td>do that</td>
<td>do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. When I feel pain, I just go on as if nothing happened.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do</td>
<td>sometimes</td>
<td>always</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>that</td>
<td>do that</td>
<td>do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCI:**

This questionnaire is designed to give us information about your occupation, income, education and health. **Tick (✓) one box only in each section.**

**Education:**
- < 10 years ☐
- 10-12 years ☐
- 13-15 years ☐
- >15 years ☐

**Employment status:**
- Unemployed* ☐
- Part-time job ☐
- Full-time job ☐

* The unemployed group included homemakers, students, retired, and women with a disability pension.

**Annual household income (pre-tax):**
- <€12,500 ☐
- €12,500 – 37,500 ☐
- €37,501-62,500 ☐
- >€62,500 ☐

**Ability to pay bills:**
- Never problems ☐
- Problems ☐

**Self-perceived health:**
- Very poor ☐
- Poor moderate ☐
- Good ☐
- Very good ☐

**Satisfaction with number of close friends:**
- Satisfied with number of close friends ☐
- Not satisfied with number of close friends ☐
**PSEQ:**

Please rate how confident you are that you can do the following things at present, despite the pain. To indicate your answer circle one of the numbers on the scale under each item, where 0 = not at all confident and 6 = completely confident. Remember, this questionnaire is not asking whether or not you have been doing these things, but rather how confident you are that you can do them at present, despite the pain.

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can enjoy things, despite the pain.</td>
<td></td>
</tr>
<tr>
<td>2. I can do most of the household chores (e.g. tidying-up, washing dishes) despite the pain.</td>
<td></td>
</tr>
<tr>
<td>3. I can socialise with my friends or family members as often as I used to do, despite the pain.</td>
<td></td>
</tr>
<tr>
<td>4. I can cope with my pain in most situations.</td>
<td></td>
</tr>
<tr>
<td>5. I can do some form of work, despite the pain. (“work” includes housework, paid and unpaid work).</td>
<td></td>
</tr>
<tr>
<td>6. I can still do many of the things I enjoy doing, such as hobbies or leisure activity, despite the pain.</td>
<td></td>
</tr>
<tr>
<td>7. I can cope with my pain without medication.</td>
<td></td>
</tr>
<tr>
<td>8. I can still accomplish most of my goals in life, despite the pain.</td>
<td></td>
</tr>
<tr>
<td>9. I can live a normal lifestyle, despite the pain.</td>
<td></td>
</tr>
<tr>
<td>10. I can gradually become more active, despite the pain.</td>
<td></td>
</tr>
</tbody>
</table>
S-DASS21:
Please read each statement and indicate how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement. *The rating scale is as follows:*

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

I found it hard to wind down

I tended to over-react to situations

I felt that I was using a lot of nervous energy

I found myself getting agitated

I found it difficult to relax

I was intolerant of anything that kept me from getting on with what I was doing

I felt that I was rather touchy

**Satisfaction:**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The care that I have been receiving here is just about perfect
Follow-up low back pain questionnaires:

Code: To be entered by University of Limerick ________________

Name: ______________________________

Date: ______________________________

Pain Scale:
This question assesses the severity of any pain you might be experiencing with your back problem. Please answer each of the questions below by circling the appropriate number on the scale.

0 IS EQUAL TO NO PAIN AT ALL, AND 10 IS EQUAL TO PAIN AS BAD AS YOU CAN IMAGINE.

Please rate your **back** pain by circling the one number that best describes your pain **on average** in the **last week**?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>no pain</td>
<td>pain as bad as you can imagine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ODI:
This questionnaire is designed to give us information as to how your back (or leg) trouble affects your ability to manage in everyday life. Please answer every section. Tick (√) one box only in each section that most closely describes you today.

**Section 1** - Pain intensity
- I have no pain at the moment.
- The pain is very mild at the moment.
- The pain is moderate at the moment.
- The pain is fairly severe at the moment.
- The pain is very severe at the moment.
- The pain is the worst imaginable at the moment.

**Section 2** - Personal care (washing, dressing, etc.)
- I can look after myself normally without causing extra pain.
- I can look after myself normally but it is very painful.
- It is painful to look after myself and I am slow and careful.
- I need some help but manage most of my personal care.
- I need help every day in most aspects of self-care.
- I do not get dressed, wash with difficulty and stay in bed.

**Section 3** – Lifting
- I can lift heavy weights without extra pain.
- I can lift heavy weights but it gives extra pain.
- Pain prevents me from lifting heavy weights off the floor but I can manage if they are conveniently positioned, e.g. on a table.
- Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned.
- I can lift only very light weights.
- I cannot lift or carry anything at all.
Section 4 – Walking
- Pain does not prevent me walking any distance.
- Pain prevents me walking more than one mile.
- Pain prevents me walking more than a quarter of a mile.
- Pain prevents me walking more than 100 yards.
- I can only walk using a stick or crutches.
- I am in bed most of the time and have to crawl to the toilet.

Section 5 – Sitting
- I can sit in any chair as long as I like.
- I can sit in my favourite chair as long as I like.
- Pain prevents me from sitting for more than 1 hour.
- Pain prevents me from sitting for more than half an hour.
- Pain prevents me from sitting for more than 10 minutes.
- Pain prevents me from sitting at all.

Section 6 – Standing
- I can stand as long as I want without extra pain.
- I can stand as long as I want but it gives me extra pain.
- Pain prevents me from standing for more than 1 hour.
- Pain prevents me from standing for more than half an hour.
- Pain prevents me from standing for more than 10 minutes.
- Pain prevents me from standing at all.

Section 7 – Sleeping
- My sleep is never disturbed by pain.
- My sleep is occasionally disturbed by pain.
- Because of pain I have less than 6 hours sleep.
- Because of pain I have less than 4 hours sleep.
- Because of pain I have less than 2 hours sleep.
- Pain prevents me from sleeping at all.

Section 8 - Sex life (if applicable)
- My sex life is normal and causes no extra pain.
- My sex life is normal but causes some extra pain.
- My sex life is nearly normal but is very painful.
- My sex life is severely restricted by pain.
- My sex life is nearly absent because of pain.
- Pain prevents any sex life at all.

Section 9 - Social life
- My social life is normal and causes me no extra pain.
- My social life is normal but increases the degree of pain.
- Pain has no significant effect on my social life apart from limiting my more energetic interests, e.g. sport, etc.
- Pain has restricted my social life and I do not go out as often.
- Pain has restricted social life to my home.
- I have no social life because of pain.

Section 10 – Travelling
- I can travel anywhere without pain.
- I can travel anywhere but it gives extra pain.
- Pain is bad but I manage journeys over two hours.
- Pain restricts me to journeys of less than one hour.
- Pain restricts me to short necessary journeys under 30 minutes.
Have you at any time during the past month had trouble (ache, pain, discomfort, numbness, tingling etc...) in any of the following body regions which affected your normal activity or changed your daily routine for more than one day? Please circle all that apply. If no trouble, circle none.

- Neck
- Lower back
- Upper back
- One or both shoulders
- One or both elbows
- One or both wrists/hands
- One or both hips/thighs
- One or both knees
- One or both ankles/feet
- None

**Orebro:**

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How long have you had your current pain problem? Tick (√) one.</td>
</tr>
<tr>
<td>2. How would you rate the pain that you have had during the past week? Circle one.</td>
</tr>
<tr>
<td>3. Circle the number that best describes your current ability to do light work for an hour.</td>
</tr>
<tr>
<td>4. Circle the number that best describes your current ability to sleep at night.</td>
</tr>
<tr>
<td>5. How tense or anxious have you felt in the past week? Circle one.</td>
</tr>
<tr>
<td>6. How much have you been bothered by feeling depressed in the past week? Circle one.</td>
</tr>
<tr>
<td>7. In your view, how large is the risk that your current pain may become persistent? Circle one.</td>
</tr>
<tr>
<td>8. In your estimation, what are the chances that you will be able to work in 3 months? Circle one.</td>
</tr>
<tr>
<td>9. An increase in pain is an indication that I should stop what I’m doing until the pain decreases.</td>
</tr>
<tr>
<td>10. I should not do my normal work with my present pain.</td>
</tr>
</tbody>
</table>
SHC:
The following are some common health problems and complaints. Please circle one number from 0 to 3 to report what extent you have been affected by each problem **during the last month**.

<table>
<thead>
<tr>
<th>Health Problem</th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpitations/extra heartbeats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Chest pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Breathing difficulties</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heartburn</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Stomach discomfort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Constipation</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Eczema</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tiredness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness / depression</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sleep problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

FABQ: Here are some of the things which other patients have told us about their pain. For each statement please circle one number from 0 to 6 to say how much physical activities (such as bending, lifting, walking or driving) affect or would affect your back pain.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely disagree</th>
<th>Unsure</th>
<th>Completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical activity makes my pain worse</td>
<td>0</td>
<td>1</td>
<td>2 3 4 5 6</td>
</tr>
<tr>
<td>2. Physical activity might harm my back</td>
<td>0</td>
<td>1</td>
<td>2 3 4 5 6</td>
</tr>
<tr>
<td>3. I should not do physical activities which (might) make my pain worse</td>
<td>0</td>
<td>1</td>
<td>2 3 4 5 6</td>
</tr>
<tr>
<td>4. I cannot do physical activities which (might) make my pain worse</td>
<td>0</td>
<td>1</td>
<td>2 3 4 5 6</td>
</tr>
</tbody>
</table>

CSQ: Below is a list of things that people have reported doing when they feel pain. To indicate your answer for each activity, circle one of the numbers on the scale under each item, where 0= never do that, 3=sometimes do that and 6= always do that.

1. When I feel pain, I tell myself I can’t let the pain stand in the way of what I have to do.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do</td>
<td>sometimes do that</td>
<td>always do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. When I feel pain, no matter how bad it gets, I know I can handle it.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never do</td>
<td>sometimes do that</td>
<td>always do that</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. When I feel pain, I see it as a challenge and don’t let it bother me.

Never do  sometimes  always
that  do that  do that

4. When I feel pain, although it hurts, I just keep on going.

Never do  sometimes  always
that  do that  do that

5. When I feel pain, I just go on as if nothing happened.

Never do  sometimes  always
that  do that  do that

**SCI:**
This questionnaire is designed to give us information about your occupation, income, education and health. **Tick (✓) one box only** in each section.

**Education:**
< 10 years ☐ 10-12 years ☐ 13-15 years ☐ >15 years ☐

**Employment status:**
Unemployed* ☐ Part-time job ☐ Full-time job ☐
*The unemployed group included homemakers, students, retired, and women with a disability pension.

**Annual household income (pre-tax):**
<€12,500 ☐ €12,500 – 37,500 ☐ €37,501-62,500 ☐ >€62,500 ☐

**Ability to pay bills:**
Never problems ☐ Problems ☐

**Self-perceived health:**
Very poor ☐ Poor moderate ☐ Good ☐ Very good ☐

**Satisfaction with number of close friends:**
Satisfied with number of close friends ☐ Not satisfied with number of close friends ☐
PSEQ:
Please rate how confident you are that you can do the following things at present, despite the pain. To indicate your answer circle one of the numbers on the scale under each item, where 0 = not at all confident and 6 = completely confident. Remember, this questionnaire is not asking whether or not you have been doing these things, but rather how confident you are that you can do them at present, despite the pain.

1. I can enjoy things, despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

2. I can do most of the household chores (e.g. tidying-up, washing dishes) despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

3. I can socialise with my friends or family members as often as I used to do, despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

4. I can cope with my pain in most situations.
   Not at all confident  1  2  3  4  5  completely confident

5. I can do some form of work, despite the pain. (“work” includes housework, paid and unpaid work).
   Not at all confident  1  2  3  4  5  completely confident

6. I can still do many of the things I enjoy doing, such as hobbies or leisure activity, despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

7. I can cope with my pain without medication.
   Not at all confident  1  2  3  4  5  completely confident

8. I can still accomplish most of my goals in life, despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

9. I can live a normal lifestyle, despite the pain.
   Not at all confident  1  2  3  4  5  completely confident

10. I can gradually become more active, despite the pain.
    Not at all confident  1  2  3  4  5  completely confident
S-DASS21:
Please read each statement and indicate how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

I found it hard to wind down
I tended to over-react to situations
I felt that I was using a lot of nervous energy
I found myself getting agitated
I found it difficult to relax
I was intolerant of anything that kept me from getting on with what I was doing
I felt that I was rather touchy
Costs analysis
For all of these sections, please only name treatments and costs relating to the time since you completed your physiotherapy treatment with XXXX

Treatments and tests received
This table is designed to give us information about treatments you received from other health professionals/services since completing your physiotherapy. This will allow us to estimate the costs associated with your back pain and health.

<table>
<thead>
<tr>
<th>Service/Treatment</th>
<th>Number of visits</th>
<th>Private or public</th>
<th>Total amount of money paid for this (€)</th>
<th>Reason for needing that service/treatment e.g. back pain, flu, stomach problems,</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice nurse in GP practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other physiotherapy outside of study</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiropractor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteopath</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massage therapist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acupuncture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other alternative healthcare professionals e.g. reflexology, reiki, homeopathy, Chinese medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group-based activities e.g. yoga, pilates, mindfulness, tai chi etc…</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgeon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultant for pain/pain medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other consultant for non-pain issues (e.g. for eyes, nose, throat, stomach, bowel, bladder, skin, joints or any other issues)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public health nurse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatrist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychologist</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counsellor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social worker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Have you received any other treatment (for back pain or any other health problems) that is not listed above since completing your physiotherapy? If so, please explain below:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

**Hospitalisations and tests**
This table is designed to give us information on costs associated with hospital visits and tests done since you completed your physiotherapy treatment. Please **only** name services since you completed your physiotherapy treatment.

<table>
<thead>
<tr>
<th>Service</th>
<th>Total number (of admissions, visits or tests for each)</th>
<th>Private or public</th>
<th>Total amount of money paid for this (€)</th>
<th>Reason for needing that service/treatment e.g. back pain, flu, stomach problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital outpatient appointment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xray</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT scan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other medical procedures (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Have you completed any other medical tests not listed above (for back pain or any other health problems) since finishing treatment in the study? If so, please explain:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
**Medications**
This table is designed to give us information on changes and costs associated with your medication since you completed your physiotherapy treatment. You might find it helpful to check your drug payment scheme receipts but also include medications not covered by this. This includes anything for your back pain or general health taken in tablet, injection, liquid or any other form. Please **only** list medications used since you completed your physiotherapy treatment.

<table>
<thead>
<tr>
<th>Name of medication</th>
<th>Dose taken (e.g. 10mg, 20mg)</th>
<th>Amount taken per day</th>
<th>Cost (if paying privately)</th>
<th>Reason for use (pain or otherwise)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Equipment, aids and informal care**

This table is designed to give us information on any equipment, aids or assistance/help with daily activities that you had to get due to your back pain since you completed your physiotherapy treatment. Please **only** name equipment/aids or help got since you completed your physiotherapy.

<table>
<thead>
<tr>
<th>Form of assistance</th>
<th>Private or public</th>
<th>Total amount of money paid for this (€)</th>
<th>Reason for needing assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid Home help (per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid Carer (per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid Babysitter (per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpaid help from family/friends (per hour)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking aids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seating or seating supports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes to house (e.g. ramp, lifting, hoist, shower, kitchen, bathroom)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Have you got any other informal care or equipment aids (for back pain or any other health problems) not listed above since you completed your physiotherapy treatment? If so, please explain below:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

**Employment and Days off from work**

If you normally engage in some paid work, what kind of work/occupation is it:

___________________________________________________________________________
___________________________________________________________________________

How many days have you been absent from work owing to back pain or illness since you completed your physiotherapy treatment? ________________

**Reason(s) for missing days:**

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
**Travel costs**
This section is designed to give us information on money you have spent on travelling to services/treatment/hospital for your back pain and general health since you completed your physiotherapy treatment.

<table>
<thead>
<tr>
<th>Treatment/service</th>
<th>Who took you to it?</th>
<th>Did you take off work to travel to treatment</th>
<th>Distance to treatment (km)</th>
<th>Number of trips</th>
<th>Reason for treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**THANK YOU FOR COMPLETING THESE QUESTIONNAIRES. WE WOULD APPRECIATE IF YOU COULD PLEASE POST THESE IN THE STAMP ADDRESSED ENVELOPE PROVIDED.**
Physiotherapist questionnaires

Demographic and training details:
- Age ____________
- Sex ______________
- years qualified __________
- years working mainly in musculoskeletal area __________
- practice setting (e.g. public, primary care) ____________________
- postgrad qualifications/year obtained ____________________

Specific CFT training
- Number of workshop days attended as participant (watching CFT tutor-POS, WD, KJF, KOS) ______
- Number of live patients you have seen others assess/treat (with CFT tutor) __________
- Number of live patients you have personally assessed/treated with CFT tutor present __________
- Number of live patients you have seen with colleague in training without CFT tutor __________
- Number of CFT patient videos you have seen without CFT tutor ___________
- Number of CFT patient videos you have seen with colleague in training without CFT tutor ________

Personal health details:
The following are some common health problems and complaints. Please circle one number from 0 to 3 to report what extent you have been affected by each problem during the last month.

<table>
<thead>
<tr>
<th>Health Problem</th>
<th>Not at all</th>
<th>A Little</th>
<th>Some</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palpitations/extra heartbeats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Chest pain</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Breathing difficulties</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heartburn</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Stomach discomfort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Constipation</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Eczema</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Tiredness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sadness / depression</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Sleep problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Have you ever experienced pain in your lower back?  Yes □  No □

Have you experienced pain in your lower back in the last year? Yes □  No □

If you have experienced low back pain in the last year, has your back pain caused you to?
- Reduce your activity levels (functional activity and hobbies) Yes □  No □
- Reduce your work                    Yes □  No □
- Receive treatment (e.g. GP, physio, chiropractic) Yes □  No □
- Take medication                    Yes □  No □
### Clinical questionnaires: HC-PAIRS

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Largely disagree</th>
<th>Somewhat disagree</th>
<th>Neutral</th>
<th>Somewhat agree</th>
<th>Largely agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chronic back pain patients can still be expected to fulfil work and family responsibilities despite pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>An increase in pain is an indicator that a chronic back pain patient should stop what he is doing until the pain decreases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Chronic back pain patients cannot go about normal life activities when they are in pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>If their pain would go away, chronic back pain patients’ would be every bit as active as they used to be</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Chronic back pain patients should have the same benefits as the handicapped because of their chronic pain problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Chronic back pain patients owe it to themselves and those around them to perform their usual activities even when their pain is bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Most people expect too much of chronic back pain patients, given their pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Chronic back pain patients have to be careful not to do anything that might make their pain worse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>As long as they are in pain, chronic back pain patients will never be able to live as well as they did before</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Chronic back pain patients have to accept that they are disabled persons, due to their chronic pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>There is no way that chronic back pain patients can return to doing the things they used to do unless they first find a cure for their pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Even though their pain is always there, chronic back pain patients often don’t notice it at all when they are keeping themselves busy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>All of chronic back pain patients’ problems would be solved if their pain would go away</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PABS-PT (19-item version)
1=Totally disagree, 2=Largely disagree, 3=Disagree to some extent, 4=Agree to some extent,
5=Largely agree, 6= Totally agree

The severity of tissue damage determines the level of pain
Increased pain indicates new tissue damage or the spread of existing damage
Pain is a nociceptive stimulus, indicating tissue damage
If back pain increases in severity, I immediately adjust the intensity of my treatment accordingly
If patients complain of pain during exercise, I worry that damage is being caused
Patients with back pain should preferably practice only pain free movements
Pain reduction is a precondition for the restoration of normal functioning
If therapy does not result in a reduction in back pain, there is a high risk of severe restrictions in the long term
Back pain indicates the presence of organic injury
In the long run, patients with back pain have a higher risk of developing spinal impairments
Learning to cope with stress promotes recovery from back pain
A patient suffering from severe back pain will benefit from physical exercise
Even if the pain has worsened, the intensity of the next treatment can be increased
Exercises that may be back straining should not be avoided during the treatment
Therapy may have been successful even if pain remains
The cause of back pain is unknown
Functional limitations associated with back pain are the result of psychosocial factors
There is no effective treatment to eliminate back pain
Mental stress can cause back pain even in the absence of tissue damage

Practitioner Confidence Scale
1=Strongly agree , 2=Agree, 3= Neither agree or disagree, 4= Disagree, 5=Strongly disagree

A. I lack the diagnostic tools or knowledge needed to effectively assess patients with LBP.
B. I know exactly what to do to effectively treat patients with LBP.
C. I am very comfortable treating patients with LBP.
D. There is nothing physically wrong with many patients who complain of LBP.
E. There is little I can do to prevent patients with acute back pain from developing chronic back pain.
F. Patients with LBP often have unrealistic expectations about what doctors can do for them.
G. Many of my patients with back pain will be dissatisfied if I do not order a roentgenogram (scan).
H. I often have negative feelings about dealing with patients who have LBP.
I. Most of my patients with LBP are very satisfied with my care.

J. How well prepared to manage LBP are you now?

1=Very well, 2=Well, 3=Neither well or poor, 4= Poor, 5=Very Poor
ABS-MP

To what extent do you agree or disagree with the following statements? Please read each statement and tick the box that best represents your view; 1=Extremely disagree; 2=Disagree; 3=Somewhat disagree; 4=Neither agree or disagree; 5=Somewhat agree; 6=Agree; 7=Extremely agree

I explore the psychological problems that my patient is facing. 1 2 3 4 5 6 7
I am concerned about the quality of treatment my referred patients receive. 1 2 3 4 5 6 7
I often find myself providing psychological support to patients. 1 2 3 4 5 6 7
If you look hard enough you can find a structural reason for most patients’ back pain. 1 2 3 4 5 6 7
It is essential that I know about my patients’ psychological difficulties. 1 2 3 4 5 6 7
Regular treatment by a physical therapist does not help prevent back pain. 1 2 3 4 5 6 7
When I refer my patients I know they will be seen within a suitable time frame. 1 2 3 4 5 6 7
The most important goal of treatment is to increase mobility. 1 2 3 4 5 6 7
I believe in continuing to treat the patient after the back pain has been resolved, to prevent its return. 1 2 3 4 5 6 7
Return to normal daily activities is the most important consequence of treatment. 1 2 3 4 5 6 7
I try to avoid probing into my patients’ personal problems. 1 2 3 4 5 6 7
I don’t believe that there is anyone out there who could help my back pain patients more than I do. 1 2 3 4 5 6 7
I advise back pain patients to restrict their life-style. 1 2 3 4 5 6 7
If I keep seeing patients on and off I can prevent relapse. 1 2 3 4 5 6 7
My objective is to get my patients back to work quickly. 1 2 3 4 5 6 7
I don’t see myself as connected to a health system of resources that I can access. 1 2 3 4 5 6 7
I often find I have to teach patients to be vigilant about their backs. 1 2 3 4 5 6 7
If I keep seeing patients on and off, they might never learn to manage their back problem themselves. 1 2 3 4 5 6 7
When referring patients I am confident they will receive good treatment. 1 2 3 4 5 6 7

Pain neurophysiology questionnaire

<table>
<thead>
<tr>
<th>Revised Neurophysiology of Pain Questionnaire</th>
<th>T</th>
<th>F</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 It is possible to have pain and not know about it.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>2 When part of your body is injured, special pain receptors convey the pain message to your brain.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>3 Pain only occurs when you are injured or at risk of being injured.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>4 When you are injured, special receptors convey the danger message to your spinal cord.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>5 Special nerves in your spinal cord convey ‘danger’ messages to your brain.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>6 Nerves adapt by increasing their resting level of excitement.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>7 Chronic pain means that an injury hasn’t healed properly.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>8 The body tells the brain when it is in pain.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>9 Nerves adapt by making ion channels stay open longer.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>10 Descending neurons are always inhibitory.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>11 Pain occurs whenever you are injured.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>12 When you injure yourself, the environment that you are in will not affect the amount of pain you experience, as long as the injury is exactly the same.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
<tr>
<td>13 The brain decides when you will experience pain.</td>
<td>T</td>
<td>F</td>
<td>U</td>
</tr>
</tbody>
</table>
**Clinical Vignette**

A 40 year-old woman presents with a six month history of low back pain. The pain came on gradually for no obvious reason. Her pain is constant with an average pain intensity of 5/10 over the past week. The patient reports moderate to high levels of disability with worse pain on prolonged standing and walking (>10 minutes). Easing factors are changing postures and lying down. She takes paracetamol as required. She feels that her activity levels have reduced and is anxious that the pain has lasted this long. There is no history of trauma. Red flag questions are negative and the neural examination is normal. The patient has a history of Type II Diabetes, which is well controlled with medication. Otherwise, her general health is good. On physical examination, the patient reports increased pain on forward flexion and extension and her range of movement is limited in both directions. The right and left paraspinal area is tender on palpation. The patient has had one previous episode of low back pain four years ago, which resolved within three months. She had been working as a volunteer in a charity shop 2-3 mornings a week but has not done so since her back pain began. This is something she would like to return to but she is worried that this might worsen her back pain. The patient had also been attending a keep fit class twice a week but again has not attended since the onset of her back pain and is worried about the effect returning may have on her back pain.

Would you like to get additional information about the patient? YES NO (please circle as appropriate)

If YES, what specify the additional information you would ask:

Would you recommend any medical investigations yes or no? YES NO

If YES, please specify which tests you would request:
What recommendations would you provide to this patient? Please **tick one box only** for each of the four categories of work, exercise, activity and bed rest.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response option on questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Return to normal work</td>
</tr>
<tr>
<td>2</td>
<td>Return to part-time or light duties</td>
</tr>
<tr>
<td>3</td>
<td>Be off work for a further ___ weeks (stating number of weeks)</td>
</tr>
<tr>
<td>4</td>
<td>Be off work until pain has improved</td>
</tr>
<tr>
<td>5</td>
<td>Be off work until pain has completely disappeared</td>
</tr>
<tr>
<td><strong>Exercise</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Return to normal exercise classes</td>
</tr>
<tr>
<td>2</td>
<td>Return to one class/light class participation</td>
</tr>
<tr>
<td>3</td>
<td>Refrain from participating for a further ___ weeks (Stating number of weeks)</td>
</tr>
<tr>
<td>4</td>
<td>Refrain from participating until pain has improved</td>
</tr>
<tr>
<td>5</td>
<td>Refrain from participating until the pain has completely disappeared</td>
</tr>
<tr>
<td><strong>Activity</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Perform usual activities</td>
</tr>
<tr>
<td>2</td>
<td>Perform activities within the patient’s tolerance</td>
</tr>
<tr>
<td>3</td>
<td>Perform only pain free activities</td>
</tr>
<tr>
<td>4</td>
<td>Limit all physical activities until pain disappears</td>
</tr>
<tr>
<td><strong>Bed rest</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Avoid resting in bed entirely</td>
</tr>
<tr>
<td>2</td>
<td>Avoid resting in bed as much as possible</td>
</tr>
<tr>
<td>3</td>
<td>Rest in bed only when pain is severe</td>
</tr>
<tr>
<td>4</td>
<td>Rest in bed until pain improves substantially</td>
</tr>
<tr>
<td>5</td>
<td>Rest in bed until pain disappears</td>
</tr>
</tbody>
</table>