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Personalised physiotherapy treatment for young people experiencing pain

Submission date
01/07/2024

Recruitment status
No longer recruiting

Registration date
04/07/2024

Overall study status
Completed

Last Edited
25/09/2026

Condition category
Musculoskeletal Diseases

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Background and study aims
Muscle and joint pains, sprains, and broken bones are common in children. While most recover, some young people continue to experience pain into adulthood. Long-term pain can affect friendships, school attendance, and mental health, and is a leading cause of disability worldwide. Physiotherapy is recommended for muscle and joint pains, but we still need to learn more about how it can help. Past research showed that how the treatment is given matters to young people and affects recovery. The World Health Organization reported that young people experiencing pain, keep saying they want physiotherapy treatment to be personalised yet, we do not know the best way to make this happen.
This research project aims to develop a training package for physiotherapists that will guide treatment to be personalised (this is an intervention).

Who can participate?
Young people aged 14-18 years old, parents, and physiotherapists, who have had experience of physiotherapy treatment for pain, can participate.

What does the study involve?
There are different ways to design an intervention. This study is using a 'person-based approach', this means the intervention is designed and developed by people who have experience of physiotherapy for muscle and joint pain (patients, parents, and physiotherapists). Each person will be asked to share their opinion based on their own experience during four different research stages in order to produce an effective, personalised intervention design:

In Stage 1, 15 young people will participate in hands on workshops. They will discuss physiotherapy sessions and select engaging activities for the intervention. Activities used in the workshop have been chosen based on input from 112 young people aged 2-21 years old at a public event.

The draft intervention will be tested in Stages 2 and 3 with 15 young people and 15 parents (Stage 2) and 15 physiotherapists (Stage 3) through interviews. Each person will provide feedback on the intervention and recommend any changes. Interviews will continue until no more changes are required.

In Stage 4 the finalised intervention, including a plan for physiotherapy sessions, and a training package for physios, will be described. The intervention will be ready for a future study comparing physiotherapy treatment with and without the training.

Young people and parents will receive information about the study during their physiotherapy appointment. The physiotherapists will learn about the study through national networks and a social media advert. Those interested in taking part can contact the researcher via email. The researcher will choose as diverse a group as possible in age, sex, ethnicity, location of pain (young people) and length of experience (physiotherapists).

What are the possible benefits and risks of participating?
Participating in the study is not expected to directly benefit individuals. However, it aims to improve physiotherapy services for others. The risks are minimal as researchers will not be asking sensitive questions that could cause distress. To prevent worsening pain from sitting still during the one-hour interview, movement will be encouraged.

Where is the study run from?
The study is being run by the University of Southampton, England, UK.

When is the study starting and how long is it expected to run for?
The study is expected to run for just over 1-year. The first workshop with young people is planned for the 21st August 2024 (Stage 1) and the last interview with a physiotherapist (Stage 3) will take place by the 30th of September 2025.

Who is funding the study?
The Medical Research Foundation and Versus Arthritis (UK) are joint funders of the study.

Who is the main contact?
Dr Rhiannon Joslin, email r.joslin@soton.ac.uk.

Contact information

Type(s)
Public, Scientific, Principal investigator

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Integrated Research Application System (IRAS)
339287

Protocol serial number
Sponsor number 91410

Study information

Scientific Title
Person-centred child and adolescent physiotherapy for musculoskeletal pain: the PCAP-MSK study

Acronym
PCAP-MSK

Study objectives
The hypothesis is that personalising physiotherapy treatment will allow young people to feel in control, reach their goals and recover, stopping pain and disability as an adult. The best way to personalise physiotherapy is unknown. Although creative activities like drawing a timeline were shown to help in research studies, using them in physiotherapy sessions is a new idea. This led to the research question: which creative activities engage young people and are practical to use by physiotherapists, to personalise treatment for young people affected by musculoskeletal pain? The aim of the current research is to develop an intervention that will outline a procedure and provide a training package for physiotherapists to deliver person-centred treatment for children and adolescents experiencing musculoskeletal pain.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 01/05/2024, South Central - Berkshire Research Ethics Committee (Health Research Authority, 2 Redman Place, Stratford, E20 1JQ, United Kingdom; +44 (0)207 104 8178; berkshire.rec@hra.nhs.uk), ref: 24/SC/0108

Primary study design
Other

Study design
Development of an intervention (training package for physiotherapists) guided by the person-based approach to intervention development (qualitative research design) and complex-intervention development framework

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Musculoskeletal pain

Interventions

The intervention development will be guided by the person-based approach (Yardley et al., 2015) and complex-intervention development framework (Skivington et al., 2021). There are four stages of the intervention development that involve different participants (young people, parents and physiotherapists) with staged recruitment.

Stage 1 involves two face-to-face 2-hour interactive workshops with 10-15 young people. Young people will design the draft intervention and then complete email follow-up (1 hour) to check and/or edit a summary of the workshop results. Young people can choose to only take part in Stage 1 and for these participants the total duration including follow-up is estimated to be less than 4 months.

Stage 2 involves two face-to-face 1-hour interviews with 10-15 young people and 10-15 parents. Young people will be interviewed with their parent to replicate clinical practice and will test the draft intervention. They will then complete email follow-up (1 hour) to check and/or edit a summary of the interview. The workshops (Stage 1) and interviews (Stage 2) will take place at the University of Southampton, travel will be reimbursed. For young people and parents only involved in Stage 2, the total duration of participation including follow-up is estimated to be less than 4 months. If young people choose to take part in Stage 1 and 2, the total duration of participation could be up to 11 months.

Stage 3 involves two 1-hour interviews with 10-15 physiotherapists, and email follow-up (1 hour) to check and/or edit a summary of the interview. Physiotherapists can be interviewed via Microsoft Teams or face-to-face at the University. The total duration of participation including follow-up is estimated to be less than 4 months

Interviews in Stage 2 and 3 will use think-aloud techniques where each person comments on the intervention and suggests changes. Interviews will continue until no more changes to the draft intervention are required.

Intervention Type
Behavioural

Primary outcome(s)
The primary data being collected is qualitative data that will include workshop and interview transcripts, drawings, written word and typed text. Qualitative data is being collected at three time points with different participants: 1) young people at baseline; 2) young people and parents at 4-7 months and; 3) physiotherapists at 10-12 months. Reflexive thematic analysis (Braun and Clarke, 2016) will be used to establish themes from the qualitative workshop and interviews.

Key secondary outcome(s)
To identify, from the viewpoint of young people, parents and physiotherapists (Stage 2 and 3), which outcomes (changes due to treatment) would best capture the success of the intervention. This will inform the choice of primary and secondary outcome measures for a future pragmatic trial comparing physiotherapy with and without the training.

Completion date
24/10/2025

Eligibility

Key inclusion criteria

1. Young people aged between 14 and 18 years old who have received physiotherapy within National Health Service (NHS) outpatient services for treatment of musculoskeletal pain (pain over muscles, ligaments, bones and joints) prior to discharge from hospital services (no medical management required). This would include those who have completed medical management post injury (ligament sprains, broken bones, dislocation) or those who have pain despite no underlying disease or injury (anterior knee pain, non-specific lower back pain) or those with pain due to growth related changes (Osgood-Schlatter disease).
2. Parents or guardians of young people who fulfil the above criteria.
3. Physiotherapists who treat children and adolescents in NHS outpatient services for musculoskeletal pain prior to discharge from hospital (no medical management required)

Participant type(s)
Carer, Health professional, Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
14 Years

Upper age limit
18 Years

Sex
All

Total final enrolment
44

Key exclusion criteria
1. Young people who are under the age of 14, 19-years-old, or older. Young people who experience musculoskeletal pain that still require medical management and discharge from hospital services is not an expectation. This would include musculoskeletal pain that is secondary to: a disease process e.g., Juvenile Idiopathic arthritis; a pre-existing long-term condition e.g., cerebral palsy; or an ongoing injury waiting medical management e.g. torn anterior cruciate ligament.
2. Parents of young people who fulfil these criteria.
3. Physiotherapists who treat adults with musculoskeletal pain and/or treat children and adolescents within the private sector.
Those who do not provide informed consent and those unable to communicate in English without assistance and/or express their views either verbally or in a written format due to significant learning difficulties, the use of alcohol or illegal substances or acute mental or physical ill health.
Lastly, in the unlikely event a child or family member had previously received physiotherapy treatment from the lead researcher they will be excluded.

Date of first enrolment
21/08/2024

Date of final enrolment
24/10/2025

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
University of Southampton
University Road
Southampton
England
SO17 1BJ

Sponsor information

Organisation
University of Southampton

ROR
https://ror.org/01ryk1543

Funder(s)

Funder type
Charity

Funder Name
Medical Research Foundation

Funder Name
Versus Arthritis

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Basic results			23/09/2026	No	No
Other publications	Children's Communication Choices About Musculoskeletal Pain and Injury: Insights From a Public Involvement Event	09/07/2025	10/07/2025	Yes	No
Other publications	Exploring how to deliver person-centred physiotherapy with adolescents experiencing musculoskeletal pain: a qualitative study	15/10/2025	24/10/2025	Yes	No
Plain English results			25/09/2026	No	Yes