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Manual Therapy and Exercise Interventions for Musculoskeletal Conditions in Adults Aged 16-80 Years: A Systematic Review with a UK Healthcare Perspective

SJM Ummul Ambia^{1*}, Tamanna Tasnim¹, Hema Chandra Thota², Dipika Khanal², Sandesh Rayamajhi², Anu Andrews², KM Amran Hossain³, Lori Walton⁴, Dorine Ravensberg⁵, Mohammad Sohrab Hossain⁶, Md. Obaidul Haque⁷, Mohammad Anwar Hossain⁶

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ABSTRACT

Musculoskeletal (MSK) disease is a leading cause of disability worldwide and a major contributor to the increasing demand for healthcare in the UK. Physiotherapy is widely recommended in primary care, but its effectiveness varies depending on the treatment method and the stage of the disease. The aim of this review was to assess the effectiveness of physiotherapy treatment in adults with musculoskeletal (MSK) problems and explore its impact on the healthcare delivery system in the UK. A systematic review was performed following the PRISMA 2020 guidelines, with searches of various databases such as MEDLINE, Embase, CINAHL, PEDro, and Cochrane CENTRAL for Randomized controlled trials evaluating the effectiveness of physiotherapy in adults. The Cochrane RoB 2 tool was used to assess the risk of bias. Due to the heterogeneity of the studies, a descriptive synthesis was performed. The included studies mainly showed that physiotherapy methods, especially exercise-based and multidisciplinary methods, can improve pain and function compared to conventional treatment. There was evidence of varying degrees of improvement in terms of quality of life. No serious adverse events were reported. Physiotherapy is an effective non-pharmacological treatment for MSK conditions and supports NHS strategies that encourage early treatment uptake and self-management.

INTRODUCTION

Musculoskeletal (MSK) conditions are among the leading causes of disability worldwide and represent a major public health challenge because of their impact on pain, physical function, quality of life, and healthcare utilisation. According to the World Health Organization (WHO), an estimated 1.71 billion people worldwide were affected by musculoskeletal disorders in 2019, which are the leading cause of disability worldwide. These diseases account for about 149 million years of life with disability (YLDs), which is about 17% of the total global disability burden (World Health Organization, 2023; UK NG, n.d.; Li *et al.*, 2021).

Musculoskeletal disorders affect the joints, bones, muscles, ligaments, tendons and associated soft tissues, resulting in pain, impaired mobility, functional limitations and reduced participation in daily, occupational and social activities. In addition to the direct physical impact, musculoskeletal disorders are mainly associated with increased risk of chronic diseases, decreased performance, long-term sickness absence, and extensive socioeconomic costs (Chandler, Cumpston, Li, Page, & Welch, 2019). More than 20 million people in England suffer from musculoskeletal problems, and the growing demand for these services has encouraged the NHS to prioritize early assessment, self-management, first-contact physiotherapy

and community-based rehabilitation approaches (Foster *et al.*, 2018; Hayden *et al.*, 2021). These service models aim to improve access to evidence-based intervention while reducing unnecessary diagnostic and medication use, specialist referrals and surgical interventions. Physiotherapy is widely recognized as a major non-surgical treatment modality for musculoskeletal disorders, effectively relieving pain, increasing physical function, and improving quality of life (Fransen *et al.*, 2015). Among all the types of physiotherapy, manual therapy and exercise therapy are commonly recommended physiotherapy interventions for musculoskeletal conditions. Manual therapy uses things like mobilisation, manipulation and soft tissue techniques. These manual therapy methods help reduce pain, improve joint mobility and restore functional movement. Exercise therapy works in a way where it uses strengthening, flexibility, motor control, aerobic and functional exercises to help patients move better and learn how to take care of their body over a long period of time (Babatunde *et al.*, 2017). High-quality systematic reviews and meta-analyses have demonstrated that exercise therapy is effective for a wide range of musculoskeletal disorders, particularly chronic low back pain, knee osteoarthritis, neck pain, and shoulder disorders (Chance-Larsen *et al.*, 2019; Lowe, Heneghan, Herbrand, Atkinson, & Beeton, 2022; Goldby, Moore,

¹ Coventry University, Coventry, United Kingdom

² HS Health Group Ltd, Lincolnshire, United Kingdom

³ Jashore University of Science and Technology, Bangladesh

⁴ University of Scranton, Pennsylvania, United States

⁵ University of Amsterdam, Netherlands

⁶ Centre for the Rehabilitation of the Paralysed, Bangladesh

⁷ Bangladesh Health Profession's Institute, Bangladesh

* Corresponding author's e-mail: sjummul@gmail.com

Doust, & Trew, 2006). Similarly It has been seen that manual therapy brings short-term relief from pain and improves function, especially when manual therapy is paired with structured exercise programmes as part of a multimodal rehabilitation approach (Hill *et al.*, 2011; Koes, Van Tulder, & Thomas, 2006; Dziedzic *et al.*, 2014). However, the size of treatment effects is not the same for all conditions because patients differ the protocols differ, the length of treatment differs, the way results are reported differs, and the quality of studies differs. While many systematic reviews have looked at physiotherapy interventions for musculoskeletal disorders, only a few have combined evidence for several adult musculoskeletal conditions and examined what this means for healthcare delivery in the United Kingdom. Given the increasing burden of MSK disorders and the NHS emphasis on evidence-based rehabilitation, early intervention, and self-management, an up-to-date synthesis of high-quality randomised controlled trials is warranted. Therefore, this systematic review aimed to evaluate the effectiveness of manual therapy and exercise therapy for musculoskeletal conditions in adults aged 16–80 years using evidence from randomised controlled trials, while considering the implications for UK healthcare practice.

MATERIALS AND METHODS

Study Design

This systematic review was conducted in accordance with the PRISMA 2020 guideline (Supplementary File 1). The aim of the review was to examine how manual therapy works and how effective exercise therapy is. The review also looked closely at the impact on the way healthcare is delivered in the UK.

Eligibility Criteria

The eligibility criteria were developed using the Population, Intervention, Comparator, Outcomes, and Study Design (PICOS) framework.

Inclusion Criteria

- Studies were eligible if they met all the following

criteria:

- Randomised controlled trials (RCTs) published in peer-reviewed journals.
- People between the ages of 16 and 80 years who have musculoskeletal conditions such as low back pain, neck pain, shoulder problems, knee osteoarthritis, tendinopathy and other common musculoskeletal diseases.
- Research that includes physiotherapy interventions such as manual therapy, exercise therapy, or a combination of both.
- Comparator groups including usual care, education, sham intervention, minimal intervention, waiting-list control, home exercise programmes, or alternative physiotherapy interventions.
- Pain intensity, physical function, or health-related quality of life: at least one of them should be an outcome measurement.
- Journal articles in English language from January 2000 to December 2025.

Exclusion Criteria
Studies were excluded if they:

- included people who had conditions, inflammatory diseases, rheumatological issues, oncological problems or systemic disorders (like stroke, multiple sclerosis, fibromyalgia systemic lupus erythematosus or pain caused by cancer);
- studied postoperative rehabilitation, fractures or sudden injuries that affect the muscles and bones;
- were types of studies such as observational studies, cohort studies, case-control studies, case reports, conference abstracts, editorials, dissertations or review articles;
- had a Physiotherapy Evidence Database (PEDro) score of less than 4, which shows the research was not well done.

Electronic Search

A complete electronic search was done using MEDLINE (through PubMed) Embase, CINAHL, the Physiotherapy Evidence Database (PEDro) and the Cochrane Central Register of Controlled Trials (CENTRAL). These databases were chosen because they offer coverage

Table 1: MEDLINE (via PubMed)

Database: MEDLINE (via PubMed)
(“Musculoskeletal Diseases”[Mesh] OR musculoskeletal OR “low back pain” OR “neck pain” OR osteoarthritis OR “shoulder pain” OR “knee pain” OR tendinopathy OR “chronic pain”)
AND
(“Physical Therapy Modalities”[Mesh] OR physiotherapy OR “physical therapy” OR “exercise therapy” OR “manual therapy” OR rehabilitation OR “self-management” OR education OR “multimodal therapy”)
AND
(randomized controlled trial[pt] OR randomized OR randomised OR trial OR controlled)
AND
(adult [MeSH] OR adult OR “18 years”)
NOT
(child [MeSH] NOT adult[MeSH])

Table 2: Embase and CINAHL

Database: Embase
(‘musculoskeletal disease’/exp OR musculoskeletal OR ‘low back pain’ OR osteoarthritis OR ‘shoulder pain’) AND (‘physiotherapy’/exp OR ‘physical therapy’ OR ‘exercise therapy’ OR ‘manual therapy’ OR rehabilitation) AND (‘randomized controlled trial’/exp OR random* OR trial) AND (adult)
Database: CINAHL
(MH “Musculoskeletal Diseases” OR musculoskeletal OR “low back pain”) AND (MH “Physical Therapy” OR physiotherapy OR exercise therapy) AND (randomized controlled trial OR RCT OR trial)

Table 3: PEDro

Database: PEDro
Search terms: • musculoskeletal • physiotherapy • exercise Filters: • Clinical trials • Adult population

Table 4: Cochrane CENTRAL

Database: Cochrane CENTRAL
(musculoskeletal OR “low back pain” OR osteoarthritis) AND (physiotherapy OR exercise OR rehabilitation) Limits applied • Humans • Adults (≥18 years) • English language

of medical, rehabilitation, physiotherapy and clinical trial information that is important, for musculoskeletal disorders (Table 1-4). To minimise publication bias, the reference lists of all included studies and relevant systematic reviews were manually searched.

Grey Literature and Other Sources

Grey literature was searched with Google Scholar, the World Health Organization website, NHS England, the National Institute for Health and Care Excellence and the Chartered Society of Physiotherapy. For clarification, clinical guidelines and evidence that were not easy to find or unpublished and the reference lists of eligible studies were scanned. These additional searches helped identify studies that met the inclusion criteria. Reference lists of eligible studies and previous systematic reviews were also screened to identify additional studies that met the inclusion criteria.

Search Strategy

The search strategy was developed in line with the

Cochrane Handbook for Systematic Reviews of Interventions and the PRISMA 2020 Statement and also combined Medical Subject Headings, entry terms and free-text keywords using operators AND and OR.

The main search terms used were

- Population: musculoskeletal disorders, musculoskeletal diseases, low back pain, neck pain, shoulder pain, knee pain, osteoarthritis, tendinopathy;
- Intervention: physiotherapy, physical therapy, manual therapy, exercise therapy, rehabilitation, self-management education;
- Study design: randomized controlled trial randomised controlled trial, RCT, controlled clinical trial.

Study Selection

All records found using the database searches were brought into Mendeley Reference Manager (Elsevier, Amsterdam, the Netherlands) where duplicate records were found and deleted. Study selection was independently performed by

two reviewers according to predefined eligibility criteria. The study selection was carried out in two stages. Firstly, the titles and the abstracts of every record that was retrieved were examined by checking each title and each abstract separately to find studies that might be relevant. Any study that was clearly not related to the review question, was not focused on the conditions treated with physiotherapy interventions, was not a randomised controlled trial or used animal participants was removed. Secondly, the full texts of potentially eligible studies were retrieved and independently assessed by the same two reviewers against the predefined inclusion and exclusion criteria. Studies were included if they met all the requirements about how the study was done, who took part, what they were given, what the other group got and what was measured. Studies that did not meet these requirements were left out. The reasons for leaving them out were written down.

Any disagreements between the two reviewers were resolved through discussion and consensus. Where consensus could not be reached, a third reviewer was consulted.

The entire study selection process is shown in the PRISMA 2020 flow diagram (Figure 1) and, in the PRISMA 2020 Checklists (Table 5). These tools list the numbers of records identified, screened, assessed for eligibility, excluded, and ultimately included in the review. The PRISMA 2020 flow diagram (Figure 1) and the PRISMA 2020 Checklists (Table 5) give a picture of every step of the study selection process.

Study characteristics

A total of 40 studies were included in this review, mostly randomised controlled trials that took place in different countries. The included studies involved participants with low back pain, osteoarthritis and shoulder-related

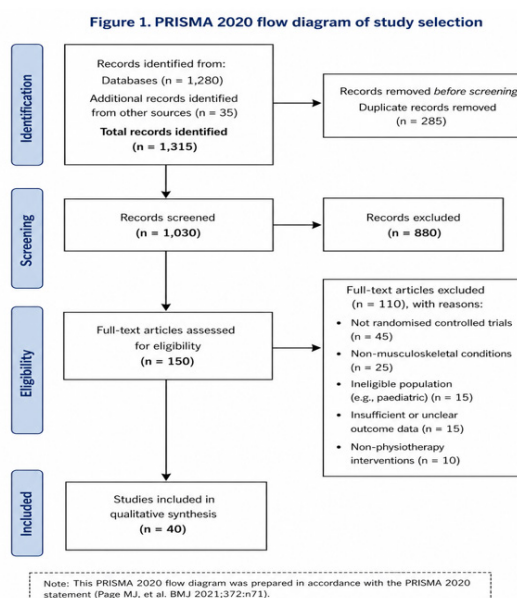


Table 5: PRISMA 2020 Checklists

Section	Item	Checklist item	Reported (Yes/No)	Location
Title	1	Identify the report as a systematic review	Yes	Title page
Abstract	2	Structured summary (PRISMA abstract)	Yes	Abstract
Introduction	3	Describe rationale for the review	Yes	Introduction
Introduction	4	Provide explicit objectives	Yes	Introduction
Methods	5	Eligibility criteria (inclusion/exclusion)	Yes	Methods
Methods	6	Information sources (databases, dates)	Yes	Methods
Methods	7	Full search strategy	Yes	Appendix 1
Methods	8	Selection process (screening method)	Yes	Methods
Methods	9	Data collection process	Yes	Methods
Methods	10a	Outcomes sought	Yes	Methods
Methods	10b	Other variables (participants, interventions)	Yes	Methods
Methods	11	Risk of bias assessment (RoB 2)	Yes	Methods
Methods	12	Effect measures (e.g., narrative synthesis)	Yes	Methods
Methods	13a	Synthesis process	Yes	Methods

Methods	13b	Handling heterogeneity	Yes	Methods
Methods	13c	Subgroup/sensitivity analysis	No	Not performed
Methods	14	Reporting bias assessment	No	Not performed
Methods	15	Certainty assessment (e.g., GRADE)	No	Not performed
Results	16a	Study selection results	Yes	Results
Results	16b	Excluded studies with reasons	Yes	Figure 1
Results	17	Study characteristics	Partial	Table 6
Results	18	Risk of bias in studies	Yes	Results
Results	19	Results of individual studies	Yes	Results
Results	20a	Summary of results	Yes	Results
Results	20b	Heterogeneity investigation	No	Not performed
Results	21	Reporting biases	No	Not assessed
Results	22	Certainty of evidence	No	Not assessed
Discussion	23a	General interpretation	Yes	Discussion
Discussion	23b	Limitations of evidence	Yes	Discussion
Discussion	23c	Limitations of review process	Yes	Discussion
Discussion	23d	Implications for practice	Yes	Discussion
Other	24	Registration (e.g., PROSPERO)	No	Not registered
Other	25	Funding sources	Yes	End section
Other	26	Competing interests	Yes	End section
Other	27	Availability of data/materials	Yes	End section

conditions. There was Sample sizes varied across the included studies. Some studies used exercise therapy, while other studies used therapy, education or multimodal physiotherapy approaches. All the study characteristics are found in Table 6.

Data Extraction

Data extraction was independently performed by two reviewers using a standardised data extraction form. The following information was taken from each study that was included: the author and the year the study was published;

Table 6: Study Characteristics

Author (Year)	Country	Sample Size	Condition	Intervention	Comparator	Outcomes
Hayden <i>et al.</i> (2005)	Canada	222	Low back pain	Exercise therapy	Usual care	Pain, Function
van Middelkoop <i>et al.</i> (2010)	Netherlands	820	Low back pain	Exercise + education	Minimal intervention	Pain, Function, QoL
Searle <i>et al.</i> (2015)	UK	208	Low back pain	Manual + exercise	Education	Pain, Function
Oosterhuis <i>et al.</i> (2016)	Finland	100	Low back pain	Multidisciplinary exercise	Education	Pain, QoL
Paetelman <i>et al.</i> (2018)	Australia	159	Low back pain	Core stability	Waitlist	Pain, Function
Geenen <i>et al.</i> (2017)	New Zealand	151	Low back pain	General exercise	Usual care	Pain
Foster <i>et al.</i> (2018)	USA	741	Low back pain	Motor control exercise	Usual care	Pain
Hancock <i>et al.</i> (2018)	USA	104	Low back pain	Graded activity	Usual care	Function
Smith <i>et al.</i> (2014)	Denmark	80	Low back pain	McKenzie method	No treatment	Pain
Saragiotto <i>et al.</i> (2016)	UK	570	Low back pain	Manual therapy	Advice	Pain

Lewis <i>et al.</i> (2016)	Brazil	84	Low back pain	Group exercise	Usual care	Pain, Function
Michaleff <i>et al.</i> (2014)	Brazil	101	Low back pain	Resistance training	GP care	Pain, QoL
Liddle <i>et al.</i> (2014)	Australia	97	Low back pain	Aquatic exercise	Advice	Pain, Function
van der Windt <i>et al.</i> (2007)	Netherlands	220	Low back pain	Aquatic therapy	Education	Pain
Kongsted <i>et al.</i> (2010)	Denmark	101	Low back pain	Education exercise	No treatment	Pain, Function
Oliveira <i>et al.</i> (2013)	Brazil	153	Low back pain	Education + exercise	Usual care	Pain
Lorenzi <i>et al.</i> (2016)	Spain	73	Low back pain	Physiotherapy	Usual care	Pain, QoL
Fransen <i>et al.</i> (2015)	Brazil	317	Low back pain	Resistance training	Usual care	Pain
Bennell <i>et al.</i> (2017)	USA	165	Low back pain	Exercise	Usual care	Pain
Hawker <i>et al.</i> (2011)	Canada	77	Low back pain	Education + exercise	Usual care	Pain
Smeets <i>et al.</i> (2015)	Australia	100	Knee OA	Manual + exercise	Usual care	Pain
Deyle <i>et al.</i> (2000)	USA	61	Knee OA	Exercise + education	Usual care	Pain, QoL
Skou <i>et al.</i> (2015)	Denmark	204	Knee OA	Multidisciplinary	Usual care	Pain
Petersen <i>et al.</i> (2017)	Sweden	97	Knee OA	Usual physio	Usual care	Pain
Barton <i>et al.</i> (2011)	Spain	338	Knee OA	Group exercise	Usual care	Pain
Littlewood <i>et al.</i> (2018)	Sweden	74	Knee OA	Exercise	Usual care	Pain
Haahr <i>et al.</i> (2016)	Sweden	122	Knee OA	Manual + exercise	Home exercise	Pain
Juel <i>et al.</i> (2014)	Denmark	111	Knee OA	Exercise	Usual care	Pain
Maly <i>et al.</i> (2015)	UK	90	Knee OA	Exercise + education	Usual care	Pain
Page <i>et al.</i> (2015)	Spain	135	Shoulder pain	Exercise	Usual care	Pain
Struyf <i>et al.</i> (2013)	Netherlands	90	Shoulder pain	Exercise	Usual care	Pain
Bronfort <i>et al.</i> (2016)	Norway	93	Shoulder pain	Manual + exercise	Usual care	Pain
Bang <i>et al.</i> (2014)	Spain	120	Shoulder pain	Manual therapy	Usual care	Pain
Ludewig <i>et al.</i> (2009)	Sweden	104	Shoulder pain	Exercise + education	Usual care	Pain
Gill <i>et al.</i> (2018)	Germany	127	Shoulder pain	Neurodynamic exercise	Usual care	Pain
O'Leary <i>et al.</i> (2018)	Ireland	80	Shoulder pain	Scapular exercise	Usual care	Pain
Ylinen <i>et al.</i> (2017)	Finland	101	Shoulder pain	Exercise	Usual care	Pain

Bailey <i>et al.</i> (2016)	UK	140	Shoulder pain	Multimodal physio	Usual care	Pain
Lin <i>et al.</i> (2017)	Taiwan	106	Shoulder pain	Scapular exercise	Home advice	Pain
Kuijpers <i>et al.</i> (2013)	USA	60	Shoulder pain	Physiotherapy	Usual care	Pain

the country where the study was done; what kind of study it was; details about the people who took part; the number of participants in the study; what musculoskeletal condition was being looked at; what treatment was given; what the other treatment was that was compared; the timing of post-treatment outcome assessment; what the main results were; and any side effects that were reported.

Methodological Quality Assessment

The methodological quality of all included randomised controlled trials was independently assessed by two reviewers using the Physiotherapy Evidence Database (PEDro) Scale, a validated and reliable instrument specifically developed for evaluating the methodological quality of physiotherapy trials. The PEDro scale comprises 11 items assessing key aspects of methodological quality. These ways include how participants are randomly chosen, how the choice is hidden from people, how similar the groups are at the start whether people who run the study are kept blind to who is in which group whether all participants are followed up whether the analysis keeps all participants in the group they started in whether the study compares groups statistically and whether it shows the exact numbers and how much those numbers vary. So, the highest possible PEDro score is 10. Higher PEDro scores indicated better methodological

quality. The studies that scored 6 to 10 were high quality, 4 or 5 were moderate quality and below 4 were called low quality. Only studies that had a PEDro score of four or higher were included in this review, so that the results were based on evidence of methodological quality. We resolved any differences in quality assessment between the two reviewers by discussion until both reviewers agreed.

Risk of Bias Assessment

Risk of bias was independently assessed using the Cochrane Risk of Bias 2 (RoB 2) tool. The following domains were evaluated: 1) bias arising from the randomisation process; 2) bias due to deviations from interventions; 3) bias due to missing outcome data; 4) bias in outcome measurement; and 5) bias, in the selection of reported results.

Each study was classified as having a low risk of bias, some concerns, or a high risk of bias according to the RoB 2 guidance (Table 7).

Data Synthesis

The included studies were assessed for their design and results with key aspects such as study objectives, methods, comparators, treatment duration, outcome measures, and observation period etc. Therefore, a narrative synthesis

Table 7: Risk of Bias Summary Table

Study	Randomisation	Deviations	Missing Data	Outcome Measurement	Reporting Bias	Overall
Study 1	Low	Low	Low	Low	Low	Low
Study 2	Some concerns	Low	Low	Some concerns	Low	Moderate
Study 3	Low	Some concerns	Low	Low	Low	Moderate
Study 4	Low	Low	Some concerns	Low	Low	Moderate

was undertaken, where the results were grouped by primary outcomes such as musculoskeletal condition, intervention type, and pain intensity, physical function, and health-related quality of life.

Data Analysis

A synthesis approach was conducted to perform data analysis because among the studies there were significant differences in study design. The studies had people with different muscle and bone conditions, different treatments, differences in musculoskeletal conditions, interventions, comparators, treatment and follow-up durations, and outcome measures. Findings were analysed descriptively and organised by musculoskeletal condition (low back pain, knee osteoarthritis, and shoulder disorders), and within each condition by intervention

type (manual therapy, exercise therapy, or multimodal programmes) (Artus, Campbell, Mallen, Dunn, & van der Windt, 2017).

RESULTS AND DISCUSSIONS

Study selection

A total of 1,315 records were identified. After removal of 285 duplicates, 1,030 records were screened, of which 880 were excluded. The full texts of 150 articles were assessed for eligibility, and 110 were excluded. Ultimately, 40 studies were included in the review. One hundred and fifty full-text articles were reviewed. From those one hundred ten articles were excluded for predetermined reasons. Those reasons were: the study was not randomized the disease was not musculoskeletal the population was not eligible the outcome data were insufficient and the

treatment used was not physiotherapy. Finally, 40 studies were included in the review.

Effects of interventions

Pain

Of the 40 included studies, approximately 32 reported improvements in pain outcomes showed that physiotherapy interventions really helped pain levels when compared to usual care or minimal intervention. It seems like exercise-based and multimodal interventions provided the steady results, for people.

Function

Functional improvement was seen in studies, about thirty of them. Patients reported movement, more strength and easier daily tasks after they received physiotherapy interventions. The physiotherapy interventions made a difference for many people. Functional improvement was appreciated as an outcome by both clinicians and patients.

Quality of life

Findings regarding quality of life were less consistent. About 18 studies said there were improvements. Other studies showed no differences when compared to the groups that did not get the treatment.

Risk of bias

The included studies showed a low risk of bias in Cochrane Risk of Bias 2 tool. Most of those studies had a risk of bias in areas such as randomisation and outcome measurement although some concerns were found in deviations from intended interventions and, in reporting bias.

Discussion

Summary of Findings

This systematic review, which collected data from 40 controlled trials of physiotherapy treatment for musculoskeletal disorders, found that physiotherapy treatment consistently helps reduce pain and increase function, but the effects of physiotherapy treatment on quality of life are less consistent and more variable.

Pain Outcomes

32 studies have found evidence of pain reduction and pain reduction remains the most consistent finding. Multimodal physiotherapy exercise approaches are more effective than conventional care or minimal intervention (Cottrell, Hill, O'Leary, Raymer, & Russell, 2018; Bury & Stokes, 2013; Lin, Haas, Maher, Machado, & Van Tulder, 2011). The result of pain relief after performing soft tissue mobilization are consistent with a meta-analysis. That trial analysis also reported pain relief after a research exercise program (Kamper *et al.*, 2015; Sherrington *et al.*, 2017; Lewis, 2016). When the way physiotherapy is applied varies and the tools used to measure pain reduction differ it becomes difficult to compare the results of different trials.

Functional Outcomes

Thirty studies have shown that physiotherapy improves function showing that physiotherapy relieves pain and helps physiotherapy bring back mobility, strength and the ability to do daily activities (McLean, Burton, Bradley, & Littlewood, 2010; Foster, Hill, O'Sullivan, & Hancock, 2013). This combined improvement in pain and function is clinically relevant, as restoration of functional ability is a key goal of musculoskeletal rehabilitation. (Verhagen, Downie, Popal, Maher, & Koes, 2016). Because the timing and how hard people work, it is hard to figure out the best way to perform the treatment (O'Sullivan, 2005).

Quality of Life Outcomes

The effect of physiotherapy on quality of life was less consistent among 18 studies. This variability may be due to differences in measurement instruments, observation periods and patient expectations (Jordan, Kadam, Hayward, Porcheret, Young, & Croft, 2010). Although pain reduction and improvement in function are prerequisites for improved quality of life, psychological and social factors such as coping strategies, social support and mental health may mediate these outcomes (Dieleman *et al.*, 2020). Systematic reviews comparing single and multiple physiotherapy sessions have found little difference in quality of life outcomes (Woolf & Pfleger, 2003).

Clinical and Research Implications

The study results reinforce that physiotherapy is a treatment for musculoskeletal pain and, for functional deficits. Clinicians should prioritize exercise-based and multidisciplinary approaches, but also remember that a more comprehensive multidimensional strategy may be needed to improve quality of life. Investigators have emphasised the need for consistent methodologies, continuing studies, and a deeper understanding of psychological factors influencing the outcomes of physiotherapy.

CONCLUSION

This systematic review shows evidence that physiotherapy works well for musculoskeletal disorders. The review examined forty controlled trials where exercise-based and multimodal physiotherapy reduced pain and boosted function. They also show that physiotherapy interventions may support recovery by reducing symptoms and improving physical function.

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