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Effects of a six-month online supervised Pilates and self-myofascial release program for adults with fibromyalgia

Submission date
19/08/2026

Recruitment status
No longer recruiting

Registration date
20/08/2026

Overall study status
Completed

Last Edited
19/08/2026

Condition category
Musculoskeletal Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Fibromyalgia is a long-term condition that can cause widespread pain, fatigue, poor sleep and emotional distress. Regular exercise is recommended as part of its management, but attending face-to-face rehabilitation programmes may be difficult for some people. This study aimed to examine whether a six-month home-based programme, supervised live online and combining Pilates-based therapeutic exercise with self-myofascial release, could improve the overall impact of fibromyalgia, sleep quality and psychological symptoms.

Who can participate?
Adults aged 18 years or older with a medically documented diagnosis of fibromyalgia, sufficient knowledge of written Greek, and access to an internet-enabled device with the basic digital skills required to participate in live online sessions.

What does the study involve?
After the initial assessment, participants were randomly assigned in a 1:1 ratio to either an intervention group or a control group. The intervention group attended live supervised online exercise sessions three times per week for six months. Sessions included breathing and mobility exercises, self-myofascial release using foam rollers or tennis balls, Pilates-based exercises, core stabilization, low-load resistance exercises, stretching and relaxation. Exercises were adapted according to individual tolerance and symptoms. Participants in the control group continued their usual daily activities and were asked not to start a new structured exercise programme during the study. Participants completed questionnaires at the start of the study, after 3 months and after 6 months.

What are the possible benefits and risks of participating?
The programme was designed to support symptom management and physical function. Exercise could temporarily increase discomfort or fatigue, particularly during symptom flare-ups, so exercises were adapted to individual tolerance and supervised in real time.

Where is the study run from?
The study was conducted through the Department of Physical Education and Sport Science, Aristotle University of Thessaloniki, Greece. Recruitment and participation were conducted remotely.

When did the study take place?
The first participant was enrolled on 6 January 2025, final enrolment took place on 20 January 2025, and final study data collection was completed on 10 August 2025.

Who is funding the study?
The study was investigator initiated and funded, with no external funding received.

Who is the main contact?
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Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Study information

Scientific Title
A six-month supervised multicomponent telerehabilitation program combining pilates-based therapeutic exercise and self-myofascial release in adults with fibromyalgia: a randomized controlled trial

Study objectives
To evaluate the effects of a six-month supervised multicomponent rehabilitation program combining Pilates-based therapeutic exercise and self-myofascial release, delivered through home-based telerehabilitation, on overall fibromyalgia impact in adults with fibromyalgia. Secondary objectives were to examine effects on sleep quality, depressive symptoms, anxiety, and perceived stress.

Ethics approval required

Ethics approval required

Ethics approval(s)
Approved 12/11/2024, Research Ethics Committee, Department of Physical Education and Sport Science, Aristotle University of Thessaloniki (University Campus of Thermi, AUTH DPESS, Thessaloniki, 57001, Greece; +30 2310 991602; ethicscommittee@phed.auth.gr), ref: 201/2024

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Uncontrolled

Assignment
Parallel

Purpose
Treatment

Study type(s)

Health condition(s) or problem(s) studied
Fibromyalgia

Interventions
Following completion of the baseline assessment (T0) and before the start of the intervention, participants were allocated to the intervention or control group using simple randomisation with a 1:1 allocation ratio. The random allocation sequence was generated using an online random-number generator.

Participants in the intervention group received a six-month supervised, group-based multicomponent telerehabilitation programme delivered live via videoconferencing. Sessions were held three times per week for approximately 50–60 minutes. Each session included breathing and mobility exercises, self-myofascial release using foam rollers or tennis balls, mat-based Pilates exercises, core stabilization, low-load progressive resistance exercises, stretching and relaxation. Exercise volume and complexity were progressively adjusted according to individual tolerance and symptoms. Sessions were supervised in real time, with verbal instructions, demonstration and technique correction where required. Morning and afternoon groups followed the same exercise protocol, and participants could attend either group according to their availability.

Participants in the control group continued their usual daily activities and did not participate in an organized exercise programme during the six-month study period.

Outcomes were assessed remotely using self-administered electronic questionnaires at baseline (T0), 3 months (T1) and 6 months (T2).

Intervention Type
Behavioural

Primary outcome(s)
1. Overall fibromyalgia impact measured using revised Fibromyalgia Impact Questionnaire (FIQR) at baseline, 3 months and 6 months

Key secondary outcome(s)
1. Sleep quality measured using Pittsburgh Sleep Quality Index (PSQI) at baseline, 3 months and 6 months

2. Depressive symptoms measured using Depression Anxiety Stress Scales-42 (DASS-42), Depression subscale at baseline, 3 months and 6 months

3. Anxiety symptoms measured using Depression Anxiety Stress Scales-42 (DASS-42), Anxiety subscale at baseline, 3 months and 6 months

4. Perceived stress measured using Depression Anxiety Stress Scales-42 (DASS-42), Stress subscale at baseline, 3 months and 6 months

Completion date
10/08/2025

Eligibility

Key inclusion criteria
1. Adults aged ≥18 years
2. Documented physician diagnosis of fibromyalgia
3. Sufficient written Greek language proficiency to understand study instructions and complete the questionnaires
4. Access to an internet-enabled device and basic digital literacy sufficient to participate in live videoconferencing sessions

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
120 Years

Sex

All

Total final enrolment
68

Key exclusion criteria
1. Unstable cardiovascular or respiratory disease, uncontrolled hypertension, or severe neurological disorder precluding safe physical activity
2. Recent acute musculoskeletal episode or surgery compromising exercise tolerance
3. Cognitive or sensory impairment preventing effective participation in remote sessions or completion of self-administered questionnaires

Date of first enrolment
06/01/2025

Date of final enrolment
20/01/2025

Locations

Countries of recruitment
Greece

Study participating centre
Department of Physical Education and Sport Science, Aristotle University of Thessaloniki
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Sponsor information

Organisation
Aristotle University of Thessaloniki

ROR
https://ror.org/02j61yw88

Funder(s)

Funder type

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available