Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of The Effect of Six Weeks of Self-Massage and Nerve Gliding Exercise on Wrist Pain and Functional Disability of Piano Players with Carpal Tunnel Syndrome

Protocol summary

Study aim

A comparison of the effects of six weeks of self-massage and nerve stretching exercises on pain and functional disability in the wrists of pianists with carpal tunnel syndrome.

Design

A controlled, parallel-group, single-blind, randomized clinical trial on 30 musicians. Simple randomization.

Settings and conduct

3 days before the start of the training, 30 subjects will be invited to complete a written consent form, as well as a form containing anthropometric characteristics and medical history, and to perform the Fallen and Tinel test, which has been developed according to the research input indicators. During a briefing session, the participants will be given the necessary explanations. The subjects will be randomly divided into two control groups and an experimental group. This means that the subjects in the experimental group will receive massage and nerve stretching exercises, and the control group will not receive any specific activity. The number of treatment sessions will be 6 weeks, 3 sessions per week, and at the end, a post-test will be administered to both groups.

Participants/Inclusion and exclusion criteria

Having at least 1 year of playing experience, moderate wrist pain (VAS score 4-7); Having mild to moderate symptom severity and functional status; 20-40 years of age; No medical problems contraindicated for massage

Intervention groups

Nerve stretching exercises and self-massage

Main outcome variables

Wrist pain; Wrist strength; Wrist flexibility

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20251118068043N1**
Registration date: **2025-11-22, 1404/09/01**
Registration timing: **registered_while_recruiting**

Last update: **2025-11-22, 1404/09/01**
Update count: **0**

Registration date

2025-11-22, 1404/09/01

Registrant information

Name
Sara Ghorbani
Name of organization / entity
Shahid beheshti university
Country
Iran (Islamic Republic of)
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+98 21 9990
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sara.gh7699@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2025-11-22, 1404/09/01

Expected recruitment end date

2026-01-05, 1404/10/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of The Effect of Six Weeks of Self-Massage and Nerve Gliding Exercise on Wrist Pain and Functional Disability of Piano Players with Carpal Tunnel Syndrome

Public title

Comparing the effects of massage and nerve stretching exercises on symptoms of pianists with carpal tunnel syndrome

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

Have at least 1 year of experience playing the piano Having moderate pain in the wrist (VAS score 4 to 7) Having mild to moderate symptom severity and functional status Age range 20-40 years Positive at least one of the Fallen and Tinel physical examination tests Absence of predisposing factors such as diabetes, hypothyroidism, hyperthyroidism, acute trauma, pregnancy Not participating in a physical therapy program in the previous month Absence of medical conditions that would contraindicate massage therapy

Exclusion criteria:

Unwillingness to continue cooperation Having three absentee sessions in the entire protocol Failure to submit self-massage report Failure to participate in the post-test

Age

From **20 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

1. Randomization method and explanation: Main method: Simple Randomization, which will be performed using a random number table. - Reason for choosing this method: No need to control the intervening variables in the study and ease of implementation. - Quasi-random method: Quasi-random methods will not be used in this study. 2. Randomization unit: Individual randomization: Each participant will be randomized independently and without grouping (such as cluster or block). 3. Randomization tool: - Random Number Table: - After assigning unique numbers to the participants(In the base of Randomization method), corresponding numbers are selected from the table. - Even numbers are assigned to the intervention group and odd numbers to the control group. 4. How to create a random sequence: - Step-by-step steps: 1. A complete list of the statistical population (based on the study entry criteria) will be prepared. 2. Each person will be assigned a unique numerical code. 3. By referring to the random number table, numbers corresponding to the codes will be selected and assigned to the group. 5. Allocation Concealment: - Method: Use of sealed envelopes and use of a third party. - Process Description: - After determining the random sequence, the names of the groups (intervention/control) will be placed in opaque envelopes. - The envelopes will be kept and opened by an independent person who will not play a role in the study. - Objective: To prevent selection bias by the researcher. - 6. Stratification: - Stratified randomization will not be used in this study. - 7. Supplementary Notes: - Transparency of the lottery process: - With respect to the traditional method (taking paper from the container), it is worth noting: - The container will be shaken homogeneously. - The papers will be the same in size and shape. - The process will be recorded by an independent observer. It is also worth noting that this method was designed in accordance with CONSORT guidelines for simple randomization and allocation concealment (REF)

Blinding (investigator's opinion)

Single blinded

Blinding description

1. Overall Blinding Design: - This study will be designed as a single-blind study, meaning that: Participants will not be aware of their group allocation (intervention or control). 2. Implementation methods for blinding participants: a) For the intervention group: - In addition, the intervention will be carried out at the house of the individuals, so the intervention is designed to be similar in appearance to the daily activities of the individuals in this group and its implementation will not interfere with daily activities. - Neutral terms will be used to describe the intervention (instead of "new program", "activity program" will be used). b) For the control group: - Participants will be told that they are participating in a "daily activity pattern study" and will not do heavy exercise during this period. - They will be asked to continue their usual activities without change. - Both groups will be monitored from the same time and under the same conditions. 3. Standardization of conditions for both groups: - Research calls: The number and duration of follow-up calls will be the same for both groups. The content of the conversations is standardized in advance. - Measurement instruments: * The same instruments will be used for both groups. * The instructions for the tests and measurement instruments will be the same. 4. Control of confounding factors: - Time separation: * Assessment sessions for the two groups will be held at different times. * Interaction between members of the two groups will be prevented. - Trained personnel: * Researchers involved in the study are trained to prevent unwanted disclosure of information. 5. Evaluation of blinding success: - At the end of the study, participants will be asked: * "Which group do you think you were in?" * "How sure are you of this?" 6. Documentation and appendices: - Standardized blinding instructions will be attached as an appendix to the study protocol. It is important to note that the above section and the methods mentioned are designed in accordance with Section 11b of the CONSORT 2010 guidelines. Finally: These arrangements will ensure that: 1. Participants will not be able to tell whether they are in the intervention or control group. 2. This lack of awareness of group allocation will prevent participants from biasing their reporting of results.

Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
research Ethics Committee of Shahid Beheshti University
Street address
Shahid Shahryari Square, Evin,
City
Tehran
Province
Tehran
Postal code
1983969411
Approval date
2025-04-12, 1404/01/23
Ethics committee reference number
IR.SBU.REC.1404.011

Health conditions studied

1

Description of health condition studied
Carpal tunnel syndrome
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Wrist pain
Timepoint
Pre-test & post-test
Method of measurement
Visual Analogue Scale

2

Description
Wrist strength
Timepoint
Pre-test & post-test
Method of measurement
Hand dynamometer

3

Description
Wrist flexibility
Timepoint
Pre-test & post-test
Method of measurement
Goniometer

Secondary outcomes

empty

Intervention groups

1

Description
Nerve stretching and massage exercise group
Category
Rehabilitation

2

Description
Control group
Category
Lifestyle

Recruitment centers

1

Recruitment center
Name of recruitment center
Tanin Mandegar Music School
Full name of responsible person
محمدرضا عباسی
Street address
3rd Floor- Unit 6 - Mehregan Building- South Kargar Street, Labafinejad Intersection- Enghelab Square
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tanin.mandegar@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
shahid beheshti university of Tehran
Full name of responsible person
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Grant name
shahid beheshti university

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
shahid beheshti university of Tehran

Proportion provided by this source
30

Public or private sector
Public

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact

Name of organization / entity
shahid beheshti University of Tehran

Full name of responsible person
Fariborz Howanloo

Position
Associate professor

Latest degree
Ph.D.

Other areas of specialty/work
Sport Medicine

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
No - There is not a plan to make this available

Statistical Analysis Plan
No - There is not a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available

Title and more details about the data/document

The data file without names and personal information, the raw sample of the informed consent form, and the clinical study report are included in the text of the final research report.

When the data will become available and for how long

After completing the research project, up to six months thereafter

To whom data/document is available

Everyone

Under which criteria data/document could be used

Any manipulation of data, misuse, or plagiarism of it without citing the source is not permitted.

From where data/document is obtainable

Fariborz Hovanloo, Contact Number: 29905847 University Address: Shahid Shahryari Square, Evin, Tehran, Email: F_Hovanloo @sbu.ac.ir

What processes are involved for a request to access data/document

After applying in person or electronically and in case of verification, a maximum of 1 week

Comments