INPLASY PROTOCOL

Corresponding author:
Yanfei Ma

mayanfei0816@163.com

Author Affiliation:
Department of orthopedics, Mianyang Central Hospital, Mianyang 621000, Sichuan, People's Republic of China.

Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest: None declared.

Effects of mind-body therapy for osteoarthritis: A systematic review and network meta-analysis

Ma, YF[1]; Li, YP[2]; Wang, CY[3]; Hou, AL[4]; Hu, R[5]; Yin, Y[6].

Review question / Objective: This net meta-analysis of randomized controlled trials aims to evaluate the effectiveness of mind-body interventions for osteoarthritis. Our study population was osteoarthritis patients in randomized controlled trial, the interventions were mind-body interventions , such as Taiji,Yoga, Qigong, pilates, Balance training, etc, and the control group was usual care or blank controls with primary outcome indicators WOMAC scores or TUG scores.

Condition being studied: Osteoarthritis is the leading cause of pain and disability in the locomotor system. Due to the general aging of the Chinese population, the number of people affected by osteoarthritis is on the rise. The principle of treatment for osteoarthritis is to start with non-surgical treatment and then consider surgery if the results are not satisfactory.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 July 2022 and was last updated on 18 July 2022 (registration number INPLASY202270084).

INTRODUCTION

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METHODS

Participant or population: We will include all RCTs involving subjects with osteoarthritis that compared at least two interventions of interest.

Intervention: We will include mind-body interventions such as Taiji, Yoga, Qigong, pilates, Balance training, etc.

Comparator: Attention Control, and Usual Care.

Study designs to be included: Randomized Controlled Trials.

Eligibility criteria: We should have included patients with osteoarthritis who had not undergone surgery.

Information sources: We will search articles in six electronic database including PubMed, EMBASE, EBSCO, Cochrane Library, Web of Science and MEDLINE.All the English publications from January 2010 to May 2022 will be searched without any restriction of countries or article type. Reference list of all selected articles will independently screened to identify additional studies left out in the initial search.

Main outcome(s): Our primary outcomes of interest include WOMAC scores , TUG scores and SF-36 scores.

Quality assessment / Risk of bias analysis: Risk of bias will be assessed by two independent reviewers, with consensus, using Cochrane Risk of Bias tool.

Strategy of data synthesis: Individual participant data will be synthesized, and the network meta-analyses will be conducted using a 'one-step' approach, where the IPD from all studies are modeled simultaneously while accounting for the clustering of participants within studies. All analyses will be conducted using Review Manager.

Subgroup analysis: We will investigate the association between the patient characteristics, WOMAC scores , TUG scores , SF-36 scores, and dose and duration of interventions with treatment response using univariate and multivariable analysis. Mixed-effect logistic regression models accounting for clustering in the individual studies will be used.We will investigate the association between the WOMAC scores , TUG scores and SF-36 scores of patients ,and dose and duration of interventions with treatment response using univariate and multivariable analysis. Mixed-effect logistic regression models accounting for clustering in the individual studies will be used.

Sensitivity analysis: Meta-analysis was repeated by excluding certain studies one by one to explore their effects on the combined effect variables, and the results obtained were compared with the original effect sizes. If the effect size did not change significantly from the original effect size after excluding a particular study, the results were stable, while the opposite results were unstable and caution is needed in interpreting the combined effect findings, suggesting the existence of bias and requiring further studies to verify.

Country(ies) involved: We will conduct this study in China.

Keywords: mind-body, osteoarthritis , systematic review.

Contributions of each author:
Author 1 - Yanfei Ma.
Author 2 - Yeping Li.
Author 3 - Chunyan Wang.
Author 4 - Ailin Hou.
Author 5 - Rong Hu.
Author 6 - Yang Yin.