ABSTRACT COMMUNICATION 796

DO EDUCATION AND EXERCISE REALLY IMPROVE CLINICAL STATUS IN PATIENTS WITH KNEE OSTEOARTHRITIS? A SYSTEMATIC REVIEW


1. Master Degree in Orthopaedic Manual Therapy, Faculty of Health Sciences, Universidad Europea de Canarias, La Orotava, Santa Cruz de Tenerife, Spain
2. Musculoskeletal Pain and Motor Control Research Group, Faculty of Health Sciences, Universidad Europea de Canarias, La Orotava, Santa Cruz de Tenerife, Spain
3. Musculoskeletal Pain and Motor Control Research Group, Faculty of Health Sciences, Universidad Europea de Madrid, Villaviciosa de Odón, Madrid, Spain
INTRODUCTION

• Knee osteoarthritis (KO) is a leading cause of chronic pain and loss of function among worldwide population.

• Education (Ed) alone or combined with exercise (Ex) is said to improve these symptoms but its clinical efficacy is still inconclusive.

• The aim of this study was to evaluate the effectiveness of Ed alone or combined with Ex on easing symptoms in patients with KO.
DO EDUCATION AND EXERCISE REALLY IMPROVE CLINICAL STATUS IN PATIENTS WITH KNEE OSTEOARTHRITIS? A SYSTEMATIC REVIEW

Ramos-Álvarez, A.; Jürgenhake, LM.; Martín Pérez, S.; Sánchez Romero, E.; Alonso Pérez JL.

METHODOLOGY
Search and Analysis strategy

DESIGN

Systematic Review
(PRISMA Statement)

STUDY DESIGN

Researchers

PICO question developing

DO EDUCATION AND EXERCISE REALLY IMPROVE CLINICAL STATUS IN PATIENTS WITH KNEE OSTEOARTHRITIS?

Schedule programming
MARCH 3RD 2020 AND MARCH 22ND 2020

SEARCHING

MESH Terms

“knee” AND “osteoarthritis” AND “chronic pain” AND “education” AND “exercise”

Databases

Tripdatabase and Cochrane Central Register of Controlled Trials (CENTRAL) and electronic databases PEDro, MEDLINE (PubMed) and aMED

Elegibility Criteria

1. Randomized controlled trials (RCTs) and non-randomized controlled trials (NRCTs)
2. Published between January 1st 2010 and January 1st 2020
3. Adults older than 50 years with painful KO
4. Experimental group received Ed alone or in combination with Ex
5. Control group consisted of usual care based on pharmacological management and rest
6. Reported at least one outcome of pain, psychological status, functionality or adherence

Methodological Quality Assessment

PEDRO Scale

Risk of bias Assessment

ROB 2.0 tool
RESULTS
Selection process (PRISMA Statement)

- **92** articles were identified in Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, PEDro, Tripdatabase and aMED

- **38** full-text articles were assessed for eligibility

- **30** full-text were excluded by Intervention (n=5) by study design (n=6), participants (n=9) language (n=1) and availability (n=9).

- Finally, a total of **8 RCTs** (n=1289 subjects) were included in qualitative synthesis

Graphic 1. Selection of publication process (PRISMA Statement)
RESULTS

Methodological quality assessment of RCTs (PEDro Scale)

- A mean of moderate quality was 7.125±1.166 out of 10.
- Blinded allocation was carry out in all selected publication.
- In contrast, Therapist blinding (12.5%) and subjects blinding (25%) were items with lower scores.

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<th>4</th>
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Table 1. Methodological quality assessment of RCTs (PEDro Scale)
RESULTS
Risk of bias assessment of RCTs (ROB 2.0)

- Overall risk of bias was moderate
- High risk of bias was detected in selection bias (12.5%), attrition bias (37.5%) and performance risk of bias (50%) of the studies included
RESULTS
Study qualitative synthesis

• **Ed alone** (pain neurophysiology education, coping skills, setting short and long term goals and self-management) **produces little improvements in pain intensity** (2 studies, n=124).

• In short-term, **Ed combined with Ex** (strengthening with weights and resistance bands, aerobic with stationary bike or community-based aerobic walking, stretching or balance) **result in larger adherence** (1 study, n=222) **and functionality** (3 articles, n=681) while, in long-term, a **greater reduction of pain intensity** (2 studies, n=263) is observed.

• **Neither modalities** show **significative changes in psychological status** such as catastrophization and self-perceived health.
CONCLUSION

• In patients with KO Ed with Ex promote adherence and improve functionality and pain intensity. However, their clinical efficacy on psychological status is not enough clarified.

• Despite the consistency of the results, because of the high heterogeneity between Ed protocols and the moderate risk of bias found, it is required more quality trials to set clinical recommendations.

• Implications: Patients who suffer from symptomatic KO could benefit from the combination of Ed and Ex because it appears to improve their clinical status more than Ed alone.
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