

Exercise intervention for chronic pain management, muscle strengthening and functional score in obese patients with chronic musculoskeletal pain: a systematic review and meta analysis / Tirza Z. Tamin, Nyoman Murdana, Yupitri Pitoyo, Eka D. Safitri

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Abstrak

ABSTRAK

Background: obesity and osteoarthritis have strong inter-relationship with multi-factorial mechanism that caused pain and leads to decreased quality of life. Exercise has been identified as prevention and management

against obesity and joint pain. This systematic review aims to assess the effect between exercises compared to diet

group for chronic pain management, physical and mental function in obese patients with chronic musculoskeletal

problem. Methods: we performed a systematic search of Randomized Control Trial studies from Cochrane CentralRegister of Controlled Trials (CENTRAL); MEDLINE; EBSCO; SCIENCEDIRECT (Elsevier); SCOPUS, grey

literature, trial registry, ongoing study for published studies, and from the ClinicalTrial.gov, thesis of rehabilitation

medicine in RSCM, and proceeding books for unpublished studies that was last updated on November 2016. Risk

of bias was assessed using Cochrane risk-of-bias tool and data were analyzed using Review Manager 2014.

Results: one study showed no difference in pain reduction (assessed using VAS) between two groups. Two studies

showed improvement in physical function measured using 6MWT in exercise group at 6 and 18 months with mean

difference 28.12 [11.20, 45.04] and 26.21 [9.01, 43.41]. There was no significant effects observed for Mental and

Physical Function based on SF-36 after 6 months (1 study) and 18 months (2 studies) observation, with mean

difference 1.10 [-0.79, 2.99] and 0.08 [-1.53, 1.70] respectively for Mental Function score and -0.30 [-2.54, 1.94]

and -0.36 [-2.30, 1.57] respectively for Physical Function score. Conclusion: exercise can improve physical function objectively, but could not reduce pain in obese patients with chronic musculoskeletal problem subjectively.

Keywords: exercises intervention, chronic pain management, functional score, quality of life, systematic review.