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The Effects of Functional Training on Physical Fitness and Skill-Related Performance among Basketball Players: A Systematic Review

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ADMINISTRATIVE INFORMATION

Support - No support.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202360072

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 June 2023 and was last updated on 25 June 2023.

INTRODUCTION

Review question / Objective This systematic review aims to discuss the effects of FT on physical fitness and skill-related performance among basketball players.

Condition being studied There is evidence that functional training (FT) has positive effects on physical fitness and sports performance. However, a systematic review detailing the FT on basketball players is still lacking.

METHODS

Search strategy Five databases, including Web of Science, Scopus, PubMed, China National Knowledge Infrastructure (CNKI) and EBSCOhost for articles published up to 17 April 2023.

Participant or population Basketball players without injure of all levels.

Intervention Functional training.

Comparator Two or more groups and single-group trials.

Study designs to be included RCTs, nRCTs.

Eligibility criteria Inclusion criteria: (1) full-text articles published in English or Chinese; (2) population is healthy basketball players with no limitations on their gender, age and level; (3) studies used the functional training as the intervention in experimental group; (4) without functional training program in control group; (5) outcome measures are physical fitness (e.g., jump, sprint) or basketball skill-related performance (e.g., free throw, dribbling); (6) randomized controlled trials (RCTs), non-randomized controlled trials (nRCTs) with two or more groups and single group trials. The exclusion criteria were: (1) systematic review; (2) studies without functional training as intervention; (3) unpublished.(1) full-text articles published in English or Chinese; (2) population is healthy basketball players with no limitations on their gender, age and level; (3) studies used the

functional training as the intervention in experimental group; (4) without functional training program in control group; (5) outcome measures are physical fitness (e.g., jump, sprint) or basketball skill-related performance (e.g., free throw, dribbling); (6) randomized controlled trials (RCTs), non-randomized controlled trials (nRCTs) with two or more groups and single group trials.

Information sources Web of Science, Scopus, PubMed, China National Knowledge Infrastructure (CNKI) and EBSCOhost. The google scholar and related reference lists in the included articles were screened.

Main outcome(s) The FT is an effective training method to physical fitness and skill-related performance among basketball players, but for some variables (e.g., jump, upper body strength, free throw), it did not show the significance because of the gender, training frequency and length, and FT focus.

Quality assessment / Risk of bias analysis The 14-items "Qualsyst", with specific criteria (yes = 2, partial = 1, no = 0), was used to assess the articles' quality.

Strategy of data synthesis The data will be analysed according to the PICOS.

Subgroup analysis NA.

Sensitivity analysis NA.

Language restriction None.

Country(ies) involved Malaysia.

Keywords Functional training; physical fitness; basketball; sports; performance.

Contributions of each author

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