

Mental imagery and basketball performance a systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION**Support** - None.**Review Stage at time of this submission** - Preliminary searches.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202650125**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 May 2026 and was last updated on 22 May 2026.**INTRODUCTION**

Review question / Objective This review aims to see if mental imagery training can improve performance for basketball players. We will look at studies where players get structured mental imagery training. We will summarize how this training affects basketball-specific skills and game performance.

Rationale Basketball is a sport that needs both physical skills and strong thinking. Coaches and athletes sometimes use mental imagery to practice skills in their mind. Some research suggests this “mind practice” can help real performance, like shooting and decision-making. But other studies show mixed results. A systematic review is needed to bring all the evidence together. This review will help make clear if mental imagery training is useful for basketball players.

Condition being studied This review will study the use of mental imagery training for basketball players. We will look at its possible effect on

performance. Performance here means the ability to do basketball-specific tasks well. Examples include shooting accuracy, passing accuracy, dribbling skills, tactical decision-making, and free-throw performance.

METHODS

Search strategy We will search several electronic databases. These databases include PubMed, Web of Science, Scopus, and EBSCOhost. We will also search Google Scholar. We will check the reference lists of relevant studies. The main search terms will include combinations of the following words: (“motor imagery” OR “mental training” OR “movement imagery” OR “mental practice” OR “mental simulation” OR “cognitive training” OR “mental imagery” OR “mental rehearsal” OR “mental movements” OR “visual imagery”) AND (“basketball”).

Participant or population This review will include basketball players. These players take part in organized training or competition. Participants can

be male or female. They can be youth or adult players..

Intervention The intervention will be structured mental imagery training programs. These programs may involve guided imagery sessions. Players imagine themselves doing basketball skills without physical movement.

Comparator The comparator may be regular basketball training, other types of training (like physical practice only), or no extra training.

Study designs to be included This review will include randomized controlled trials and other controlled experimental studies. We will not include observational studies, case reports, reviews, or conference abstracts without full data.

Eligibility criteria Studies will be included if they meet these points: participants are basketball players; the intervention is a structured mental imagery program; the study has a comparison group; the study reports at least one outcome about basketball skill or performance. Studies will be excluded if they do not involve basketball players, do not use mental imagery as the main intervention, or do not report basketball-specific outcomes.

Information sources Information will come from electronic databases. These include PubMed, Web of Science, Scopus, and EBSCOhost. We will also use Google Scholar and check reference lists of included studies. We will review full-text articles when we can get them.

Main outcome(s) The main outcomes will be measures of basketball performance. These may include shooting accuracy (e.g., free throws, field goals), passing accuracy, dribbling test scores, tactical assessment scores, and game-related statistics.

Additional outcome(s) We may also report outcomes related to the mental process. These may include imagery ability scores, self-confidence ratings, or anxiety levels. We will describe these if the studies provide the information.

Data management Two reviewers will independently screen the records and extract the data. The team will organize study information in a table. Disagreements will be solved by discussion.

Quality assessment / Risk of bias analysis We will judge the quality of the included studies using the PEDro scale. We will look at items like random

assignment, group similarity at start, blinding, and complete reporting of outcome data.

Strategy of data synthesis We will judge the quality of the included studies using the PEDro scale. We will look at items like random assignment, group similarity at start, blinding, and complete reporting of outcome data.

Subgroup analysis None.

Sensitivity analysis None.

Language restriction We will include studies published in English.

Country(ies) involved China.

Other relevant information None.

Keywords Mental Imagery, Motor Imagery, Mental Training, Basketball Performance.

Dissemination plans The findings of this review will be submitted to a peer-reviewed journal.

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