

Effect of SAQ training on endurance performance and skill performance on soccer players: a systematic review

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ADMINISTRATIVE INFORMATION**Support** - None.**Review Stage at time of this submission** - Data analysis.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202690105**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 September 2026 and was last updated on 23 September 2026.**INTRODUCTION**

Review question / Objective The purpose of this systematic review is to analyze the effects of Speed, Agility, and Quickness (SAQ) training on endurance performance and skill performance in soccer players and to identify gaps in the existing literature to inform future research.

Condition being studied Soccer is a physically and technically demanding team sport that requires players to maintain high levels of endurance and execute technical skills effectively throughout match play. Endurance performance is important for sustaining repeated high-intensity activities and maintaining physical performance during competition, while skill performance, including dribbling, passing, shooting, and ball control, is essential for successful soccer performance. Speed, Agility, and Quickness (SAQ) training has been increasingly incorporated into soccer conditioning programs because of its emphasis on rapid acceleration, multidirectional movement, agility, and explosive actions. However,

the effects of SAQ training on endurance performance and soccer-specific skill performance remain unclear. Therefore, this systematic review will examine the available evidence regarding the effects of SAQ training on endurance performance and skill performance in soccer players.

METHODS**Participant or population** Soccer players.**Intervention** Any types of Speed, Agility and Quickness Training.**Comparator** As for experiment group, the Speed, Agility and Quickness training should be applied. As for control group, routine training or other training could be applied.**Study designs to be included** RCTs, and non-RCTs.**Eligibility criteria** As for population, the studies must involve soccer players. As for intervention,

the studies must involve Speed, Agility, and Quickness (SAQ) training. As for outcomes, the studies should report at least one result related to endurance performance or skill performance. As for study design, randomized controlled trials (RCTs) and non-randomized controlled trials (non-RCTs) will be included.

Information sources Prominent academic databases were considered to search the related literature, including EBSCOhost, Scopus, PubMed, Web of Science, and Embase. Meanwhile, the search was also thoroughly carried out on Google Scholar and the reference lists of relevant studies until 30 June 2026. For each independent database, a strategic search query was conducted using terms related to Speed, Agility, and Quickness (SAQ) training, endurance performance, skill performance, and soccer players, primarily within the title and abstract fields.

Main outcome(s) The main outcomes are endurance performance and skill performance. Endurance performance includes aerobic endurance, anaerobic endurance, and related endurance measures, while skill performance includes soccer-specific skills such as dribbling, passing, shooting, ball control, and overall playing ability.

Quality assessment / Risk of bias analysis Risk of bias in the included studies will be independently evaluated by two reviewers using study design-specific validated tools, with any disagreements resolved through discussion or consultation with a third reviewer. For randomized controlled trials (RCTs), quality assessment will be conducted using the Cochrane Risk of Bias 2 (RoB 2) tool across five key domains: bias arising from the randomization process (D1), bias due to deviations from intended interventions (D2), bias due to missing outcome data (D3), bias in measurement of the outcome (D4), and bias in selection of the reported result (D5). Preliminary assessment indicates that among the 6 included RCTs, 3 studies present a low risk of bias, while 3 studies demonstrate some concerns. For non-randomized studies of interventions (non-RCTs), the ROBINS-I tool will be employed across seven domains covering pre-intervention (confounding and selection of participants), at intervention (classification of interventions), and post-intervention (deviations from intended interventions, missing data, outcome measurement, and selection of reported results). Preliminary findings categorize all 3 included non-RCTs as having a moderate risk of bias. Overall assessment results will be synthesized and

visualized through risk of bias summary tables and traffic-light plots.

Strategy of data synthesis None.

Subgroup analysis None.

Sensitivity analysis None.

Country(ies) involved China.

Keywords Speed, Agility, and Quickness training; endurance performance; skill performance; soccer players.

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