INPLASY

Effects of Speed, Agility, and Quickness (SAQ) Training on Soccer Player 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: INPLASY202430077

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 March 2024 and was last updated on 18 March 2024.

INTRODUCTION

Review question / Objective What is the impact of SAQ training on football player performance?

Condition being studied SAQ training is a form of athletic training aimed at improving an athlete's speed, agility, and quickness, which are essential attributes for success in soccer and many other sports. Therefore, the condition being studied can be described as the athletic performance of soccer players, with a focus on parameters such as speed, agility, quickness, endurance, and possibly injury rates.

METHODS

Search strategy Define Keywords and Synonyms:
Identify key terms related to the topic, “SAQ training” OR “Speed, Agility, Quickness training” AND “Athlete performance” OR “physical performance” OR “Sport performance” OR “speed” OR “Flexibility” OR “agility” AND “Soccer player*” OR “football player*” OR “soccer athlete*” OR “football athlete*” OR “female football player*” OR “female soccer player*” OR “female football athlete*” OR “female soccer athlete*” OR “male football player*” OR “male soccer player*” OR “male football athlete*” OR “male soccer athlete*” OR “youth football player*” OR “youth soccer player*”
Boolean Operators:
Use Boolean operators (AND, OR, NOT) to combine search terms effectively.
Database Selection:
Choose relevant databases to search for literature. include PubMed, SPORTDiscus, Web of Science, Scopus, and Google Scholar. From start to March 17, 2024.
Hand Searching and Citation Tracking:
Review reference lists of relevant articles to identify additional studies (backward citation tracking).
Explore articles that have cited relevant studies (forward citation tracking) to identify newer research.

Participant or population Soccer players.

Intervention Speed, Agility, and Quickness (SAQ) training.

Comparator Regular soccer training or conditioning.

Study designs to be included Randomized controlled trials.

Eligibility criteria Additional inclusion criteria:Studies published in peer-reviewed journals.Studies available in English language.Studies with clearly defined SAQ training protocols and outcome measures related to soccer player performance.Studies conducted on human participants.Studies conducted on soccer players of all ages and skill levels.Additional exclusion criteria:Studies that do not focus specifically on SAQ training or its effects on soccer player performance.Studies with inadequate reporting of methodology or results.Studies lacking sufficient detail to assess the quality and validity of the findings.Studies with overlapping or duplicate data.Review articles, editorials, conference abstracts, and other non-primary research sources.Studies involving participants with pre-existing medical conditions that may significantly affect performance outcomes.Studies with interventions that include additional components beyond SAQ training, making it difficult to isolate the effects of SAQ training alone.

Information sources PubMed SPORTDiscus Web of Science Scopus Google Scholar Hand searching: Reviewing reference lists of relevant articles and systematic reviews, as well as conducting forward citation tracking, can help identify additional studies that may not be captured through database searches.

Main outcome(s) Reported one or more athletic performance (e.g. speed, agility, dribbling, etc.)

Quality assessment / Risk of bias analysis The Cochrane Collaboration's Risk of Bias tool for RCTs.
Publication bias assessment: Evaluate the potential for publication bias, including checking publication bias plots and conducting statistical tests using Egger's regression test.
Reporting guidelines: Adhere to appropriate reporting guidelines in the PRISMA statement, clearly documenting and reporting the assessment process and results in the literature.

Strategy of data synthesis Data extraction: Extract relevant data from each included study, including study characteristics (e.g., author, year of publication, study design), participant characteristics (e.g., sample size, demographics), intervention details (e.g., type of SAQ training, duration, frequency), outcome measures (e.g., speed, agility, quickness, injury rates), and results (e.g., mean differences, effect sizes, confidence intervals). Stata software performs meta-analysis.

Subgroup analysis Explore sources of heterogeneity through subgroup analyses based on predefined study characteristics (e.g., age, gender, study quality) or intervention characteristics (e.g., type of SAQ training, duration).

Sensitivity analysis Conduct sensitivity analyses to assess the robustness of meta-analysis results by excluding studies with high risk of bias or extreme effect sizes.

Country(ies) involved Malaysia and China.

Keywords SAQ training; Speed, Agility, Quickness training; Soccer player; football player; agility; speed; Sport performance; physical performance.

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