Thank you for the opportunity to review this manuscript, which considers some interesting, applied issues.

This study appears to be novel, and author showed an interesting point about "***The impact of change-of-direction repeated sprint training on players' jumping ability, sprint speed, and change-of-direction ability: A systematic review and meta-analysis".***

The authors have conducted a high-quality meta-analysis with clear objectives and a sound methodological approach.

Additional discussions on variability among studies, methodological differences, and potential limitations would enhance the scientific value of the manuscript.

The manuscript is written in professional and academic language. However, certain sections, particularly the discussion, could be clearer, as some conclusions based on different studies need more precise articulation.

Based on what I have read, I notice a few things that would be good to correct, in order to improve the quality of the article.

Please see my comments below.

A deeper explanation of the mechanisms behind RS-MCOD's stronger effects compared to RS-OCOD, as well as the practical sports implications of these findings, would be beneficial.

The introduction provides sufficient context and references relevant literature. However, a deeper discussion on the differences between RS-OCOD and RS-MCOD would enhance the study's value.

The structure follows PRISMA guidelines and adheres to PeerJ journal standards.

The figures (forest plots, funnel plots) are appropriate, but the explanations of the results could be clearer. Additionally, more discussion on potential publication bias in the included studies would be beneficial.

Relevance of the Research Question:

The study addresses an important topic in sports science and fills a gap in the literature regarding the effects of RS-COD on different aspects of athletic performance.

Methodology and Reproducibility:

The methodology is well described, including inclusion/exclusion criteria, database search strategy, and data analysis. However, more details on the specific tests used to measure performance (beyond their simple mention) would be useful.

Write the P value in lowercase if it indicates statistical significance.

Consistently use the number of decimal places throughout the text. In some places there are 2, and in others 3 and 4. It will be clearer to readers when you unify these parameters.

Bias Analysis and Validity:

The study assesses the risk of bias, but a more detailed discussion of the potential limitations of different studies and their impact on the findings would strengthen the manuscript. Additionally, the study selection criteria could be further elaborated.

The results are well presented through meta-analytic indicators (SMD, I^2, p-values).

The high heterogeneity in sprint speed (I^2=71%) and COD ability (I^2=70%) suggests variability among studies, which is not sufficiently addressed in the discussion.

Interpretation and Connection to the Research Question:

The conclusions are supported by the data, but they should be interpreted more cautiously considering publication bias.

The subgroup analysis reveals differences between RS-OCOD and RS-MCOD, but the manuscript does not fully explain why RS-MCOD significantly improves sprint and COD ability while RS-OCOD does not show statistically significant effects.

The limitations are acknowledged, but more discussion is needed on how they can be addressed in future research.

The issue of publication bias is mentioned, but without suggestions on how it might influence the interpretation of the results.

Upon reviewing the manuscript, it is evident that a significant number of references are missing within the provided PDF document. This omission hinders a thorough assessment of the study's foundation and the credibility of the cited sources. I strongly encourage the authors to ensure that all references are properly included in the final version to allow for a complete evaluation.

Furthermore, the majority of the cited references are more than five years old, with several being significantly older. While foundational studies are valuable, it is essential to incorporate more recent research to reflect the latest advancements in the field. Sports science, particularly in the areas of repeated sprint training and change-of-direction performance, is rapidly evolving, and the inclusion of up-to-date literature (from the last five years) is crucial to maintaining the manuscript's relevance and scientific rigor.

I urge the authors to conduct a more comprehensive review of the recent literature and integrate studies published within the last five years. This will not only strengthen the theoretical framework and discussion but also enhance the manuscript's overall impact and reliability.