



Reclaiming the value of qualitative analysis in sports performance research

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ABSTRACT

Quantitative metrics and technology-driven approaches have reshaped sports performance analysis (SPA), yet they risk overshadowing the equally vital contribution of qualitative methods.

This opinion paper highlights the value of qualitative analysis in capturing the complexity, context, and meaning of player and team behaviors, elements that numbers alone cannot explain.

Drawing on video-based evaluations, case studies, and narrative reconstructions, qualitative approaches provide insights into tactical, psychological, and interactional dimensions of performance that are indispensable for bridging the science–practice gap. By integrating qualitative and quantitative perspectives, SPA can achieve a more balanced and applicable paradigm, ensuring that scientific research remains relevant to real-world coaching and athlete development.

This paper calls for a renewed recognition of qualitative methods as a central pillar of SPA and invites further scholarly contributions to this evolving discussion.

Keywords: contextualization, qualitative analysis, science–practice gap, sports performance analysis.

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INTRODUCTION

It is well established that qualitative methods offer an in-depth understanding of complex phenomena, allowing researchers to understand the "how" and "why" behind behaviors, decisions, and events (Eakin & Gladstone, 2020; Lim, 2025). This contribution makes them very useful in the field of sports performance analysis (SPA), because the performance of an athlete or a team is a multifactorial and complex issue (Mujika et al., 2018; Yang et al., 2024; Zentgraf et al., 2024). However, their value is often underestimated.

Recently, the Journal of Sport Sciences published an editorial by Memmert (2025) that offers a valuable and timely reflection on the current and future directions of SPA. I fully agree with the author's emphasis on several key areas: the integration of big data and machine learning, the need for solid theoretical foundations in research design, the adoption of experimental approaches to strengthen causal inference, and the critical importance of contextualization and open science practices. These points form a strong and coherent framework that can guide SPA research in the years to come. Particularly noteworthy is the author's call for benchmarking, transparency, and reproducibility, which resonates with the broader movement towards open science in sports and exercise research.

However, despite these significant contributions, the editorial presents a vision of SPA that is quantitative mainly and technology-driven. While quantitative metrics, advanced tracking systems, and machine learning models are essential, performance analysis is both quantitative and qualitative. This omission is particularly striking given Memmert's own recognition of the importance of contextualization, which is best achieved through qualitative approaches (Lames, 2023).

This opinion paper was initially written in the form of a "comment" on Memmert's editorial and submitted to the Journal of Sports Sciences. However, the reviewer to whom it was assigned recommended rejection of its publication, even though, as they wrote in their comments, "I deem the efforts made in this comment valuable in general." One argument against the comment was that, even if we accept that qualitative analysis dominates the practical domain, "this would not suffice as an argument for why qualitative analysis should be more prevalent in the scientific field."

The question that arises from this reviewer's remark is: why then is research conducted in the scientific field at all? Is it merely to produce publications, or is it to provide insights that can ultimately assist practice? Therefore, the purpose of this paper is to emphasize the contribution that qualitative methods can offer to SPA, to invite authors to conduct such studies, and to invite journals to evaluate them objectively based on their contribution to applied, on-field practice.

Accordingly, this opinion paper adopts the position that advancing sports performance analysis requires a more balanced epistemological framework, in which qualitative and quantitative approaches are treated as complementary rather than hierarchical. In this view, qualitative analysis plays a central role in contextualizing data, interpreting behavior, and ensuring that research outcomes remain meaningful for applied practice.

Qualitative Analysis: The Forgotten Dimension

In modern soccer and other team sports, qualitative analysis, particularly video-based evaluation, remains the primary tool used by coaches and performance analysts in practice (Nyman et al., 2025; Wright et al., 2012; Wright et al., 2016). As Plakias et al. (2025) argue, there is a growing need to acknowledge the value of qualitative match analysis, which captures the tactical, psychological, and interactional nuances of performance that quantitative data alone cannot explain. A dataset might show that a team's passing frequency decreased in the last 15 minutes. However, only qualitative observation can reveal whether this was due to a tactical shift, opponent pressure, or mental fatigue.

Moreover, qualitative analysis is indispensable for contextualization, a key challenge for SPA, as Memmert (2025) rightly identifies. Context in sports is inherently complex, dynamic, and socially constructed. Understanding the "why" behind player and team behaviors often requires in-depth video analysis, expert interviews, and narrative reconstruction, tools that are part of the qualitative research tradition (Lim, 2025).

A common criticism of qualitative approaches concerns subjectivity, limited generalizability, and perceived lack of rigor (Mwita, 2022; Queirós et al., 2017). However, contemporary qualitative research has long moved beyond unstructured observation, employing established criteria for trustworthiness such as triangulation, transparency, reflexivity, and analyst consensus (Adler, 2022; Ahmed, 2024). In performance analysis specifically, structured video observation protocols, multi-analyst coding, and integration with quantitative and contextual data could provide a robust framework for minimizing individual bias while preserving contextual depth (Anguera et al., 2017; Lames, 2023; Mujika et al., 2025). Importantly, the aim of qualitative inquiry is not statistical generalization, but analytical and theoretical insight into complex, context-bound phenomena. When used alongside quantitative indicators, qualitative analysis does not weaken scientific rigor; rather, it strengthens interpretability by explaining why and how performance outcomes emerge in real-world sporting environments.

Bridging the Science–Practice Gap

One of the main criticisms Mackenzie & Cushion (2013) raised regarding performance analysis in soccer was the persistent "theory–practice gap." As Halperin (2018) and Mujika et al. (2025) highlight, case studies are powerful qualitative research designs that enable scientists to collaborate with coaches, gain a deeper understanding of elite performance environments, and produce actionable insights immediately relevant to practitioners. These studies can complement group-based quantitative designs, providing both statistical and narrative perspectives (Halperin, 2018). The role of case studies as a bridge between scientific research and applied practice is another overlooked aspect of SPA. By focusing on real-world contexts, case studies help ensure that performance analysis research is not conducted "for the sake of research," but rather serves the needs of coaches and athletes (Plakias et al., 2025). For example, individualized tactical analyses of specific matches or tournaments can yield practical lessons that no large-scale, aggregated dataset can provide. Clearly, while soccer is frequently used as a reference point due to its extensive performance analysis literature, the arguments advanced here apply equally

to a wide range of team sports and high-performance contexts in which performance emerges from complex tactical, psychological, and contextual interactions.

CONCLUSION

Quantitative metrics, advanced technologies, and machine learning models have undoubtedly transformed the field of SPA; however, their dominance risks overshadowing the essential contribution of qualitative approaches. Qualitative methods capture the complexity, context, and meaning of player and team behaviors, elements that numbers alone cannot explain. By incorporating video-based evaluation, case studies, and narrative reconstructions, researchers can bridge the science–practice gap and ensure that scientific inquiry remains relevant to real-world coaching and athlete development.

Ultimately, SPA should not be framed as a competition between quantitative and qualitative methods, but as a complementary integration. A more balanced paradigm, in which qualitative insights stand alongside quantitative data, will enhance the validity, contextualization, and applicability of research. This opinion paper, therefore, calls for greater recognition of qualitative analysis as a central pillar of SPA and invites scholars to contribute to this evolving conversation.

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The authors hereby declare that this research is free from any conflict of interest with any party.

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