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# Enacting Coach–Athlete Relationships in Remote Endurance Coaching: A Longitudinal Study

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## 1 Introduction

Remote coaching has rapidly become a popular mode of practice in endurance sport, enabled by wearable sensors, digital communication technologies, and online training platforms (Kirkland & Cowley, 2023). While sport science research has extensively examined physiological monitoring and performance analytics, considerably less attention has been paid to how coaching relationships are enacted within technology-mediated environments (Stewart & Jowett, 2026). Existing remote coach–athlete relationship research has relied largely on retrospective accounts, limiting understanding of how relational processes unfold in everyday coaching practice. This study addresses this gap by examining how coach–athlete relationships are enacted longitudinally through digitally mediated interaction in remote coaching of endurance athletes.

## 2 Material and Methods

Adopting an interpretivist qualitative design, six remote endurance coach–athlete dyads were followed over a four-month observation period. Two dyads involved cycling coaches, whilst the remaining four operated across running and triathlon. Data included individual interviews with the coaches and athletes prior to the observation period. A 4-month continuous capture of coach-athlete interactions followed, including data from: video calls, voice calls, WhatsApp communication (text messages, photos and voice notes), and training platform exchanges.

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A post-observation interview followed, with the coach and athlete both present, allowing for additional insights to be gathered. Analysis used reflexive thematic analysis, focusing on how relational processes took place across communication technologies over time.

## 3 Results

Results indicated that remote coaching functions as a distributed relational process in which coaching practices are divided across different technologies. Training platforms primarily operated as sites of training prescription, monitoring, and accountability. In contrast, relational work, including reassurance, interpretation of subjective fatigue, negotiation of expectations, and motivational support, occurred predominantly through informal messaging and calls. Across dyads, athletes rarely evaluated coaching effectiveness solely through data feedback; instead, effectiveness emerged through responsiveness, interpretive dialogue, and perceived relational presence.

## 4 Discussion

Mapping findings onto the 3+1 Cs framework (Jowett, 2007) revealed multiple relational configurations. Closeness ranged from structured professional trust to familiarity sustained through humour and informal communication. Commitment was expressed through reliability (agreed communication approaches) and availability, rather than communication frequency alone. Complementarity varied between hierarchical and collaborative decision-making structures. Co-orientation proved particularly sensitive to technological mediation, achieved not only through conversation, but through shared engagement of elements, such as training graphs and data, screenshots, and photographs that stabilised shared interpretations of performance.

While performance metrics often influenced training decision-making, over-reliance risked obscuring athletes' lived experiences when metrics became the primary interpretive lens. Coaches frequently relied on informal communication to contextualise physiological data. Rather than diminishing relational coaching, digital technologies redistributed relational labour (Baym, 2015) across platforms. Synchronous interactions (voice and video calls) acted as trust-building and repair mechanisms, while asynchronous messaging enabled ongoing relational maintenance. The findings illustrated how data-rich training environments may enhance efficiency but still require interpretive dialogue to translate metrics into meaningful coaching decisions.

## 5 Practical Applications

This study contributes to coaching science by reframing remote coaching not as face-to-face coaching conducted at distance, but as a distinct sociotechnical practice in which relationship quality is enacted through coordinated use of technologies. For remote cycling coaches and athletes, the findings suggest that effective remote coaching depends not solely on data quality or analytic sophistication but on integrating performance metrics with athletes' lived experiences through sustained relational interaction.

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