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► **To cite this version:**

Valentin Roux, David Trouilloud. Do concordant coach-athlete dyads predict higher athletes' perceived competence?. FEPSAC 17TH CONGRESS, Jul 2024, Innsbruck, Austria. <https://fepsac2024.eu/assets/images/FEPSAC%20CONGRESS%202024%20FINAL%20Abstractbook.pdf>. ⟨hal-05101762⟩

HAL Id: hal-05101762

<https://nantes-universite.hal.science/hal-05101762v1>

Submitted on 6 Jun 2025

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Do concordant coach-athlete dyads predict higher athletes' perceived competence?

POSTER
P078



FEPSAC
CONGRESS
2024



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Introduction

- 3+1Cs model (Jowett, 2007): the quality of the coach-athlete relationship (CAR) can be approached through the dimensions of closeness (affects), commitment (cognitions), complementarity (behaviours), and co-orientation (mutual understanding) (Figure 1).
- Co-orientation reflects the degree of congruence between both coaches' and athletes' perceptions of their relationship (Jowett & Clark-Carter, 2006), and can be defined by actual and assumed similarities as well as empathic understanding (see Figure 2).

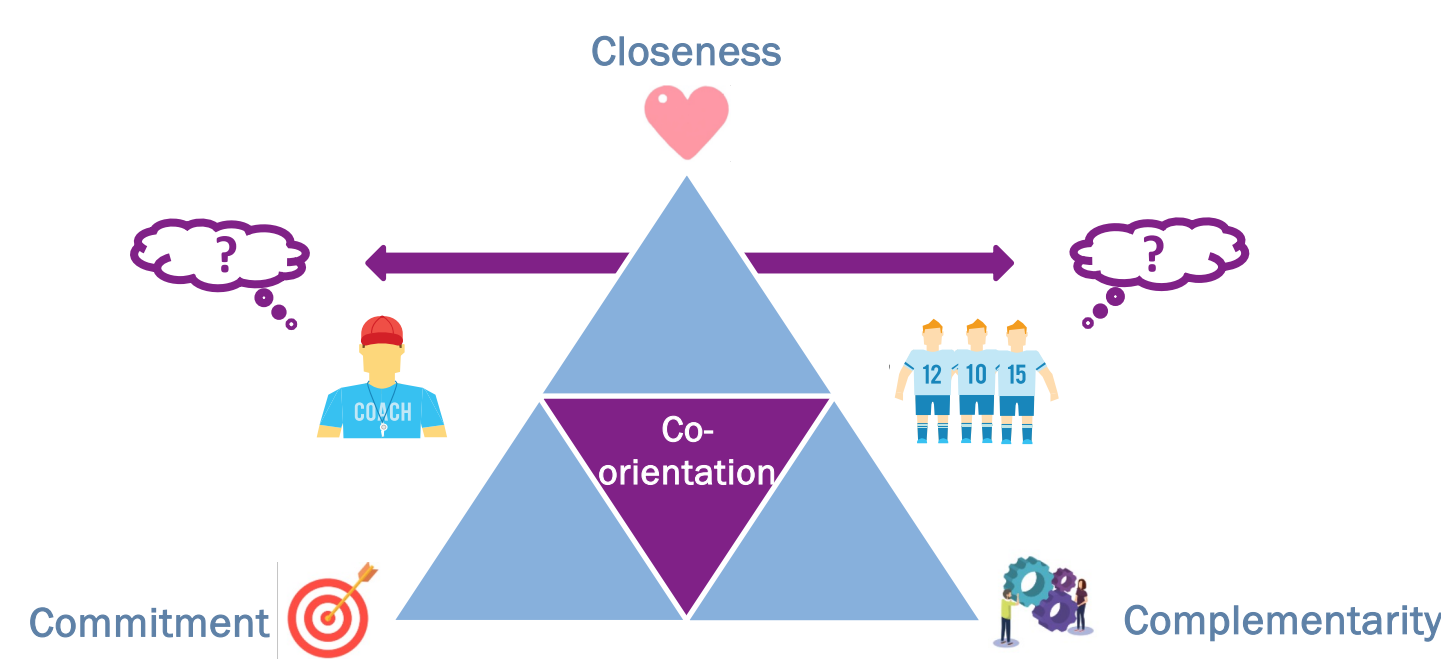


Figure 1. The quality of the coach-athlete relationship.

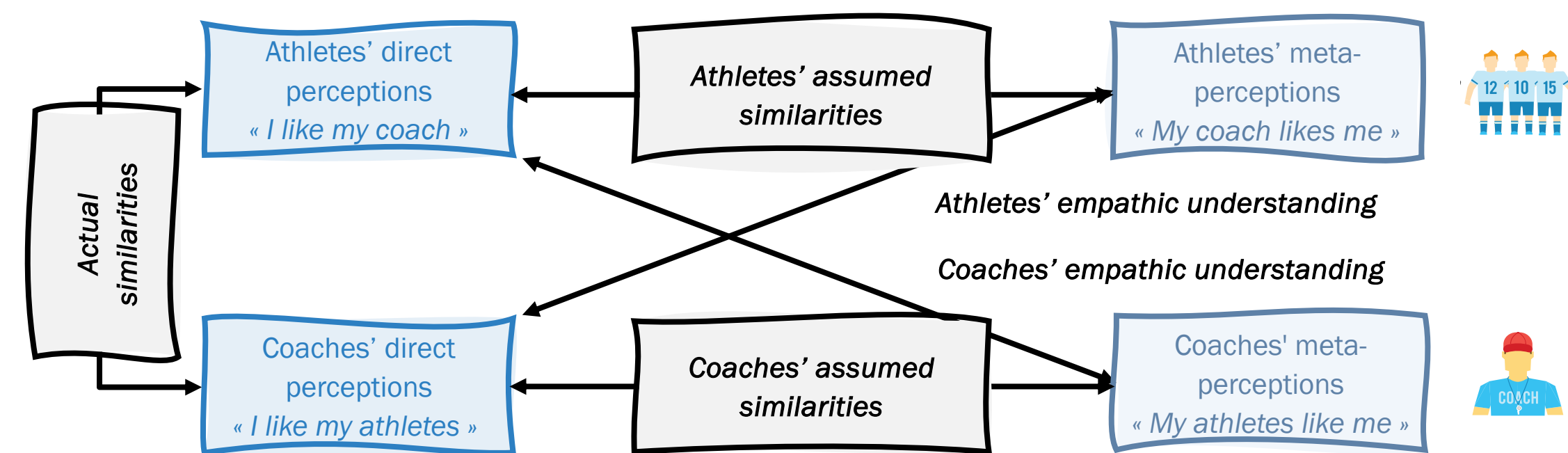


Figure 2. The co-orientation dimensions.

- For the last 20 years, literature indicated that the quality of the CAR can be related to several performance (e.g., efficacy), motivational (e.g., self-determination), affective (e.g., burnout), and cognitive (e.g., perceived competence) factors (Roux & Trouilloud, 2021).
- However, although co-orientation is considered as a key element of the CAR quality, it has been poorly investigated in the literature.

Objective & hypothesis

- Exploring the associations between co-orientation and athletes' perceived competence.
- It is hypothesized that congruence between athletes' direct and meta- and coach's direct perceptions of their CAR predicts higher athletes' perceived competence.
- Precisely, it is expected that congruence at high levels predicts higher athletes' perceived competence that congruence at lower levels.

Participants

- 152 handball players (76 men, 76 women), Mage = 15.09 (SD = .87)
- 9 coaches (men), Mage = 34.39 (SD = 5.62)
- National level (33%), Regional level (67%)
- Intensive handball training centers (M = 8.5 hours per week, SD = 2.5)

Measures

- Coach-athlete relationship quality: French version of the CART-Q (Jowett et al., 2017)
 - Athletes' direct perceptions « I like my coach »
 - Athletes' meta-perceptions « My coach likes me »
 - Coaches' direct perceptions « I like my athletes »
 - Coaches' meta-perceptions « My athletes like me »

- Athletes' perceived competence (Trouilloud & Amiel, 2011)

Data analysis

Response surface analysis (Barranti et al., 2017) were conducted using Rstudio. Three polynomial regression equations were performed for each co-orientation dimension and response surface were plotted. Polynomial equations were computed as follow:

Actual similarity:
 $Y = b_0 + b_1AD-CAR + b_2C-CAR + b_3AD-CAR^2 + b_4(AD-CAR * C-CAR) + b_5C-CAR^2 + e$

Athlete assumed similarity:
 $Y = b_0 + b_1AD-CAR + b_2AM-CAR + b_3AD-CAR^2 + b_4(AD-CAR * AM-CAR) + b_5AM-CAR^2 + e$

Athlete empathic understanding:
 $Y = b_0 + b_1AM-CAR + b_2C-CAR + b_3AM-CAR^2 + b_4(AM-CAR * C-CAR) + b_5C-CAR^2 + e$

In these equations, Y represents athletes' perceived competence, and AD-CAR, AM-CAR, C-CAR correspond respectively to athletes' direct and meta-perspective of the CAR and coaches' direct perspective of the CAR.

Results

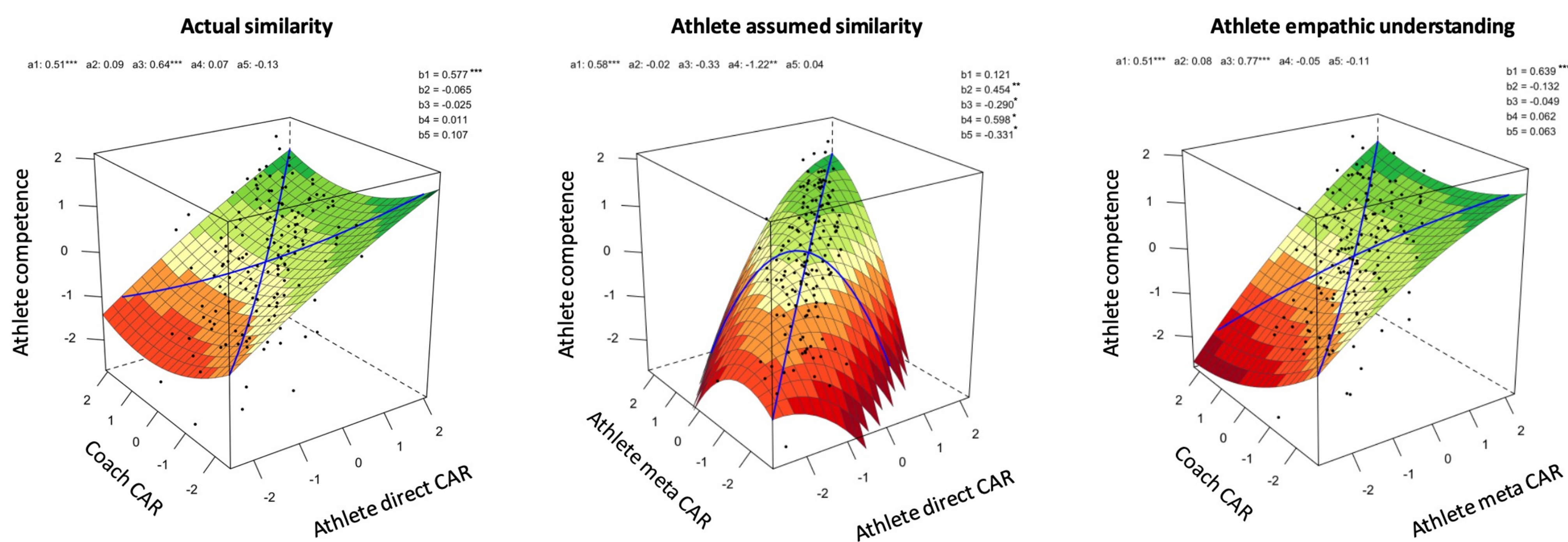


Figure 3. Response surface analyses plots.

- a1: Do matches at high values have different outcomes than matches at low values?
- a2: Do matches at extreme values have different outcomes than matches at less extreme values?
- a3: Is one mismatch (X > Y) better or worse than the other (X < Y)?
- a4: Are matches better or worse than mismatches?

Discussion

- Response surface analyses indicate that congruence at high levels is associated with higher athletes' perceived competence.
- However, according to Humberg et al. (2019), response surface analysis coefficients should not be considered independently. Consequently, the hypothesis of congruence only be satisfied for athlete assumed similarity.
- Results support theoretical principles from 3+1Cs model (Jowett, 2007) suggesting that the degree of congruence between coaches' and athletes' perceptions of the quality of their relationship may be associated with athletes' perceived competence.

Limitations & perspectives

- The coach's meta-perspective was not measured. Exploring the coach's assumed similarity and empathic understanding, could provide a better understanding of the overall dimension of co-orientation.
- Co-orientation has only been studied among adolescent handball players. Studying these associations in a variety of sports would provide a better insight into this process.
- Although CAR has been considered as a dynamic process, the present study used a cross-sectional design. Future studies are encouraged to conduct longitudinal methodology in order to explore how co-orientation is likely to evolve over time.

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