



## **Understanding the Demands of the Coach Athlete Relationship within Professional Cycling. What does it take to be an Elitlevel Director Sportif?**

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### **ABSTRACT**

*The art of coaching can be defined as the interaction of two people: the coach and the athlete, where they both show elements of connection, understanding, shared experiences and trust to help bring the best out of each other and achieve a common goal. Whilst there has been a large amount of research focusing on the how the coach athlete relationship is built, there is currently no research exploring the perceptions of both the coach and the athlete regarding the how the coach athlete relationship functions in the context of professional cycling. The aim of this research study was to explore the role of a cycling director sportif and identify how they use elements of the coach athlete relationship to achieve a common goal with their athletes and achieve the best performance possible within their team environment. The participants were three males and one female who were purposefully sampled for this study due to their extensive experience in being a director sportif. Participants took part in a single semi structured interview lasting 45 minutes in order to gain a deep understanding of their perception and experiences of the coach athlete relationship. The data were thematically analyzed using interpretative phenomenological analysis. A total of six super-ordinate themes were uncovered during the analysis process and were defined as previous experience, coaching behaviors, education, communication, potential and team culture and ethos. The results indicate that there is a lack of clarity regarding the role of a director sportif and their function within the greater performance support team. There is also a critical lack of understanding focusing on the best form of education for newly appointed director sportifs, it is also unknown if previous experience as a professional cyclist provides a sufficient level of knowledge and skills to be an effective coach. This present study also highlights a change in the way that coaches measure the performance of their athletes within the context of professional cycling, and how both coaches and athletes heavily rely on communication and more interpersonal skills as their primary source of motivation during training and races. Future research should attempt to further define the role of a director sportif and identify whether just informal learning and mentoring is a sufficient form of education for newly appointed director sportifs.*

**Keywords:** Coach athlete relationship, Cycling, Director sportif, Communication, Education, Coaching behaviors, Leadership

## INTRODUCTION

An effective coach athlete relationship is a critical factor that enables the successful functioning and overall performance of a sports team or an individual's sports performance. Whilst there has been a variety of research on the well-established elements of the coach athlete relationship, there is currently a lack of research exploring the role of the coach athlete relationship within the context of professional cycling [1].

Professional road cycling requires both the coaches and the athletes to be away from their home for extensive periods of time and often, athletes train independently from their coaches creating many complex issues and placing additional strain on the coach athlete relationship [2].

**At its simplest form, coaching is the interaction of two people:** The coach and the athlete with the coach attempting to teach the athlete a new skill or to help them progress in their sport. The coach and the athlete have the opportunity to form a unique connection in which they form trust, a deep level of understanding, and shared experiences whilst attempting to achieve a common goal. Jowett suggested that in the past the coaching process related solely to the process where coaches are responsible for changes in their athletes physical performance and wellbeing. However, recent research suggests that the coaching process is more focused on the coach athlete relationship as this is at the heart of establishing successful coaching. Observing and analyzing the coach athlete relationship is important for not only understanding the entire coaching process but equally the quality and effectiveness of the coaching the athlete receives and the quality of the relationship the athlete has with their coach. In more simplistic terms the coach athlete relationship is at the heart of the more general coaching process and the outcomes of the "coaching" is heavily influenced by the coach and the athlete's ability to function as a unit and develop a strong connection [3].

**The coach athlete relationship:** There are many definitions that relate to the coach athlete relationship. However, most coaches and sports psychology researchers have defined the coach athlete relationship as all of the situations in which a coach and athlete share interactions including shared experiences, feelings and behaviors. Feld et al., attempted to explore some functions of the coaching efficacy model, in which they suggested that the coaching efficacy model included four primary dimensions. The first dimension stipulated by Feld et al. focuses on the teaching technique efficacy which relates to the coach's ability to instruct other individuals [4].

The second of the four dimensions is defined as game strategy in which game strategy refers to the coach's ability to generate athlete buy-in to the coaching process as well as the coach's ability to achieve whole team success (winning a match or witnessing a notable increase in performance). The third dimension highlighted by Feld et al., is motivation efficacy and relates to the coach's ability to use psychological skills to promote athlete well-being and for the coach to motivate their athletes to achieve a predefined goal. The fourth coaching dimension is character building, this solely relates to the coach's ability to influence athletes' personal development and positive attitude toward sports [5].

Building on from this research by Feld et al., Jowett's, highly regarded research article titled "interdependence analysis and the 3+1Cs in the coach-athlete relationship learning objectives" attempted to fully understand all of the elements and functions of the coach athlete relationship Jowett's work sets out a framework that included four major constructs that relate to the most prominent elements of the coach athlete relationship. The four main constructs suggested by Jowett are closeness (this relates to how much the coach and the athlete care support each other), commitment, (this relates to the how committed the coach and or the athlete is in relation to maintaining the relationship for an extensive period of time), complementary (the extent to which the behavior of the coach and athlete are similar to each other) and lastly co-orientation (this relates to whether the coach and the athlete have been able to establish a common view regarding how the athlete will progress in their sport). The framework proclaimed by Jowett can be summarized as how the coach perceives the athlete's ultimate personal and sporting potential (summarized as the coach's perceptions of the athlete's overall performance). A strong coach athlete relationship is one of the key factors for overall sporting performance and happiness for both the athlete and coach. Another outcome of a positive coach athlete relationship is that the coach and or athlete are better able to understand what emotions they are experiencing during training or competitions. A positive coach-athlete relationship has been shown to promote participation, athlete satisfaction, self-esteem, and improved performance [6].

Jowett and Cockerill proposed that the coach-athlete relationship can be heavily influenced in equal ways by both the coach and the athlete. Subsequently, Jowett developed the "3 C's" model to objectively measure how successful a coach athlete relationship is. The "3 C's" included; (1) 'Closeness': Which focuses on how deeply the coach and athlete are connected and how mutual trust, respect, and appreciation are expressed; (2) 'Commitment': Can be defined as the desire to maintain the relationship over time and; (3) 'Complementarity': The interaction between the coach and the athlete that is perceived to be cooperative and effective. The final "C", 'co-orientation' was added to assess how reciprocal the coach and athlete perceptions of the relationship were. The addition of 'co-orientation' resulted in the model being currently referred to as the "3+1 C's" model. The "3+1 C's" model suggests the more an athlete and coach are satisfied with the relationship, the higher the quality of the relationship, and the greater the athletic outcomes as a result of the relationship.

**What is a director sportif:** In the sport of professional cycling, each team has a support vehicle which typically contains a Director Sportif (DS), a mechanic (in some cases this may be the job or the role of the DS), spare parts e.g. wheels, bicycle tools, and food and drink for the riders. It is the DS's job to communicate with their athletes (in this case the cyclists) in the race either by using race radios or by having riders come back to the team car in the middle of races to discuss race strategy, weather updates, nutrition interventions or more generic coaching in an attempt to motivate the riders to achieve a common goal for the team in that particular race [7-10].

Previous research exploring the role of a DS is extremely limited with only one prior research article investigating what elite female cyclists expect from their DS. Research conducted by Salmon et al., attempted to examine the role that a DS has in relation to situational awareness and teamwork in the context of an elite women's cycling race. Salmon et al., conducted interviews with riders regarding their perception of the role of a DS and recorded significant parts of race radio communication between the riders and the DS. The results from Salmon et al., proposed that riders expect the following characteristics from their DS: Good communication, the ability to provide mechanical and nutritional support, provide updates to the riders regarding what's happening in the race, provide a platform for communication within the team of riders, mentor the riders and motivate them to achieve a common goal within the team. The analysis and results from Salmon et al., suggests that a DS has a unique and important role in relation to establishing effective teamwork. Salmon et al., suggested eight unique behaviors and characteristics that a good DS needs for them to function effectively within a professional cycling team. These characters were: Leadership, mutual performance monitoring, back up behaviors, adaptability, team orientation, shared mental models. Mutual trust and communication [11].

As previously mentioned within professional cycling the DS also takes on the responsibilities of the coach. Due to the limited amount of research that has focused on the role of DS's and coaching in professional cycling, it is currently unclear which aspects, if any, of the pre-existing definitions of the coach athlete relationship will apply to the context of professional cycling.

**Leading research question:** Amongst the current scientific literature, there is a significant lack of research exploring the role of a cycling DS and their role and function within the coach athlete relationship. Whilst there are several research articles which have explored the concept of the coach athlete relationship, there is currently no research which explores the coach athlete relationship within the context of professional cycling. Due to the unique team environments, international race schedules and the fact that the athlete and coach are often in different countries or locations there is the potential for the coach athlete relationship to function in different ways than has already been depicted by existing research [12-15].

The clear lack of evidence regarding the role of a DS and how the DS (coach) and the cyclists (athletes) build and maintain elements of the coach athlete relationship leaves a large gap in the research literature. Due to the lack of a coherent evidence base, the primary aim of this research study was to explore how the DS and the cyclist build and maintain elements of the coach athlete relationship. The secondary aim of this research article was to build on the work of Salmon et al., to help further define the behaviors and interpersonal characteristics that are expected from DS's.

## MATERIALS AND METHODS

This present study adopted an Interpretative Phenomenological Analysis (IPA approach). An IPA approach is a well-established approach to qualitative research in sports psychology and greater psychology research. The specific aim of this approach is to gain an understanding of the phenomena under investigation from the participant's perspective. This phenomenon being the experiences of DS's in their job role specifically within the context of building relationships with the riders that they coach. Subsequently, the phenomena also focuses more generally on exploring elements of the coach athlete relationship.

The IPA approach to data collection was chosen due to its ability to invite participants to articulate stories, their experiences, feelings and thoughts regarding a specific situation or phenomenon. The approach follows a systematic procedure without having too many elements of the prescriptive methodology. Subsequently, using an IPA approach allows for flexibility and an individual approach for data collection. The approach offers a detailed analysis of the personal accounts of participants, followed by a presentation and discussion of the generic experimental themes that were paired with the researcher's own interpretation [16].

Ethical approval for the study was gained *via* the internal university ethics committee at the institution, where the author was a resident whilst the study was being conducted. All the participants opted to take part in the study by giving their signed informed consent.

## Participants

A homogenous sample was purposely selected for this study. The participants were selected based on their experiences as elite (professional) cycling director sportifs. Specifically, participants for this study were recruited from continental, pro-continental and world tour cycling teams (elite national and international teams with a professional status). This specific approach was adopted in accordance with Smith and Osborn's guidelines for IPA research. There were 4 participants (three male, one female, Mage=45.5

years, age range 28-62 years; Mexperience=8.5 years working as a DS in a professional cycling team). Whilst all four participants had been a DS at a continental team, two of the participants had additionally been a DS at a world tour team. Three of the participants in this study were still actively involved in professional teams being a DS, whilst one had recently retired from being a DS at a world tour team [17].

## Procedure

The participants were interviewed to gain an insight into their experiences as director sportifs in professional cycling teams and how they used aspects of the coach-athlete relationship in their role. This study adopted a semi-structured interview approach, as highlighted by Smith and Sobborn. The researcher developed a specific interview schedule for the study, but this was used as a rough guide rather than a way of forcing the interview in a strict direction regarding themes and concepts. This approach is consistent with the phenomenological approach, where the participants are considered the "experts", and it is the meaning that they associate with their experiences that is of interest to the researcher [18].

The specific process for developing the interview schedule adhered to a four-step approach developed by Smith and Osborn. This approach suggested that the researchers (a) Think about a broad range of issues; (b) Put these topics in the most appropriate sequence; (c) Think of appropriate questions relating to these areas, and (d) Think about possible probes and prompts. Examples of interview questions included as part of the interview schedule are: "Can you give me an example of how trust and respect between staff and riders has been formed?" and "What has been the greatest challenge you have experienced in your role as a director sportif" and "What do you think makes a great director sportif? Can these attributes or values be learned, or do you think they are innate values". All the interviews, which lasted between 30 and 60 minutes, were recorded and transcribed verbatim to produce an accurate record of the conversations that took place. The interview transcripts were then returned to the participants to check the accuracy of the transcription process, after which IPA was used to describe the key themes and concepts that were discovered during the interviews.

## Data analysis

The Interpretive Phenomenological Analysis (IPA) method was used to analyze data in this study. The researcher engaged in an interpretive relationship with the transcript, reading each one several times to become familiar with the participants' answers and experiences. The researcher then searched for emerging themes and concepts that could be used to answer the research hypothesis. Initial comments and reflections regarding significant themes and concepts were made digitally on a copy of each interview transcript. Subsequently, a list of key themes from each interview was recorded, and any segments of the interview transcript that supported the key themes were noted [19,20].

Checks were made with the original transcripts to make sure connections still worked with the primary source materials. This step led to the development of a coherent table of themes. Once the transcripts had been analyzed by the introspective process, a final table of superordinate themes was constructed. These superordinate themes were translated into a narrative around the analysis and subsequently became more expansive.

**Table 1.** Table one shows graphical representations of how the interview transcripts were analyzed in line with the IPA approach.

P?	Raw data	First reflection	Theme/Keyword
P2	But you get your kicks in other ways, you know about the whole group being successful.	Success, passion, challenge, complacency	Challenge
P2	They go in because they love the sport inside. That's what drives them. And it's such a powerful drug that drug, I guess that it kind of masks all of the shit stuff that you have to do you know To get there so	Passion, challenge, reward, hard work, resilience, mental strength	Resilience
P2	So yeah, I run a kids program and then I kind of left a sport for a while, but then I came back into it and if I do anything I like to do it as well as I could	Previous experience, passion, rider development, Potential	Rider-development /potential
P2	I got slightly bored of that, Jack. So I found new ways to become involved in racing.	Passion, self-development, personal goals, challenge	Self-development
P2	Kind of expands from there a really. I just started taking up opportunities in the team car when they were given to me. And it just progressed from there obviously. For me it was kind of like a progression model. I just kept on taking opportunities and worked my way up over time until I got to where I was today.	A fluid progression, informal learning, opportunities	Informal learning
P2	I'm sure that may change in the next few years. I think the more research that comes out will try and give DS's much more education which I think is what it needs. Yeah. just like to see it turn into profession.	Research, change, education. job role, understanding, progression, development	Development
P2	So the first thing I'd like to do, I like everybody to learn everybody else's role. That's not in a race. Sorry, that's not obviously. If you got a climber, you can't do the Sprint's job, but we like to swap job roles.	Respect, understanding, learning, knowledge hard work, resilience	Respect
P2	So you know myself or Steve Lamphere who you know heading up the team at the moment, you know, he's gotta do some mechanic and he's gotta do some of the commercial stuff he's gotta do. He's gonna do things that he really doesn't want to do. But he just has to get them done so that the team can function	Resilience, mental strength, respect	Resilience

P2	To understand what it takes to run a team. So if you've got that understanding that builds ethos and a good culture so that you know when things go wrong, you don't blame people, you get rid of the blame culture.	Understanding opportunities, team culture, team ethos, trust respect, humility	Humility
P2	We have to remember that we are custodians for the sport.	Trust, respect, knowledge, progression. Potential, guidance	Guidance
P1	Advice my dad gave me years ago is just be yourself, you know? Don't try and be someone else. Just be yourself. And I was always friendly and welcoming and tried to treat people how I want to be treated in life and. I think that that's always been enough really	Friendly open, accepting, trust, compassion, communication	Accepting
P3	You sound like a knob head, but I don't know how many Welsh vests like loops, right? I represented in Britain	Experience, respect, modesty, guidance, education,	Experience
P3	And, you know, you could see more things and we'd be chatting from the team buses and just both really loved the racing.	Passion, hunger for success, progression, experience, winning, team work	Winning
P3	I'll do whatever I can to help you because it it's a good little project. And he said, well, I've been meaning to chase you up. Let's meet to chat over this project. We did that in the setting like this and he said I want you to be the DS. We talked enough about racing. I know how you race yourself. I know how you watch the race in between the two of us, of how you have. And sort of train you to do this, show you what to do.	Passion, guidance, mentor, Experience, trust, belief. Self-belief	Mentor
P3	Umm. And you might get a little local rider to help you out. Go to the feed. But all of these people are just doing it for the love of the sport really. They are getting limited money from it but they are just so in love with the sport so they don't mind.	Passion, progression, hard work, opportunities	Opportunities
P3	Even if you have the passion for the sport and the job. I don't think most people understand just how hard you have to work.	Hard work, determination, hunger for success, progression, experience, winning, mental strength, resilience	Determination

In the first column is a reference to which participant that particular interview transcript came from. Column two shows the raw data that is an extract from their interview transcript. Column three is the researchers first reflections about the raw data, during this phase the researchers looked at the raw data through different "lenses" to figure out what elements of the coaching and the coach athlete relationship the raw data was related to. The fourth and final column is the most prominent theme that the raw data referred to. Later on in the analysis phase of this research these prominent themes were characterized as the subordinate themes which in turn were all characterized into six large themes which were defined as the superordinate themes.

## RESULTS AND DISCUSSION

The IPA analysis of the data highlighted six superordinate themes, all of which have been used to form the basis of the following discussion, and a total of 106 subordinate themes. The superordinate themes include previous experience, passion for the sport, education, communication, potential and team culture and ethos (Figure 1).



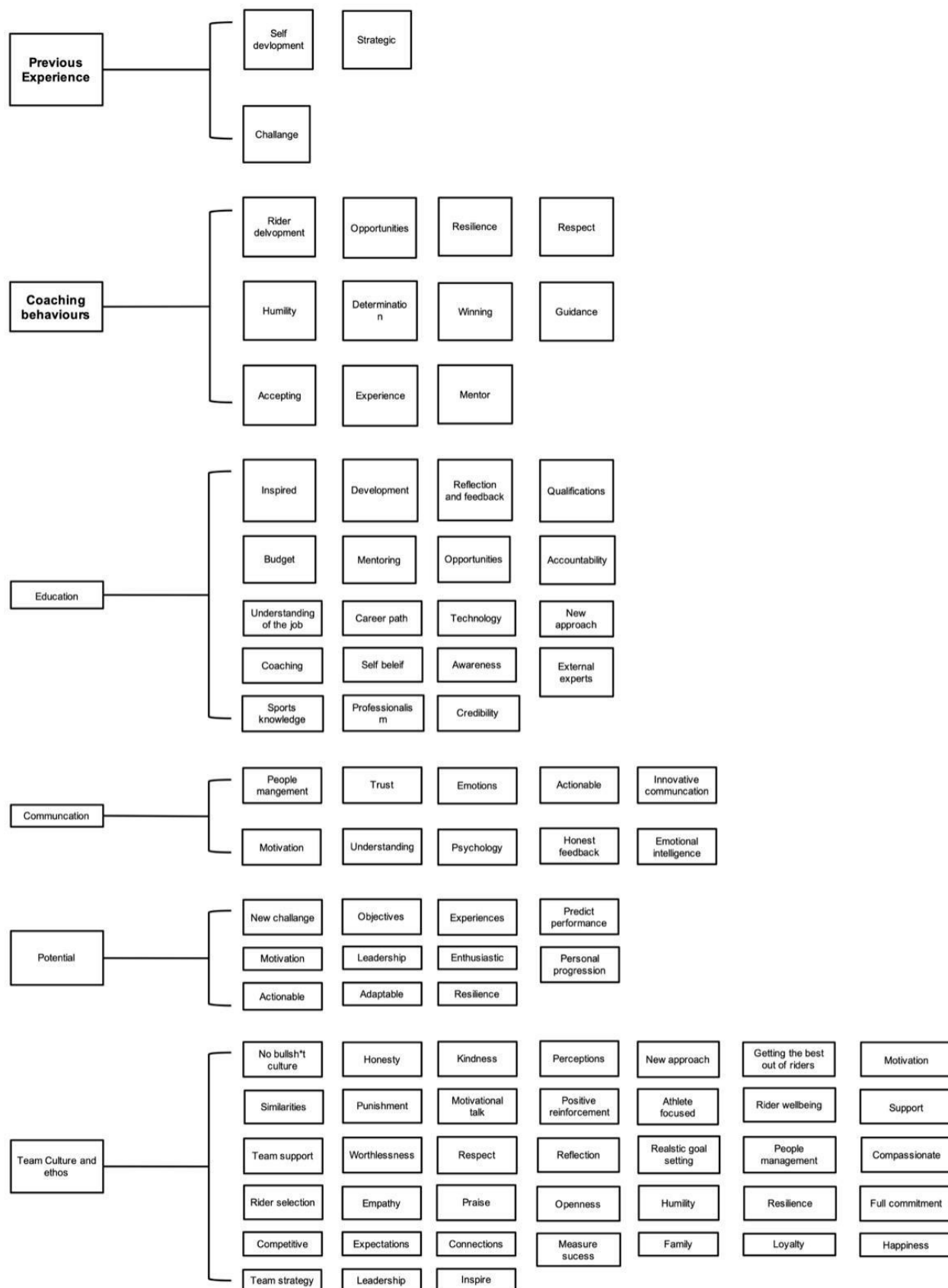


Figure 1: Superordinate and subordinate themes

Figure 1 shows the results for the thematic analysis of all four interview transcripts. Figure one shows the six superordinate themes of: Previous experience, coaching behaviors, education, communication, potential and team culture and ethos. On the right hand

side of figure one is a visual representation of all of the secondary sub-ordinate themes that emerged. Several of the sub-ordinate themes were present in more than one super-ordinate theme.

**Superordinate theme one:** The superordinate theme of previous experience primarily related to the DS's desire for self-improvement and additionally their desire to set themselves new challenges either in a coaching context or within a business context. All of the participants recounted their experiences of being high level professional athletes (cyclists or runners) before they transitioned into becoming a DS. The results from the IPA interview transcripts analysis suggest that some of either the coaching behaviors or the characteristics that were defined as part of the team culture were taught to the DS informally in their previous careers as coaches or athletes in an informal manner.

**Superordinate theme two:** The second super ordinate theme centered around the DS's perception of their own coaching behaviors and equally some of the behavioral characteristics that the athletes expected from the coaches. Most of the sub-ordinate themes centered on building relationships and would be historically considered some skills within coaching. Some examples of these soft skills that were uncovered during the IPA analysis are: humility, accepting, determination, resilience and respect.

**Superordinate theme three:** The third super-ordinate theme was defined as education with the term education referring to informal education (the DS's typically defined this as learning on the job), formal education (formally study for coaching qualifications or studying the DS coach education course with the UCI) or mentorship (this was typically described as having either a high level coach or DS guide the participants for the first few years whilst they first started out in their role as a DS). Many of the remaining sub-ordinate themes are related to defining what the role of a DS actually is. Having the DS's attempt to self define their role was extremely useful due to the limited amount of knowledge and academic research regarding cycling DS's and their role.

**Superordinate theme four:** The fourth superordinate theme that was highlighted during the data analysis was communication. Communication was defined as how both the DS's and the athletes expected each other to talk and share ideas. Many of the DS recounted their experiences in establishing good communication practices with the athletes that they coach which enabled a deeper level of trust and support in the coach athlete relationship. Additionally, three out of the four coaches spoke about how they would often use communication as a tool to help motivate riders during races and hard training sessions either by talking to them one-to-one or by using the team race radios. Whilst the contexts of race radios are unique to the sport of cycling, using communication as a form of motivation is not uncommon in coaching practice.

**Superordinate theme five:** The fifth superordinate theme focused on the topic of potential. Whilst interviewing the participants it became apparent that there can sometimes be a disconnect between the athletes perception of their ability and the coaches perception of the athletes ability. Many of the participants recounted their experiences as a DS when they had to convince their athletes that they were capable of more than they thought they were capable of. Additionally, some of the DS talked about how they would measure success and more generally potential. In the past many DS's and coaches have relied only on a cyclist's power numbers as a way of measuring their potential. However, all of the participants in this research study stated how they now use an athlete's happiness to measure success.

**Superordinate theme six:** The sixth and final super-ordinate theme was team culture and ethos. This superordinate theme focused on the values and characteristics that both the DS and the athletes wanted to have in their team environment. Many of the subordinate themes that were suggested by the DS's aligned with team values that have been highlighted in pre-existing academic research.

**Previous experience:** The superordinate theme of previous experience focused on the coaches (DS) desire for self-development and seeking new challenges either within sport or within a more general business context. There were a total of three sub-ordinate themes that came under the superordinate theme of previous experience. The first super-ordinate theme related to what previous experience the DS's had either as professional cyclists, or professionals in other sports before they transitioned into becoming a DS. A number of clear aspects regarding this role emerged including, self-development, strategic and challenge. In particular self-development was an extremely important attribute for DS's especially in relation to how they create elements of the coach athlete relationship with the people that they coach. For example participant two highlighted the following:

"So yeah, I run a kids program and then I kinda left a sport for a while, but then I came back into it and if I do anything I like to do it as well as I could"

Participant one stated that "They go in because they love the sport inside. That's what drives them. And it's such a powerful drug that drug, I guess that it kind of masks all of the shit stuff that you have to do you know to get there so" The assumption that previous professional experience in a sport is sufficient experience to then manage people in that sport is a common concept and can be seen across multiple sports including football. Kelly discovered a similar phenomenon within the context of professional football managers. The research conducted by Kelly states that "The findings highlight the lack of formal management training and the widespread assumption within football that previous playing experience is sufficient preparation for entry into management". Extejt et al., proclaimed that for the sport of NBA basketball there was no correlation between the number of seasons a player played and

the magnitude of leadership experience that they gained. It should be assumed that the same correlation should apply to professional cycling meaning that although having previous experience as a professional cyclist will give a coach some degree of knowledge, it fails to fully prepare them for when they first start to manage a professional team as a DS.

**Passion for the sport:** The second superordinate theme was coaching behaviors and this focused on what the DS's thought their coaching behaviors were and equally some of the coaching behaviors that the athletes expected from their coaches. Many of the subordinate themes can be for coaching behaviors can be grouped into mentoring (Guidance, rider development, mentor, experience, opportunities and winning). Other subordinate themes can be grouped under the coach's ability to form a deep meaningful connection with the athletes that they coach (Humility, accepting, determination, resilience and respect). For this superordinate theme there were a total of 11 sub-ordinate themes that emerged from the analysis. The sub themes relating to passion for the sport included: Challenge, resilience, rider development, self-development, informal learning, respect, humility, guidance, accepting, experience, winning, mentor, opportunities and determination.

The second superordinate theme was coaching behaviors and focused on the DS's self-perception of their coaching style as well as the behaviors expected by the athletes they coached. The subordinate themes that emerged from the analysis could be grouped into two distinct categories: Coaching behaviors and passion for the sport. Under coaching behaviors, there were a total of six subordinate themes: Guidance, mentorship, resilience, respect, determination, and humility. These themes centered on the coach's ability to connect with their athletes on a deep level and support their development as riders, while also fostering a sense of humility and respect in their interactions. Under passion for the sport, there were a total of five subordinate themes: Challenge, self-development, informal learning, experience, and winning. These themes related to the coach's dedication to the sport and their desire to help their athletes achieve their goals, while also striving for personal and professional growth.

Several of the most prominent themes for this superordinate theme can be grouped by the term mental strength. In this case the term mental strength relates to characteristics of resilience, determination and challenge. All four participants gave examples of how they have had to use elements of mental strength in their daily role as a DS.

Participant four highlighted: "Even if you have the passion for the sport and the job. I don't think most people understand just how hard you have to work."

Participant two highlighted: "So you know myself or Steve Lamphere who you know is heading up the team at the moment, you know, he's gotta do some mechanics and he's gotta do some of the commercial stuff he's gotta do. He's gonna do things that he really doesn't want to do. But he just has to get them done so that the team can function."

Under the superordinate theme of passion for the sport, the participants have shared their experience of needing to have a significant interest in the sport and developing young riders in order to have something to offset all of the negative elements that come with the job. It is not uncommon for coaches to need a high level of reliance. Research into tennis coaches has shown that they also need a similar level of resilience to be able to coach effectively. Young, suggests that all coaches from all sports will at some point in their career as a coach go through emotional hardship by stating "Resilience refers to effective coping and adaptation although faced with hardship, loss, stress, adversity, change and negative life events. Coaches are not immune from such experiences. While some coaches are more fortunate than others, all coaches are likely to go through very traumatic experiences such as verbal abuse from parents, financial pressures, job loss, relocation, relationship breakdown, discrimination, unexpected loss of a loved one or illness." Young, is suggesting that coaches will face many difficulties through their coaching career and will need to find a way of coping with those so that it does not affect their ability to coach. Several studies have suggested that coaches must employ a positive mindset and use their passion for their sport and their passion for coaching in order to not be heavily affected by any emotional hardship or stress that they may face within their role.

**Education:** The third super-ordinate theme of education related to the coaches (DS) desire to acquire new knowledge about the sport, sports science, coaching methods and how to motivate and get the best out of the athletes that they work with. There were a total of 19 subordinate themes. The 19 subordinate themes relating to education can be grouped into informal learning vs. formal learning (qualifications, external experts, mentoring, opportunities, sports knowledge, professionalism, accountability and credibility). Most of the remaining subordinate themes could be grouped under the heading role of a DS. With the extremely limited amount of academic research regarding the role of a cycling DS and a more general lack of understanding what the role of a DS entails in the context of professional cycling. Most of the DS talked about how they are continually learning what the role of a DS is and how everyone has a slightly different interpretation of what a DS does (Understanding the job, coaching, career path, self-belief, reflection and feedback, awareness and new approaches).

The third superordinate theme that became apparent from the analysis was the theme of education. The theme of education focused on how DS's gained the skills and knowledge to fulfill their job role and also how they learned to do the things they need to for their job.



One of the main subordinate themes under the superordinate theme of education was informal learning vs formal learning. All of the participants highlighted that although they had either been on the UCI DS education course or had studied their coaching qualifications with BC, all of the participants equally stated that they gained even more knowledge and experience by learning on the job in the form of informal learning.

Another subordinate theme of qualifications became apparent whilst analyzing all of the transcripts. The subordinate theme of qualifications related to the participants desire to undertake formal education and complete industry recognised qualifications that would give them the knowledge and the skills to become a DS.

Additionally, external experts and mentors were also mentioned as important sources of education for the DS's. The participants highlighted that they were always looking for opportunities to learn from others who were more experienced or had different areas of expertise. The subordinate themes of sports knowledge, professionalism, accountability and credibility were also discussed by the participants. They highlighted that in order to be an effective DS, they needed to have a deep understanding of the sport and the technical aspects of cycling. Professionalism was also seen as important, as DS's need to act as role models for their athletes and represent their team in a positive manner. Accountability and credibility were also seen as important, as DS's need to be able to make tough decisions and have the trust of their athletes and team management.

The final set of subordinate themes under the superordinate theme of education related to the role of a DS. As there is a lack of academic research regarding the role of a cycling DS, the participants talked about how they are continually learning about their job and how to best fulfill their role. This includes understanding the job itself, the coaching aspect, the career path of a DS, self-belief, reflection and feedback, awareness, and new approaches.

Participant two stated that "I did do some of the lower level qualifications like my coaching qualifications and stuff like that but I haven't do some of the big qualifications that is needed to DS a world tour team" Whereas participant three stated that "We're lucky in the UK that we can do it through on the job training. On one hand getting to do on the job training reduces some of the barriers to entry but on the other hand you always have that thought in the back of your mind if you are doing the right thing or not."

Participant three stated "I think part of our team ethos for all the staff and the DS's on the team is that we all buy in to the approach of CPD continued professional development. You know the sport is always changing and we need to change as DS's at the same time. We need to constantly want to get better at our roles to help the team develop as a whole. It's a team culture thing. I think where the sport is now, if you aren't willing to put in the work and keep learning than maybe this sport isn't for you."

All of the participants from this research study commented on how they have experienced both formal and informal education throughout their role as a DS and that they valued both in different regards. Vargas-Tonsing, interviewed coaches to better understand their needs regarding coaching CPD and general coach education. The results from Vargas-Tonsing, suggest that whilst coaches value both formal education and informal education they often found informal education, such as on the job learning, to be a more effective form of education as it allowed them to better transfer their newly acquired knowledge directly into their way of coaching.

Another key sub them that emerged from analyzing the interview transcripts was "mentor". The sub theme regarded the participants

Participant one spoke about their experienced being inspired and eventually mentored by a famous coach peter keen.

"Yeah, he worked very closely with Chris Boardman and was Dave Brailsford's kind of mentor. I think in many ways. So I used to study Peter Keene and his methods quite a lot, and I used to go to conferences whenever I could and listen to all the, you know, the speakers."

Whereas participant three spoke about the role that reflection has in education regarding how participant three would often reflect to their coaching mentor.

"We don't reflect enough I don't think about what we need to change what the good bits of our job are and how we make and create relationships with the people around us. It think there are a few that are like Ohh, look at me I'm working for this big team.

The concept of having a coaching mentor is equally common in a variety of sports and different businesses. Learning through a mentor or just a more experienced coach can provide new coaches with a way of quickly gaining sports and coaching knowledge and directly improve how they utilize elements of the coach athlete relationship within their own coaching.

**Communication:** The fourth superordinate theme that emerged from analysis of the interview transcripts was "communication". Within the more general superordinate theme of education the sub-ordinate theme of communication relates to how a DS uses communication to form a relationship with the riders that they coach. Amongst the super-ordinate theme of communication a total of 10 sub-ordinate themes emerged. The 10 sub-ordinate themes were: people management, trust, motivation, emotions, actionable,

innovative communication, motivation, understanding, psychology, honest feedback and emotional intelligence. The vast majority of the subordinate themes could be grouped together under the heading of using communication to establish a relationship (motivation, people management, trust, understanding, emotions, psychology, honest feedback and emotional intelligence). In total there were 10 subordinate themes for the super-ordinate theme of communication.

One of the most prominent subordinate themes that emerged from the analysis was “motivation”. Motivation referred to how the DS communicated with their riders during meetings, races and more general daily activities. Many of the participants spoke about verbally coaching their riders using race radios.

Another important subordinate theme that emerged under the superordinate theme of communication was “trust”. The coaches highlighted the importance of building trust with their riders in order to effectively communicate and work together towards their goals. They discussed how trust can be built through consistent communication, honesty, and respect. The coaches also emphasized the importance of being able to adapt their communication style to the individual needs and preferences of each rider. Another subordinate theme that emerged under communication was “emotional intelligence”. The coaches spoke about the importance of being able to understand and manage their own emotions as well as those of their riders. They highlighted the need to be able to recognize when a rider may be struggling with mental health or personal issues, and to provide support and guidance in those situations. The coaches also discussed the importance of using empathy and active listening skills to better understand their riders and communicate effectively with them.

Overall, the theme of communication highlighted the critical role that effective communication plays in the relationship between a DS and their riders. It emphasized the importance of building trust, understanding individual needs, and using emotional intelligence to effectively motivate and guide riders towards their goals.

Participant one stated “But her GC position of 7<sup>th</sup>, which was a remarkable achievement for a young rider. In a pretty much an amateur team. And I wanted to defend that. Anyway, we did to cut a long story short, I coached them.

Participant four talked about using a combination of emotion and motivation to verbally coach their rider through some of the hard final moments of an important race. “To achieve that and for instance, on the last on the very last climb, they were all \*\*\*\*\* all of them. But she was over. She was really overachieving. She was the underdog and she was really gritty Yorkshire rider. She was the underdog and she was really gritty Yorkshire rider. And I just told her on the radio to imagine that her boyfriend Johnny was at the top of the climb. He road for Lotto Soudal and Sky, Jon Dibben. Johnny Dibben, you know. So I said, look, Johnny, she knew he wasn't. But, you know, John's at the top of the climb. Come on. Abby may. This is the last time of the day. Let's do it for Johnny, you know.”

It is not uncommon for coaches to use communication as their primary method of motivation. Buning and Thompson found that female softball athletes heavily relied on verbal communication from their coaches as their primary source of motivation during both training and competitions. The results from Buning and Thompson suggest that “Perceptions of coach-athlete communication (including verbal communication) were the greatest influence on athlete motivation. Athletes were more motivated to perform when the head coach's communication was clear and direct”. The finding suggested by Buning and Thompson matches the findings put forward within this research article that demonstrate that in order to achieve motivation through the coach athlete relationship, the athletes need their coaches to verbally communicate with them in a way that plays on either positive emotions or strong emotions that can illustrate the correct behavior response from the athlete. This concept shares several similarities with that of positive self-talk. Positive self-talk is defined as an internal dialogue that enables a person to feel good about them.

Several participants spoke about how they would use communication as a key part of the coach athlete relationship building process in regards to how they might form trust and connections with the athletes that they coach. Equally, communication was also mentioned as a motivation tool during races with many of the participants stating that they would often use certain styles of communication in addition to playing on certain emotions of the athletes to motivate them through a hard part of a race.

**Potential:** Potential was the fifth superordinate theme and related to the athletes expectations of their potential and the coach's ability to push the athletes to exceed their expectations of their potential. In total there were 11 sub-ordinate themes that related to potential. Several of the sub-ordinate themes can be grouped under the heading of goal setting (new challenge, actionable objectives, predict performance and personal progression). The remaining sub-ordinate themes focused on the concept of expectations vs potential, with several of participants stating that one of their main roles as a DS (coach) was to try and get their athletes to exceed their own personal perceptions of what their potential was and to achieve greater goals then they originally thought was possible.

Participant one stated “But her GC position of 7<sup>th</sup>, which was a remarkable achievement for a young rider. In a pretty much an amateur team. And I wanted to defend that. Anyway, we did to cut a Long story short, I coached them.”

Partpcaint two said “I think that we maybe measure success in a different way to most other teams.

Making people feel good about your organization, which is what makes us unique as a professional team.”

Participant four stated that “So it's the relationship that we develop with the riders that's paramount. Basically a happy Smiley Rider is a well performing rider. “

Participant four said “I think the most important thing for me is to see the white stuff. I want to see the smile. I want to see smiles at people and it actually, you probably have asked the question at the moment, but the real question is how do you measure success?”

All of the participants commented that they measure the potential and the success of a rider through their emotional status rather than just their fitness and their power numbers which has not historically been the case.

**Team culture and ethos:** The sixth and final superordinate theme was team culture and ethos. There were a total of 38 sub-ordinate themes that related to team culture and ethos. The super-ordinate theme of team culture and ethos related to the characteristics and values that need to exist in order to create a positive environment that prompted athlete development and how individuals wanted to establish and maintain positive coach athlete relationships. Regarding the more general theme of team culture and environments several subordinate themes can be grouped together including: No bullshit culture, team support, honesty, empathy, similarities, expectations, leadership, kindness, motivational talk. Respect, praise, connections, positive reinforcement, reflection, openness, measurement of success, athlete focused, humility, family, getting the best out of riders, rider wellbeing, resilience, loyalty, support, compassion and happiness.

Participant two one stated “And then there was a second group on the road. And then there was a third group on the road, which we had two riders in, like two or three minutes down on the winner, which was remarkable because they both went to work on the Monday. You know back to their regular 9-5 jobs which they had to do”

Participant three stated “Umm and that they could pick up the phone. At any point.

Participant four stated “Yeah, I kept them happy and maintained their trust. You know, I delivered what I said I would for them completely straight and honest and yeah, yeah, that's, that's where I'd be with her.”

All participants talked about how one of the most important elements of team culture was that they needed to trust their athletes and respect them in order to fully support them. When participant one talked about the level of respect that he had for his amateur team completing at one of the biggest races in the world on Sunday, only for them to all have to go back into work on Monday, they are talking about how they deeply respect their riders and the passion that they have for the sport but also getting the best out of themselves. This shows how a deep level of support and compassion are needed in order for the coach athlete relationship to function as effectively as possible (Supplementary data).

## CONCLUSION

The purpose of the current study was to explore the perceptions and experiences of cycling Director Sportif (DS's) regarding how they utilized several elements of the coach athlete relationship. At this high level of professional cycling there appears to be a disconnect between the experience level of newly appointed DS's and what athletes perceive to be the required skills and characteristics of a DS. Additionally, it also appears that having even a high degree of experience being a professional cyclist or being a professional athlete in another sport does not necessarily mean that the individual will have the necessary skills needed to be an effective coach. This coupled with the overall lack of clarity regarding what is expected of cycling DS's from a job role and experience standpoint means that athletes will find it extremely challenging to transition straight into being a professional DS without any formal coach education intervention.

Another major finding from this current research project was that certain elements of the coach athlete relationship are utilized more than other elements. The key elements that were defined during this research study were communication, formal vs informal education, the role of mentorship, how coaches measure success, and how coaches and athletes work together to form the key components of the coach athlete relationship. Particularly the present study highlights the importance of effective communication. Effective communication was cited as a crucial component of successful coaching, with coaches using various styles and techniques to motivate and support their athletes during races. The importance of both formal and informal education was also emphasized, with many participants highlighting the need for ongoing learning and development throughout their careers. Mentorship was seen as a valuable tool for new coaches, allowing them to learn from experienced colleagues and gain insight into the nuances of the job. However, the results from the present study also suggest that there is a significant gap between the perceived skills and characteristics of newly appointed DSs and the expectations of the athletes they work with. This gap may stem from a lack of formal coach education and training, as well as the absence of clear guidelines regarding the job responsibilities and experience required for the role. The results suggest that athletes may find it difficult to trust and respect their coaches if they feel that the coaches lack the necessary skills and knowledge to effectively support and guide them.

Further research is needed to further clarify the role of a DS and what athletes expect from their DS. Research should also aim to explore the role that informal learning has regarding how newly appointed DS learn as they make their transition from professional rider to team manager. Future research could also focus on developing more comprehensive coach education programs to better prepare individuals for the complex and multifaceted role of being a cycling DS. Ultimately, such research could help to improve the quality of coaching in the professional cycling industry, leading to better overall coach athlete relationships and athlete performance.

In conclusion, this study highlights the importance of formal coach education intervention for individuals transitioning into the role of a professional DS. The findings suggest that more emphasis should be placed on the development of the necessary skills and characteristics for an effective coach. Moreover, the identified elements of the coach-athlete relationship provide a framework for coaches to use when working with athletes to achieve success. Further research is needed to build on these findings and develop strategies to enhance the coach-athlete relationship and improve the performance of athletes at the professional level of cycling.

### LIMITATIONS AND RECOMMENDATIONS

There are several limitations that should be considered when putting the results of this research into context. Firstly, there were a low number of participants, this was due to the time in the racing season that the research project was conducted in. Due to the timescale that the research was conducted in, the data collection phase took place during July, August and

September which is arguably the three busiest months for all of the professional cycling teams. Over potential participants were contracted numerous times in an attempt to get an interview with more DS's however, they didn't have enough time to fully commit to the research process. One recommendation for future research is that if this project were to be attempted again to undertake the data collection process during the professional cycling off season which typically takes place from November to February as this would allow more DS's to be available to take part in the search project. Having more participants may allow for some slightly different results to be discovered which could help further increase the knowledge about the job role of a DS and how the coach athlete relationship is built and maintained within the context of professional cycling teams.

It is important to acknowledge the limitations of this study in order to properly contextualize the findings. One of the main limitations is the relatively small number of participants. This was due to the timing of the research project, which took place during the busiest months of the professional cycling season. Despite efforts to recruit more participants, many were unable to commit to the research process. Therefore, the findings of this study may not be fully representative of the perspectives and experiences of all DS's in the professional cycling industry.

To overcome this limitation, future research could be conducted during the off-season of professional cycling (November to February), when DS's may have more availability to participate in research projects. Increasing the number of participants would provide a more comprehensive understanding of the role of a DS and how the coach-athlete relationship is established and maintained in professional cycling teams.

Another potential limitation is the possibility of social desirability bias. This occurs when participants provide responses that are socially acceptable or desirable, rather than reflecting their true thoughts or experiences. To mitigate this, future research could consider using a more objective and standardized method of data collection, such as surveys or standardized interviews. Finally, this study focused solely on the perspectives and experiences of DS's in professional cycling. Future research could expand on this by including the perspectives of athletes, other coaching staff, and team management to gain a more comprehensive understanding of the coach-athlete relationship and team culture in professional cycling teams.

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