

Investigating the Process Through Which National Hockey League Player Development Coaches
'Develop' Athletes: An Exploratory Qualitative Analysis

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Abstract

The emergence of Player Development Coaches (PDC) in professional sports demonstrates recognition for the importance of fostering personal and professional development. Nonetheless, the processes by which PDCs facilitate such development are largely unknown. Therefore, the purpose of this study was to explore the perceptions, experiences, and responsibilities of current/former National Hockey League (NHL) PDCs. Semi-structured interviews were conducted with eight experienced NHL PDCs ($M_{age} = 50.5$, $SD = 9.7$). The PDCs reported working closely with athletes to oversee their development, which involved frequent meetings and evaluation of performances. They also described the necessity of establishing trust and ensuring transparency with their athletes, providing support (e.g., emotional), and engaging in reflective practice. In using these sport specific, relational, and introspective competencies, player development coaches guide athletes towards various professional (e.g., physical, psychological performance) and personal developmental outcomes (e.g., character). The findings indicate that PDCs act similarly to mentors, whereby the pillars of trust and respect are central to their perceived ability to impact athlete's personal and professional development. In conclusion, in order to expedite the ultimate performance goal of getting athletes into the NHL, PDCs work collaboratively to reinforce and develop a range of developmental assets that span from improvements in performance to personal growth.

Keywords: Athlete Development, Coaching, Elite Sport

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Regardless of age or level of competition, coaches are largely responsible for shaping the sport environment, and as a consequence, play a significant role in the development of athletes (Bloom, Falcão, & Caron, 2014; Gilbert & Trudel, 2004; Trudel, 2006). As such, a large body of literature has focused on understanding the implications of high-quality coach-athlete interactions (e.g., Becker, 2009; Poczwadowski, Barott, & Jowett, 2006). Indeed, the characteristics of effective coaches have been examined in a range of competitive contexts, spanning grassroots recreational (e.g., Gilbert & Trudel, 2004), collegiate (e.g., Wrisberg, 1990), professional (e.g., Wang & Straub, 2012), and Olympic/international levels (e.g., Kimiecik & Gould, 1987). Whereas investigating the role of head coaches in relation to athlete experiences is critical, head coaches rarely work in isolation and are often surrounded by other coaches within a sport organization who directly impact athlete development. Although the specific leadership structure for a given team is likely to vary, combinations often involve head and assistant coaches, support staff, and management (Durand-Bush & Salmela, 2002; Martin, Eys, & Spink, 2017). Interestingly, an emerging coach type that is salient across professional sport organizations and has yet to receive research attention is the *player development coach*¹ (PDC).

An inspection of publicly available job descriptions and National Hockey League (NHL) media guides indicate that PDCs are responsible for tracking the development of prospects (i.e.,

¹ In recent years, the player development coach position has expanded to include a larger “development staff” which includes a variation in job titles. Accordingly, within this manuscript we use player development coach as an umbrella term to encompass all existing variations, including: (a) director of player development, (b) assistant player development (c) coordinator of player development, (d) player development coordinator, (e) development consultant, (f) [position; e.g., goaltender] development coach, (g) developmental [position] coach, (h) director of [position] coach. See Figure 1 for visual representation of the development staff in relation to the organizational structure of an NHL organization. A typical NHL organization employs anywhere between 1 and 5 PDCs depending on the needs and resources of the organization.

emerging athletes who's playing rights are owned by a particular organization). Consider the description provided by the Nashville Predators NHL hockey team staff directory:

In his role, [player development coach] is responsible for following and evaluating prospects drafted by Nashville, in addition to working with players on all levels throughout the United States, Canada, and Europe. He assists them with their maturation process into NHL players by focusing on nutrition, off-ice workouts and conditioning, practice habits, and game performance. (Nashville Predators, 2019)

Through such descriptions, PDCs appear to have a broad developmental mandate, spanning nutrition, time management, training, and performance. As a consequence, the role of a PDC seems tautological to life coaching, a profession oriented towards providing developmental resources that is widely adopted in the industrial and organizational settings (Day, Surtees, & Winkler, 2008). Life coaching is an intensive and systematic means of helping individuals/groups attain goals and improve their professional performance and personal well-being, with the overarching objective of improving organizational effectiveness (e.g., Grief, 2007; Kilburg, 1996). Importantly, although the philosophical underpinnings pertaining to life coaching seem to align with those of the PDC role, a paucity of research exists, warranting targeted investigations to more accurately understand how PDCs are contributing to athlete development.

In relation to sport specifically, the role of the PDC could be viewed through several perspectives. Inherent within the position title is the notion of "development." In this regard, the role of the PDC could be situated within the Personal Assets Framework (PAF) for athlete development (Côté, Turnnidge, & Vierimaa, 2016). The PAF represents a developmental framework, whereby the overarching desired outcomes of sport (i.e., personal development,

participation, performance) are influenced by proximal experiences of connection, character, competence, and confidence. For optimal development and eventual performance to occur however, one must consider the interactions between social (quality relationships), personal (athlete engagement in activities), and physical contexts (appropriateness of sport settings). Importantly, whereas the PAF is likely relevant for aspects of the PDC role, much of the literature serving as its foundation has involved youth development and personal assets pertaining to head coaches (e.g., Côté, Bruner, Erickson, Strachan, & Fraser-Thomas, 2010; Côté & Gilbert, 2009), with less attention directed toward elite/adult athlete populations and other tertiary or specialized coach positions (e.g., assistant coaches, mental performance coaches).

Another perspective to consider in relation to the emergent role of the PDC is through the growing body of literature involving expert or high-performance sport coaching (e.g., Blackett, Evans, & Piggott, 2018; Mallett, 2011). Specifically, and in relation to the varied coaching roles now required in sport, researchers suggest that it “takes a village” to win at the most elite levels (Din, Paskevich, Gabriele, & Werthner, 2015, p. 597). Similarly, applied researchers advocate the delegation of tasks through explicit coaching roles that range from general communication with athletes to the provision of situation specific feedback (e.g., Andrews, 2015; Gilbert, Gilbert, & Trudel, 2001). Accordingly, the emergence of the PDC likely represents the growing awareness of the need for context specific coaching roles. In this light, PDCs might represent a hybrid across the forms of coaching outlined by Trudel and Gilbert (2006). Whereas *participation* coaching emphasizes basic skill development and is unlikely to be a focus at the professional level, both *development* and *high-performance* coaching appear to align closely with the PDC role. Development coaches engage in relations with athletes (who are selected based on skill) over long periods of time, and emphasize continued growth (e.g., Gilbert & Trudel, 2000).

High-performance coaches however, are evaluated based on their ability to lead athletes to success, while also ensuring athlete development (e.g., Din et al., 2015). In sum, it appears that the occupational mandate of PDCs spans the developmental orientation espoused in the PAF (Côté et al., 2016), combined with the necessity of both developing skill and translating to elite performance (Trudel & Gilbert, 2006).

The emergence of PDCs signifies a continued recognition for the importance of coaching roles beyond those of the head and assistant coaches. However, considering the recency of their emergence, little is known of their role expectations within an organization, and how these individuals facilitate athletes' professional and personal development. Accordingly, the purpose of this study was to explore the expectations held for PDCs within a professional sport league by examining perceptions and experiences of current/former NHL PDCs.

Methods

The research was situated within an interpretivist philosophical paradigm, whereby our approach was underpinned by ontological relativism (i.e., the existence of multiple realities) and a constructivist epistemology (i.e., knowledge is co-constructed by the researcher and participant; Daly, 2007). The novelty of player development coaching is likely to lead to an absence of occupational standardization, which would result in a range of "realities" across teams. Therefore, our chosen philosophical approach enabled us to capture this potential range of lived experiences across participants. A generic qualitative methodology was employed (see Bradbury-Jones et al., 2017) and our data were obtained through semi-structured interviews (Sparkes & Smith, 2014). The data were analyzed following thematic analysis guidelines, which was preferred given that it is not tied to a specific approach, but rather, provides researchers with analytic tools to make sense of data (Braun, Clarke, & Weate, 2017).

It is worth noting that the first author was raised in—and has continuous exposure to—an environment that is intimately familiar with professional ice hockey and has a particular interest in athlete development and coach effectiveness. Further, the first author was supported by two team members with prior participation in elite level hockey and a fourth team member with little knowledge of hockey. Accordingly, the research team contained a variety of separation with the participants and the context (Williams, & Morrow, 2009). Nonetheless, all supporting team members have significant experience and research-based expertise in coaching and athlete development. Collectively, the researcher's backgrounds provided an advantage to conducting the interviews (i.e., relational ease and shared understandings) and facilitated the interpretation of the data, which aligns with our paradigmatic position. For instance, the shared understanding of the context between the first author, who was responsible for conducting all the interviews, and the interviewees allowed the participants to feel comfortable sharing knowledge and strategies, and the combination of researchers' backgrounds resulted in diverse interpretations of the findings, thus fostering stimulating discussions.

Participants

To qualify for participation in the current study, prospective participants were required to be either current or former PDCs in an NHL organization with a minimum of 2 years of experience. These criteria were implemented to ensure that participants were appropriately knowledgeable and experienced (see Figure 1 for a description of organizational structure). Accordingly, eight male NHL PDCs ($M_{age} = 50.5$, $SD = 9.7$) with a mean of 7.6 years of experience ($SD = 6.9$) agreed to participate. Although not a prerequisite to the position, all PDCs were former elite hockey players, with all except one having experience as an athlete in the NHL. Specifically, the participants combined for 86 years of experience as former professional

athletes ($M = 12.3$, $SD = 3.3$). The PDCs collectively achieved a number of accomplishments, which included but were not limited to: (a) being early draft picks, (b) playing in multiple all-star games, (c) winning the Stanley Cup, (d) playing in the world championships and/or the Olympics, (e) serving in formal athlete leadership roles (e.g., team captain), and (e) having surpassed 1,000 regular season games. Following their athletic careers, it was common for PDCs to become professional scouts (positions responsible for identifying talented athletes) prior to transitioning into a player development role. Other PDCs reported serving as head/assistant coaches or general managers across various leagues in North America and/or Europe. Lastly, two participants were former PDCs who had recently transitioned into other roles within their organizations. Of the six participants who were currently employed as PDCs, five were “directors of player development” who directly oversaw a combined 11 player development coaches, of which included the final active PDC. To ensure anonymity, participants were given randomly selected pseudonyms (e.g., Derek).

****Insert Figure 1 Here****

Data Collection

Following approval from the primary investigators ethical review board, participants were purposefully recruited through snowball sampling techniques (Patton, 2015; Sparkes & Smith, 2014). That is, given the high-profile nature of the participants, the researchers relied on personal and participant networks to maximize recruitment. Through this technique, all individuals who were contacted agreed to participate and consented to having the interviews audio-recorded and transcribed verbatim. Crucial to the success of this procedure was the pre-established network of the first author as well as the generosity of the participants in facilitating the continued recruitment of participants. Spanning a 5-month period (April 2016 to September

2016), the interviews were conducted by the primary investigator via phone or skype, and ranged from 9:44 to 100:03 minutes ($M = 49:39$; $SD = 28:54$) in duration, which resulted in 134 pages of raw text. The variation in interview length was a function of participant availability. For instance, one participant was only able to provide 10 minutes to the researcher, however he was willing to familiarize himself with the interview guide beforehand and had responses that he was prepared to share in relation to the main points during the brief interview. Furthermore, in alignment with our philosophical stance, interview length does not necessarily reflect the quality of information obtained and it is important to represent all participants in the results. Therefore, we felt it was justified to include this participant in the analysis, despite the short length of the interview.

An open-ended semi-structured interview guide² was created, which enabled the researcher to pre-plan the interview questions while also allowing a degree of flexibility so the participants could fully express themselves. This also allowed the researcher to use probes to gain detail and clarification, and to depart from the guide to have participants expand on certain topics of interest (Purdy, 2014; Sparkes & Smith, 2014). Interview guide development was informed by the authors experiences with elite and/or professional hockey as well as the coaching (e.g., Côté & Gilbert, 2009) and athlete development literature (e.g., Côté, Turnnidge, & Evans, 2014). As an example, questions designed to explore how the PDC-athlete relationships were perceived to develop long-term performance were informed by the PAF (e.g., performance and personal development outcomes; Côté et al., 2014; Côté, Turnnidge, & Vierimaa, 2016). A pilot interview was conducted with an individual that had 25 years of

²The full interview guide is provided online as a supplemental document.

employment-related professional hockey experience, of which a good portion pertained to player development. Further, the interview guide was subject to refinements throughout the interview process to maximize the effectiveness of the interviews (Sparkes & Smith, 2014). For example, when it became clear that player development coaching was still an evolving occupation, additional probes were included to all subsequent interviews (e.g., “Where/how do you see this position developing moving forward?”).

The interview guide consisted of four sections. The first was designed to establish rapport with the participants and consisted of introductory questions pertaining to athletic and post-athletic career trajectories (e.g., “Could you provide a summary of your playing career from start to finish?”). In the second, participants were asked to describe in detail their involvement within their current organization, such as “How would you differentiate yourself with other positions?” and “Could you tell me how you would define ‘player development’?” In the third, participants were asked to provide examples of their experiences in developing athletes, and to discuss strategies they employed to facilitate the development process (e.g., “How do you know when you are being successful at developing players?” and “Can you describe typical strategies or behaviours that you employ to facilitate the development process?”). In the final section, interviews concluded with questions designed to garner additional details that may have been previously overlooked. Example questions included, “If you could go back and give yourself some advice when starting out as a player development coach, what would it be?” and “Is there anything that you think we missed and should discuss with regard to this topic?”

Data Analysis

Thematic analysis was conducted following the guidelines proposed by Braun et al. (2017). The primary investigator began the process of familiarization by immersing himself in

the data. As he was the individual who conducted and transcribed the interviews, he listened to each audio-recording and read each transcript. The data were then coded based on a latent coding process, whereby the meanings of each code were considered in relation to two broad themes: (1) the general role of PDCs and their representativeness of the definition for coaching effectiveness (i.e., professional, inter-, and intra-personal competencies; Côté & Gilbert, 2009), and (2) the personal assets and developmental outcomes from the PAF (Côté et al., 2016). These codes were subsequently organized and clustered into higher-level patterns (i.e., provisional themes) by engaging in a process of developing, refining, and naming. More specifically, the process of generating themes involved recursively assessing the meaning and coherency of initial themes until a final set of themes was deemed by the research group to represent the participants experiences. This resulted in the generation of a final set of overarching themes (2) and subthemes (5), and these guided the writing process, which consists of data extracts and descriptive/analytic commentary.

It is important to note that the thematic analysis was conducted reflexively and recursively, meaning that the analytical process began with the first interview and continued throughout data collection (Braun et al., 2017; Sparkes & Smith, 2014). Furthermore, the second and fourth authors iteratively challenged the primary researcher throughout this process. As an example, the supporting authors helped guide the refinement and naming of themes by iteratively challenging the provisionally developed themes, thus contributing to the representation of themes into a coherent and compelling depiction of participant accounts.

Trustworthiness of the Research

In line with our relativist ontological approach, we did not adhere to universal criteria when establishing the trustworthiness of our work (e.g., Smith & McGannon, 2018). Conversely,

we selected from a list of socially-constructed characteristics to demonstrate quality of goodness. In line with this perspective, “quality is both revealed and resides in the research report, placing responsibility for judging quality not only on the researcher but also the reader” (Burke, 2016, p. 337). Accordingly, to enable the reader to gauge the goodness of our work, we used the following criteria: (a) meaningful coherence, (b) resonance, (c) transparency, (d) rich rigor, and (e) impact (e.g., Smith & McGannon, 2018; Sparkes & Smith, 2014).

Meaningful coherence was achieved by ensuring our philosophical assumptions, purpose, methods, and results aligned, such as verifying the questions in the interview guide reflected our ontological stance of relativism (e.g., the possibility of multiple realities) prior to data collection. For example, questions were structured to ensure that participants answers reflected their own reality (e.g., Could you tell me *how you would* define ‘player development’?) as opposed to one single truth (e.g., *How is* ‘player development’ defined?). *Resonance* was fostered through the use of rich participant quotations intended to vividly reveal participants’ experiences. Additionally, given that our sample included participants representing a wide range of role tenure, occupation history, and athletic experiences across seven of 31 possible NHL teams/organizations: our findings have breadth, representativeness, and transferability. To ensure *transparency*, all members of the research team served as critical friends to the first author. Specifically, the second and fourth authors were closely involved and continuously challenged the first author during all phases of the study. For instance, on multiple occasions during the process of developing, refining, and naming themes, the first author provided the second and fourth authors with his interpretations, who subsequently challenged him by proposing alternative explanations and interpretations. Meanwhile, the third author remained somewhat removed from the process in order to challenge elements of the data collection, the analytical

process (e.g., development of themes), and the interpretations of our findings. *Rich rigor* was achieved through appropriate sampling and generating meaningful data that supported our significant claims. Finally, *impact* was established by generating themes that hold practical benefits towards the existing community of PDCs and advancing the coaching literature by fostering an understanding of the influence of coaches for the development of athletes following the achievement of elite status.

Results

Overall, the PDCs spoke in detail about their emergence as player development coaches, the scope of their roles, and their contributions to athlete development. As such, the results described within the subsequent sections indicate that in their role PDCs oversee and facilitate the development of upcoming athletes by means of various sport-specific, relational, and introspective competencies. Using these skills, PDCs guide players towards various professional and personal developmental outcomes. Figure 2 provides a visual representation of the findings.

****Insert Figure 2 Here****

Player Development Coaches' Roles and Responsibilities

Prior to the emergence of PDCs, players were formerly left to rely on the informal personal and professional support of various individuals, such as peers (i.e., veteran teammates), coaches, and at times even player personnel and/or management to informally provide the necessary professional and emotional support required to excel. In fact, more often than not developing players were left to fend for themselves:

As a young kid coming into the NHL, you were kind of left alone. You were drafted but you didn't have anybody to lean on to ask questions if you needed ... the general managers learned that when they drafted a kid, they become an asset, and you have to

protect that asset. Otherwise, if they were left alone they didn't pan out the way they wanted and they lose their assets. There was no support, so that's why they created this position I think. (Bruce)

Indeed, this lack of support may have left players more vulnerable to on or off-ice setbacks, which would serve to impede the development process resulting in athlete underachievement and/or possible loss of an asset. Accordingly, the participants expressed that the role of PDCs emerged based on a need to provide enhanced support for upcoming athletes. To this end, PDCs discussed the significance of (a) sport-specific responsibilities, (b) relational functions, and (c) engaging in introspective practice, in relation to the development of athletes.

Sport-specific responsibilities. According to the PDCs, the emphasis on player development has grown within the last decade, whereby each organization typically employs two to six development coaches that are each assigned to certain positions (e.g., forwards) or geographical regions (e.g., Europe). There is often a director who oversees the PDCs, who are collectively responsible for overseeing and tracking development and evaluating strengths and weaknesses. Indeed, PDCs oversee the development of prospects that have been drafted within their organization across their career trajectories ranging from Junior (ages 16–20; e.g., Ontario Hockey League), Collegiate (ages 18–23; e.g., National Collegiate Athletics Association), and professional levels (e.g., ages 18+; e.g., American Hockey League). To this end, their responsibilities require extensive travel to interact with and observe their assigned athletes throughout the year, and to report back to the senior management in relation to how the athletes are progressing. In relation to such reports, the PDCs must evaluate their athletes' strengths and weaknesses, and each discussed the detail that they must include in their documents to enable them to evaluate improvement over time.

With my players in the American Hockey League, I put booklets together with every game of the season in it, and also self-evaluations by the player. “How was your competitive level this game,” “were you being physical enough,” it had about five categories on it. I had the coaches do the same evaluations ... I see both, and I notice he’s had three good games, but he had five terrible games, and two mediocre games, there’s a problem. And so now you can attack the problem. (Curtis)

Importantly, the tracking and evaluation process continues so long as the athlete remains in the organization. Moreover, their progress is tracked during yearly developmental markers, which begins during a week-long intensive development camp. According to Bruce:

The development camp consists of bringing all our prospects to the facility just to show them what the professional life is all about, to show them our resources ... and we do a bunch of tests to create data to see where they’re at when they start all the way to their third development camp. That gives us a gauge of how well they’re developing.

Relational functions. Across the interviews, the PDCs emphasized the importance of a number of relational functions, such as (a) mentoring their athletes, (b) building trusting relationships, and (c) collaborating with all members of the organization to optimize athlete support. First, a number of PDCs described the importance of serving as a mentor for their athletes by providing them with guidance and support in their professional and personal lives. Specifically, career guidance might include providing timely information and suggestions to help athletes make decisions, deal with situations, and generally help them reach their objectives.

Mentoring is a huge part of player development, and mentoring means caring for that person and making sure that you are helping them clear the road of obstacles that may be preventing them from achieving what they want to achieve and reaching their potential

... all we can do is try and help them by giving them information and guidance. Even then, there is no guarantee they are going to make it so what I mean by mentoring is it's trying to give them the best chance. (Aaron)

Furthermore, being emotionally available for athletes might include simply serving as an emotional outlet (i.e., a sounding board), and thus simply listening and being supportive. For instance, Curtis said “[players] need to have someone they can talk to who’s with the organization that they can trust and they can blow off some steam about the coach, about teammates, whatever ... someone who will help them, not condemn them.” In sum, it appears that development coaching goes beyond the pure evaluation and development of skills, also satiating athlete relational needs. Of course, this results in an interesting dynamic, where athletes are aware that the PDCs are there to support them, but must also evaluate their progress and performance and report back to the organization.

Second, Six PDCs stressed the importance of building trusting relationships. That is, forging a strong relationship that is underscored by trust and transparency served as the cornerstone of the developmental process and their strategic approach.

A strategy I use is trust. You can't do without it. When you break down human behaviour and the ability for growth, in any relationship, that is the number one instrument or vehicle for things to happen through.” (Hayden)

Indeed, the importance of this relational strategy is likely a necessity for establishing trust when striving for athlete buy-in and commitment to their vision. Further, strategies cannot be implemented without proper communication. In fact, according to Eric “three quarters of the job is just communicating with the players.” Therefore, to develop a trusting relationship, PDCs must work towards establishing effective communication that is transparent and honest. This is

illustrated by Bruce, who explains that “You cannot Bull Shit a kid. You played a good game, you’re going to have a tap on the back. You played a bad game, I’m going to let you know ... at the end of the day, you know, if you BS a kid you’re not helping anyone.

Third, PDCs do not work in isolation. In fact, they must constantly communicate and work with a number of individuals that surround each athlete, regardless of the athletes’ career stage. For instance, according to Eric “half the job is communicating not only with the players, but also with the agents, with the coaches, and with their parents.” Adding to that, every organization has a large host of dedicated support staff that act as resources, and part of the PDCs role is facilitating their use by the athletes:

Ultimately, I'm the guy that these players are supposed to lean on, and I'm supposed to push them and get them to the next level, with all the tools and resources that we have with our training staff, to our nutritionist, to our coaching staff, to our on-ice drill guys. Collectively, I'm supposed to help and give all these tools to the player and get them to the NHL as quickly as possible. (Eric)

Introspective practice. Being able to reflect on personal experiences, such as successes and failures, was seen as a strategic tool. At times, PDCs relied on their past experiences to determine how to best help an athlete. Alternatively, they sometimes used their playing experience to provide personal stories/anecdotes to help athletes understand and relate to their message.

I've played the game so I can give them stories to help through the process and unfortunately, but fortunately for this job, I have the background of playing in the minor leagues, which can help them too when they don't think they're going to make it, or things aren't going well, to keep pushing forward. (Eric)

Eric further spoke to the importance of continuously striving to improve his practice throughout his career. “I’m totally different now from my first year, and hope I’ll be different next year still. Always learning and trying to grasp new things ... to really hone your skill, you’re always learning how you can help the players.” In sum, through their various competencies and knowledge, PDCs clearly take an active approach to their role in facilitating the professional and personal development of their athletes.

Desired Athlete Developmental Outcomes

Ultimately, the primary objective was for athletes to become contributing members within their NHL club. This was defined by “developing young players into the NHL ... everyday NHL players. At the end of the day, you’re hired by the team to push these players to have impacts on your team, the NHL team, sooner rather than later” (Eric). However, several PDCs were quick to caution the importance of (a) understanding the *process* of obtaining an outcome of this magnitude, and (b) cultivating and harnessing athlete commitment. For instance, Aaron cautioned that “we want to rush [development], you know, we want it now. What the hell, we’re an instant gratification society. We’re no different, but it’s a process. We use that word a lot: Process, sometimes it takes more time.” With this in mind, the PDCs discussed the importance of athletes committing to and embracing the long-term vision of the organization and the directional support provided by the PDC, known in this community as “buy-in.” According to Derek, “once a kid accepts the ideas and the direction that we try and lead them in, then their success is going to come.” For this reason, athletes need to trust and believe that their PDCs are guiding them in the direction that is most beneficial for their career and commit to their vision. Committing to the process was expected to facilitate the attainment of desired outcomes, such as physical and psychological performance, and personal growth.

Physical and psychological performance. PDCs discussed the necessity of contributing to athletes' improvements in basic sport-specific and psychological skills. For instance, PDCs described a range of performance measures that are easier to identify and measure, such as physical, technical, and tactical skills. Although it seems intuitive to expect athletes to improve in sport-specific competencies, the emphasis is on consistency and continual improvement. "We're seeing if they're elevating their game, learning ... from the day they walk into that dressing room to the end of their career ... there's a big gap, and you're making sure that they are closing that gap daily." (Eric). Three of the PDCs also emphasized the importance of developing psychological skills in their athletes. This was often cited as one of the more important and necessary skills—yet sometimes the hardest—to develop. Examples included the development of confidence, the ability to visualize, focus, maintain a positive attitude, and demonstrate mental toughness. "It's working with the player mentally, because the mental part of the game is left out in the cold and you have to develop that because it determines the physical part and they go hand in hand" (Curtis).

Personal growth. Although PDCs spent a considerable time working towards performance, they also recognized the importance of developing athletes on a personal level. For instance, three PDCs discussed the importance of helping athletes to adopt "healthy" performance lifestyle behaviours which could mitigate unnecessary distractions and facilitate development, both physically and psychologically. This included various off-ice behaviours such as good nutrition and hygiene, locating and maintaining an apartment, and substance abuse prevention.

[Cooking] was another skill that I thought we needed because with nutrition becoming such a huge factor we want to teach them to do it on their own, they have to be able to go

home, go to a grocery store, they have to be able to pick up the right groceries, and these simple meals with nutritional value are very easy for them to make ... they understand how important it is and how easy it is, and you don't need someone to do it, you can do it yourself. (Eric)

Given that athlete's personal characteristics can serve as barriers to development, PDCs emphasized the importance of "becoming a good pro" (Bruce). Accordingly, they described a range of interrelated personal attributes and characteristics that make up a "good pro." These included developing a level of maturity and discipline and establishing good habits. As an example, Derek described how the lack of maturity in certain athletes inhibits their commitment to the process: "... some kids fight it, and it's the immaturity, it's 'I know I got it all, I know the answers' ... the process is very difficult to expedite if the maturity level is not there." Additionally, one PDC noted that all players work on developing their skills, however not many value the development of a strong work ethic, which is a key contributor to career advancement. "It's less flash and more dash, right? You want them to work harder. Take the flashiness out of the game ... to make it easier to transition to the NHL, players should start working on work ethic" (Eric).

Three PDCs also discussed the need to emphasize character development—that is, pro-social behaviours both on (e.g., protecting a teammate) and off the ice (e.g., teammate social inclusion). For instance, when asked about his most desired outcome, Bruce responded:

Being a good teammate on the ice and off the ice. For me those things are probably more important than the hockey aspect itself ... because with compete and character you'll always overcome talent, no matter what. If I'm a coach I would take that kid 100 times

before the kid that just only has talent and doesn't compete and is non-committed, that brings a lot of problems to your team.

In sum, development does not happen overnight. In order to expedite the ultimate performance goal of getting athletes into the NHL, and to contribute to the team once they arrive, PDCs work to reinforce and develop a range of developmental assets that span from improvements in performance to personal growth.

Discussion

The purpose of this study was to examine the roles, perceptions, and experiences of current PDCs to explore the breadth of their profession and how they contribute to athlete development, both personally and professionally. As a general summary, PDCs are former athletes responsible for overseeing, evaluating, and guiding the development of the organization's assets (i.e., current players in development). To do so, they strive to establish trusting relationships, work with players based on their individual needs, and rely on previous experiences (both as former athletes and PDCs) and organization resources (e.g., nutritionists). This is done with the intent of helping athletes improve their skills, adopt healthy performance lifestyle behaviours, and develop professionalism (e.g., positive attitudes and values) with the ultimate goal of getting athletes into the NHL. The following sections will situate these findings within the broader coaching and sport psychology literature. In addition, considering the exploratory nature of this research and the relative recency of this coaching role, both practical implications and future directions will be suggested.

The participants in the current study indicated that athlete development is a collaborative process that spans the coaching staff, development staff, and support staff (see Figure 1). This finding echoes Din et al.'s (2015) contention that it takes a village to foster athlete development

and performance. Head and assistant coaches are generally more concerned with the day-to-day responsibilities involved in ensuring a winning season, such as preparing and training athletes for competition via general communication, situation specific feedback, and tactical strategy (Andrews, 2015; Gilbert et al., 2001, Rathwell, Bloom, & Loughhead, 2014). Accordingly, it is well recognized that the occupational coaching demands of head and assistant coaches are extensive (Bloom, 2002; Rynne, Mallett, & Rabjohns, 2017), highlighting the importance of supporting roles (e.g., skills coaches, PDCs). To this end, it appears that PDCs responsibilities—from a professional developmental standpoint (i.e., performance)—are bigger picture, such as ensuring the maintained and continuous development of athletes' sport skills (e.g., tracking development). In doing so, part of their mandate is to use the organizational resources (i.e., the village; Din et al., 2015), to provide athletes with the developmental tools, such as mental performance coaches, nutritionists, skills coaches, depending on the individual needs of each athlete.

Furthermore, our findings also indicate that PDCs, both directly and indirectly, discussed serving as mentors to their athletes indicating that perhaps mentoring is vital to the development process and PDCs utilize the mentoring process to facilitate player development. According to Bloom (2013), mentoring is “a relationship between a mentor and his/her [mentee] where the former has a direct influence in the development of the latter and personally commits his/her time for the others' personal growth and development. The pillars of this relationship are trust and respect” (p. 477). In line with this definition, some of the mechanisms said to facilitate the achievement of athlete's developmental outcomes involved building trusting relationships and providing support and guidance. Furthermore, our findings suggest that PDCs are concerned with their athletes' well-being on and off the ice, and contribute to their personal growth by helping

them develop a professional identity, being an emotional outlet, and generally showing care and respect. For instance, PDCs are actively seeking to advance their players' careers by providing direct coaching, and helping them navigate personal and professional obstacles to achieve their desired outcomes. These outcomes align well with mentor role theory (Dominguez, 2017; Kram, 1985), which contends that mentors provide a range of functions that contribute to a mentee's career advancement (e.g., promotions, coaching, protection from adversity) and personal growth (e.g., identity development, support, modeling). Collectively, this evidence indicates that mentoring may—either directly or indirectly—serve as an occupational mandate for PDCs. In this way, development coaching bares similarities to formal mentoring structures (e.g., Bloom, 2013; Merrick, 2017). However, it appears as though PDCs rely solely on previous athletic experiences within their role as mentors. Perhaps it would be beneficial for PDCs to receive training as formal mentors, which is universally recommended for mentors across disciplines (e.g., Finkelstein & Poteet, 2007; Spiva, Hart, Patrick, Waggoner, Jackson, & Threatt, 2017). In fact, empirical evidence suggests that mentoring relationships are more likely to be successful and lead to mentee development when mentors are trained (Klasen & Clutterbuck, 2002; Merrick, 2017).

The desired athlete outcomes identified by the PDCs include contribution to the affiliated NHL club, along with the development of physical and psychological skills, lifestyle behaviours, and appropriate professional behaviours (e.g., character). The appreciation by PDCs of development as a multifaceted process requiring time and athlete buy-in are consistent with models of athlete development (e.g., multi-dimensional model of talent identification and development; Abbott & Collins, 2004). The combination of which represents a holistic approach to development congruent with existing talent identification and development systems in elite

sport (e.g., Din et al., 2015; Premier League, 2011; Trudel & Gilbert, 2006) and positive youth development literature (e.g., PAF; Côté et al., 2016).

The physical and psychological performance skills and elements of personal growth discussed by PDCs align closely to the individual assets (i.e., competence, confidence, connection, and character) and three P's (i.e., participation, performance, and personal development), supported by the relationships and settings provided by PDCs and affiliate teams, as represented in the PAF (Côté et al., 2016). There is also support for the specific attributes mentioned; the psychological skills discussed by PDCs, such as confidence, visualization, focus, and mental toughness, align closely to the identified psychological characteristics of elite athletes (e.g., Gould, Diffenbach, & Moffett, 2002; MacNamara, Button, & Collins, 2010). The personal growth outcomes described by PDCs including lifestyle behaviours (e.g., hygiene, nutrition), attributes and characteristics of being a professional athlete (e.g., maturity, discipline), and character (pro-social behaviours) were similar to literature regarding life skill development through sport (Jones & Lavalley, 2009) and the "better people make better all blacks" philosophy used by the New Zealand All-Blacks (Hodge, Henry, & Smith, 2014). This philosophy suggests athletes that make better behavioural decisions off the field and retain high professional standards will perform better on it (Hodge et al., 2014) and PDCs believed that working on improving lifestyle and values associated with performance was in line with appropriate professional standards to allow better transitions to the professional level (i.e., NHL).

Although the outcome goals of PDCs do align with talent development systems in elite sport, questions remain on the level of understanding and commitment to developmental theory. For example, while PDCs discussed the need for building relationships and mutual trust, the discussion of buy-in typically involved the athlete needing to buy-in to the PDC/organisation's

vision, as opposed to creating a shared approach to athlete development. Additionally, when discussing the desired outcomes for athletes, PDCs did not talk in relation to existing theories of development such as the PAF (Côté et al., 2016), refer to any theoretical underpinning for a specific set of skills or forms of high-performance coaching (e.g., Mallett, 2011), nor reflect upon the pedagogical assumptions on which their practice was based (see Nelson, Groom, & Potrac, 2016). While it would be considered unusual for coaches to talk in such academic terms, it raises questions about how coherent the approach to development of athletes is given the shared responsibilities between the professional organization, PDC, and minor league affiliate. Given recent recommendations for talent identification and development systems to employ aspects of Deliberately Developmental Organizations (e.g., Kegan & Lahey, 2016; Rongen, McKenna, Cobley, & Till, 2018), researchers, sport organizations, and PDCs should evaluate processes further to ensure clarity and consistency of developmental systems.

Practical Implications

Recruitment of PDCs is highly selective and currently represents an opportunity for a narrow range of individuals. The potential drawbacks of this approach are discussed, (e.g., uncritical reproduction of cultural values) with recommendations for organisations to become more deliberately developmental of both PDCs and junior athletes. Practical implications to enhance evidence-based practice and inclusivity within the PDC role are provided for both organisations and sport psychology consultants.

The results suggest that current PDCs are exclusively ex-professional athletes. Whereas examining the reasons for this exclusivity was not an objective of this research, observations from PDCs indicate that there is a level of trust from the organisation and buy-in from athletes that stems from having such status. The overrepresentation of ex-professional athletes is also

similar to patterns identified in English soccer and rugby, whereby such individuals are ‘fast-tracked’ into head coaching roles (Blackett, Evans, & Piggott, 2017; Blackett et al., 2018). There are however important considerations in relation to such practices, such as (a) a tendency for athletes who are moved into coaching roles within the organization to uncritically reproduce developmental practices; (b) prioritizing experiential learning and reproduction of cultural values ahead of professional development and formal qualifications; and (c) the likelihood of replicating the demographics of current professional athletes, meaning that other minority groups are further underrepresented in leadership roles (Blackett et al., 2017). Consequently, sporting organisations would benefit from exploring their selection processes, with an emphasis on the requirements for the position (e.g., formal education, previous experience) while considering opportunities to promote inclusivity and diversity.

Initially, NHL teams and their associated minor league affiliates would benefit from becoming a deliberately developmental organization (Rongen, McKenna, Cobley, & Till, 2018) in their approach to developing athletes through evidence-informed practice. As PDCs highlighted a number of activities associated with their role that are currently well understood by both researchers and practitioners, such as effective coaching (e.g., Côté & Gilbert, 2009), mentoring (Bloom, 2013), and athlete development (Côté et al., 2016), an important element of deliberately developmental organizations would be to prioritize professional development of the PDCs. Organizations should look to provide a wide range of individuals (from within their organisation, outside, and women’s leagues) to start their PDC journey, including alongside their playing or other career to provide a more inclusive pool of qualified individuals. Once in the role, the lack of dialogue between PDCs from differing organizations highlighted in the current study, and the potential for uncritical reproduction of coaching behaviours, suggests a need for

ongoing learning opportunities to provide a more evidence-based approach to athlete development. Given that the role of the PDC appears to have originated from the notion that individuals should be guided through their development to facilitate elite performance, a similar approach may be appropriate in developing PDCs. Avenues may include formal coach education enhanced by informal and non-formal learning (Werthner & Trudel, 2006) such as mentoring programs (e.g., Bloom, 2013) and leadership workshops (Turnnidge & Côté, 2017) as well as communities of practice with existing coaching bodies (e.g., International Council for Coaching Excellence).

Finally, PDCs in this study discussed the importance of developing relationships and working with other coaches, parents, and other dedicated support staff, (e.g., nutritionists), so considering that research suggests that it “takes a village” (Din et al., 2015, p. 597), organizations could strive to facilitate communication and collaboration between the PDCs and other specialized roles. For instance, acting as a trusted advisor (Lauer, Driska, & Cowburn, 2019), sport psychology consultants help provide a greater evidenced-based approach to, and evaluation of, the development of psychological characteristics for athletes. For example, helping PDCs integrate and apply their experiential knowledge with recent research developments in the use of deliberately implemented implicit (e.g., use of problem setting) or explicit (e.g., direct instruction) pedagogies in the development of life-skills (Holt et al., 2017) necessary for a performance lifestyle. Similarly, sport psychology consultants would also be in an ideal position to consult with PDCs to manage their own ‘performance lifestyle’ as they develop multiple athletes, coaches, and support staff in differing locations that require extensive travel, including the reflective practices necessary for the role. To that end, sport psychology consultants may form part of the mentoring programs we recommend organizations establish.

Limitations and Future Directions

This study relied on the perspectives of PDCs, however these coaches do not work in isolation. Indeed, in support of existing research our findings indicated that PDC efforts to contribute to athlete development are shared with a number collaborating developmental agents, such as nutritionists, skill coaches, and training staff (e.g., Durand-Bush & Salmela, 2002; Martin et al., 2017). To capture a holistic picture of the development process, it would be worthwhile to conduct a study that acquires the perspectives and experiences across a larger range of development agents, such as coaches, training staff, nutritionists, and sport psychologists, to name a few. Similarly, conducting interviews or focus groups with emerging athletes would provide an important complementary perspective to help understand the impact of PDCs and other developmental agents. Further, despite having a representative sample of PDCs in the hockey realm, our findings may not be applicable to all professional organizations and other sports (e.g., basketball). Other sport organizations may have different development systems and deal with players who come from different backgrounds/contexts. As such, it would be worthwhile to investigate the roles and responsibilities, outcomes, and developmental strategies of PDCs in other sports where this occupation is emerging.

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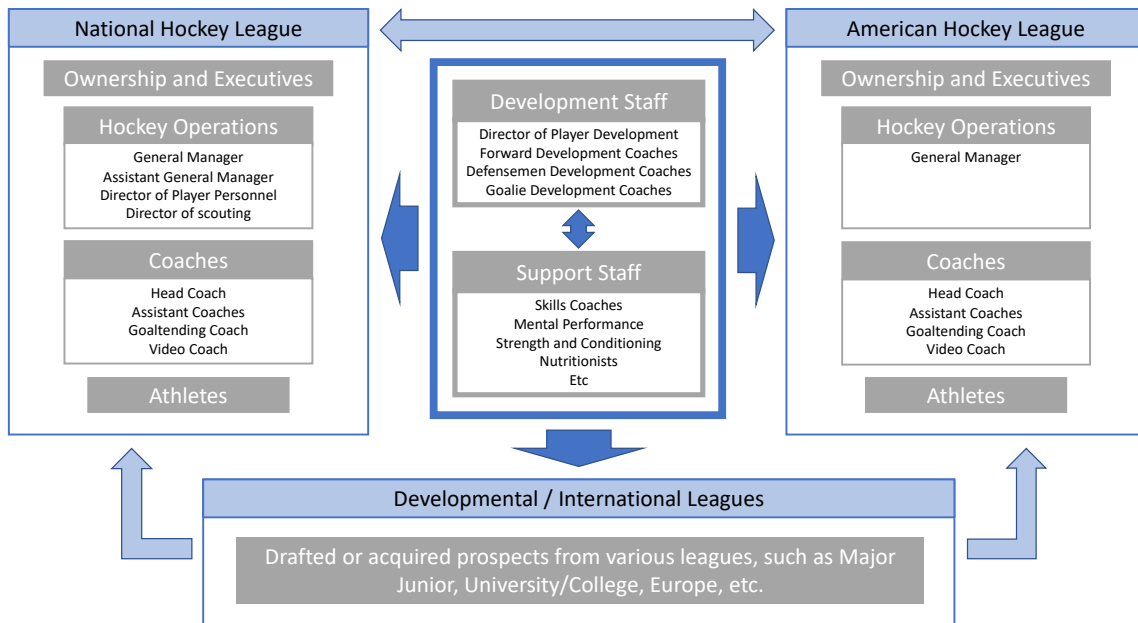


Figure 1. Organizational structure of a typical National Hockey League organization. Our sample included five directors of player development (who oversaw 11 player development coaches), two former directors of player development, and one player development coach.

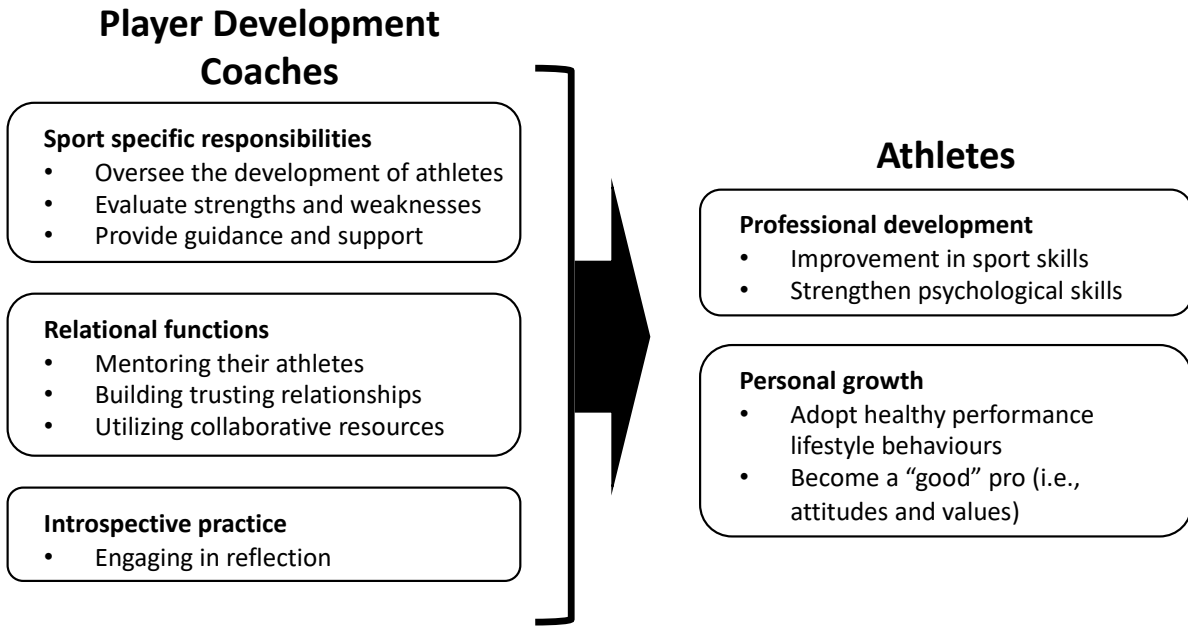


Figure 2. Visual representation of thematic layout