

Understanding Sport Expertise through a Cultural Perspective: An Exploratory Study

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Cultural sport psychology has emerged as an important area within the field of applied sport psychology, but little research has been done on the cultural factors impacting sport expertise development. Employing Bronfenbrenner's ecological system theory as a guiding framework, the present study examined the development of sport expertise through a cultural lens. In-depth semi-structured interviews were conducted with ten elite athletes who had represented their respective countries in major international events. Our findings permeated three layers of Bronfenbrenner's ecological model of development: microsystem (family and coach-athlete relationship), mesosystem (sport culture), and macrosystem (country culture), and indicate that culture is a salient factor that influences the development of elite athletic performance. Culture was found to be a multifaceted phenomenon ranging from broad cultural layers such as values and norms within a country to more specific layers such as the sport culture within a family, the community atmosphere within the sport, and customs in the coach-athlete relationship. These findings contribute to the growing body of research in cultural sport psychology and enhance cross-cultural understandings of talent development in sport.

KEY WORDS: Expertise development, Talent development, Cultural sport psychology, Culture.

Over the last two decades, cultural sport psychology has emerged as an important area within the field of sport psychology. The discourse of sport psychology has become increasingly sensitive to sociocultural factors, with an added emphasis on qualitative research and culturally competent praxis. Various authors (e.g., Ryba et al., 2010; Ryba et al., 2013; Ryba & Wright,

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2005; Schinke & Hanrahan, 2009) have previously highlighted the implications for the field. As mental performance consultants (MPCs) work with different athlete populations, there has been an increased effort to provide them with multicultural training (Butryn, 2002; Martens et al., 2000) and to advocate culturally informed practice (Roper & Fisher, 2018; Ryba et al., 2013; Schinke et al., 2012; Schinke & Moore, 2011; Weinberg & Gould, 2018). Lending further support to the importance of cultural factors, the Association for Applied Sport Psychology (AASP) requires in its new certification program a specific training in understanding of diversity, multiculturalism, and cultural awareness (AASP, 2017).

While the term cultural sport psychology is quite broad, it highlights cultural praxis and acknowledges that individuals are cultural beings whose self-identities are complex cultural constructs with an array of influential layers including nationality, gender, and language (Stambulova & Schinke, 2017). Cultural sport psychology considers how sport cultures, social identities, and the larger cultural context affect athletes' behaviors, mental states, and sport performance (Hacker & Mann, 2017). In line with this cultural shift in sport psychology, adopting a cultural perspective to explore sport expertise development would help to better understand how sociocultural variables facilitate elite sport performance. Starkes (1993) defines sport expertise as consistent superior athletic performance sustained over an extended time period. In their systematic review of studies of expert performance in sport psychology, Swann and colleagues (2015) identified eight broad categories of defining expert athletes, ranging from Olympic champions to regional level competitors, and those with as minimal as two years of experience in their sport. The most common criteria for defining sport expertise was found to be elite athletes competing at the international and/or national level (e.g., Olympic Games, World Championships). According to Barab and Plucker (2002), a major part of exhibiting expertise entails realizing actions which are consistent with sociocultural mores. To date, only a few studies (e.g., Henriksen et al., 2010a, 2010b; Storm et al., 2012) have focused on the cultural factors underlying the development of sport expertise, despite the call from some authors (e.g., Davids & Baker, 2007).

A notable yet often overlooked contextual feature that influences sport participation is cultural influence. In particular, not much consideration is given to the potential influence of cultural factors on the acquisition of sport expertise. Oftentimes, attention is solely directed to what elite performers are like, and not enough attention is given to where they are from and how this shapes their sport experience. An in-depth look at the developmental trajectory of expert athletes should involve an exploration of their family,

culture, and idiosyncratic experiences (Gladwell, 2011). Although the term culture is flexible in its usage, for the purpose of this study, culture refers to information and practices that describe how a group of people lives in relation to their environment (Reber, 1995). Quite simply, culture describes a set of behavior patterns, ideologies, and morals shared by members of a particular group. Whilst genetic, training, and psychological factors are considered primary influences on sport expertise development, these primary influences occur within an overarching socio-cultural context (Baker & Horton, 2004).

Holistic ecological approaches on the study of sport expertise (e.g., Henriksen et al., 2010a, 2010b) have focused on broader developmental contexts and the environment in which athletes grew up in. According to these approaches, talent development investigations should also explore the macro-environment level which includes a variety of cultural influences such as “national culture, general sporting culture, and the culture of the specific sport and youth culture” (Henriksen et al., 2010a, p. 213). Similarly, Thorpe (2009) highlighted the potential of employing a multi-level contextual approach to investigate the dynamic interplay of individual and socio-cultural factors in traditional and alternative sports alike. Wheeler (2011) found robust evidence that family culture helps determine an individual’s propensity to participate in sport and suggested that whether young children increase or decrease sports participation may depend on predispositions that have been formed in early ages of development. The goals and practices that parents employ over their children may be a product of their own developmental histories (e.g., sporting backgrounds) and their relations with other families. In this sense, Birchwood and colleagues (2008) concluded that sporting cultures are transmitted through family networks and a set of behaviors and beliefs that have historical and social dimensions. In their qualitative investigation with 17 elite Danish athletes, Storm and colleagues (2012) found that specialization pathways towards elite performance are unique trajectories embedded in a cultural context. The authors suggested future research follow up on cultural significance by studying elite athletes’ specialization pathways across countries and sports to acquire a more holistic understanding of the complexity behind elite athletic performance.

The importance that a country or society places on a particular sport can dramatically influence youth sport participation and subsequent sport expertise development (Baker et al., 2003). For some athletes, culture may encourage and reinforce their sport participation whereas for others, culture may present barriers to sport participation. Kontos (2012) proposed that membership in a cultural group sometimes reinforces sports participation (e.g., soccer in Latin America, ice hockey in Canada) but may also

negatively impact athletes who elect to play a sport that is neither expected nor supported in their social milieu. Moreover, factors such as the sport, the athlete's gender, and socioeconomic status (SES) may all play a role in how culture affects athletes' choices, opportunities, and the development of sport expertise. For instance, young athletes in developed countries have access to facilities, coaching, and competition. However, this may be in stark contrast with athletes in developing countries that may not be provided with opportunities for extensive training resources (Salmela & Moraes, 2003).

Sport expertise has been investigated from several perspectives, including developmental (e.g., Côté, 1999; Durand-Bush & Salmela, 2002; Gulbin et al., 2010), holistic ecological (e.g., Henriksen et al., 2010a, 2010b), contextual (e.g., Côté et al., 2006; Domingues & Goncalvez, 2013), and motivational (e.g., Castillo et al., 2018; Mallet & Hanrahan, 2004). It should be noted that this study extends Castillo and colleagues' (2018) previous investigation of the motivational factors associated with sport expertise development. To gain a more holistic understanding of sport expertise development, the same sample of athletes was asked to describe the cultural factors that they believed were conducive to their athletic growth. Thus, readers are informed that the investigation presented herein is a direct continuation of our previous work and, as such, are strongly encouraged to review the earlier publication to better appreciate the current study.

To date, there have been limited attempts to capture an understanding of sport expertise from a sound ecological theory. To this end, a suitable and well-established theoretical framework for understanding sport expertise is Bronfenbrenner's (1986, 2004; Rosa & Tudge, 2013) ecological theory of development. Bronfenbrenner's ecological theory emphasizes the role of environmental contexts in the process of human development and considers four environmental systems: microsystem, mesosystem, exosystem, and macrosystem. The microsystem involves the interpersonal relations, activities, and interactions that occur in an individual's immediate surroundings such as the individual's family, school, and neighborhood. The mesosystem refers to the relations between microsystems such as homes, schools, and peer groups (e.g., sports). The exosystem consists of social contexts in which the person does not have an active role but that may nevertheless impact their development (e.g., parents' work environment). Lastly, the macrosystem involves the culture in which individuals live and in which development occurs. Studies have shown that athletes have the potential to expand

or narrow their macrosystem based on their interactions and the environment around them (Hoekman et al., 2017; Krebs, 2009). Araújo and colleagues (2010) used Bronfenbrenner's model to examine how Brazilian football player's environmental factors such as facilities and structure of training could influence their development of sport expertise. They found greater expertise was developed when unstructured time and variety were incorporated into training methods. An athlete's environment may also impact their commitment to their respective sport, as Diogo and Gonçalves (2014) found a relationship between increased youth sport training demands and the athlete's desire to participate in the sport. From Bronfenbrenner's perspective, these studies focus on the microsystem at the sport level and to our knowledge, no studies have investigated larger cultural influences, such as the mesosystem and macrosystem.

In line with the growing interest in cultural sport psychology, the purpose of this study was to extend Castillo et al.'s (2018) previous work by examining the impact of cultural influences on the development of sport expertise through Bronfenbrenner's (1986, 2004) ecological theory of development. To address this aim, the cultural upbringings of elite athletes ranging from different countries were explored via qualitative inquiry. Specifically, we were interested in identifying cultural factors that were influencing youth sport participation and the developmental trajectory of expert athletes.

Method

PARTICIPANTS

Consistent with what has been found to be the most conventional criteria for defining sport expertise (Swann et al., 2015), the major criterion used to define an "elite" athlete required participants to have represented their country in a major world class competition (e.g., Olympics, World Championships, World Cup, Pan American Games, Commonwealth Games). Thus, elite/expert athletes in this study were those competing (or who previously competed) at the international level. Ten athletes (7 males, 3 females) who met this inclusion criterion were interviewed, with six of them being currently active at the elite level. Their ages ranged from 18 to 33 years old ($M_{age} = 25.9$, $SD = 5.02$). On average, they were first selected to represent their country in a major sport competition at the age of 15.8 ($SD = 2.20$). The countries represented were: Chile, Colombia, Italy, Japan, Puerto Rico, South Korea, and the United States. Nine sports were represented: four team sports (soccer, rugby, rowing, and softball) and five individual sports (water skiing, swimming, high jumping, and diving). The main characteristics of the participants are displayed in Table I.

TABLE I
Main Characteristics of Participants.

Athlete ID	Sport	Age	Sex	Country of Origin	¹ Experience	² National team	³ Practice per week <i>before</i>	⁴ Practice per week <i>after</i>
1	Rugby	33	M	Korea	4-5 years	Age 18	15-20 hrs	15-20 hrs
2	Soccer	29	F	Japan	13 years	Age 17	18 hrs	18 hrs
3	Rowing	18	M	USA	4 years	Age 18	20-25 hrs	30-35 hrs
4	Short Track Speed Skating	28	M	Korea	9 years	Age 15	50 hrs	50 hrs
5	Water Skiing	27	M	Italy	7 years	Age 14	21 hrs	25 hrs
6	Swimming	25	M	Colombia	10 years	Age 13	16-18 hrs	20 hrs
7	Softball	21	F	Puerto Rico	10 years	Age 18	25 hrs	25 hrs
8	Track and Field - High Jump	22	M	Chile	4 years	Age 14	20 hrs	20 hrs
9	Rowing	33	M	USA	3 years	Age 18	18 hrs	28 hrs
10	Diving	23	F	USA	4 years	Age 13	20-25 hrs	20-25 hrs

Note. ¹Experience in specific sport before reaching international level; ²First national team selection; ³Practice per week in specific sport *before* reaching international level; ⁴Practice per week in specific sport *after* reaching international level.

PROCEDURE

Upon approval of the study by the university institutional review board, athletes were contacted via email or by telephone to explain the purpose of this study and schedule the interview. Individual interviews were conducted in-person by the first author and ranged from 60-90 minutes in length, with one athlete being interviewed via Skype. A semi-structured interview procedure was employed to gather data pertaining to topics and issues specified in advance in an interview guide. A pilot interview with one international level athlete was conducted prior to data collection to refine the interview guide and interviewing skills. The interview guide was used to provide a uniform framework in which to operate across participants and to allow in-depth exploration of personal experiences (Kreiner-Phillips & Orlick, 1993; Mallett & Hanrahan, 2004). The main question to investigate the cultural factors was: "In what ways, if any, did your culture influence your sport participation or experience?" Probes and follow-up questions were used to further explore promising leads or to return to earlier

points that required further development or clarification. As noted earlier, this study was part of a larger research project investigating sport expertise through motivational, developmental, and cultural perspectives. However, due to the large amount of data generated through qualitative inquiry and adopting distinct theoretical frameworks, cultural data were extracted from the full interview guide to avoid convoluted results and to focus exclusively on the impact of cultural influences on the development of sport expertise through Bronfenbrenner's ecological theory. Whilst this previous publication (i.e., Castillo et al., 2018) was written based on the same data set, this current manuscript extends the preceding work by examining sport expertise exclusively through a cultural perspective as opposed to a motivational perspective. Thus, the manuscripts are connected but the analyses are grounded in different theoretical frameworks. In some instances, responses from the motivational questions also provided information regarding cultural influences. Because those responses were analyzed through a different theoretical framework, the tags and themes were only specific to the approach selected. With consent from the participants, all interviews were audio-recorded and later transcribed verbatim for analysis.

DATA ANALYSIS

Four authors (E. C., J.-C.L., S.C., & C.S.M) independently reviewed the raw data obtained from verbatim transcriptions. The data were analyzed using a deductive reasoning process according to Bronfenbrenner's four environmental systems: microsystem, mesosystem, exosystem, and macrosystem. The guidelines for structuring qualitative data (Côté et al., 1993) were employed to increase the trustworthiness of the data analysis process. Specifically, meaningful data were first coded as tags, and themes were then created by comparing and grouping the tags with similar meaning. Two of the authors (J.-C.L. & S.C) independently identified tags and themes emerging from the raw data. Consensus validation or mutual agreement between the researchers on the final form for each quote (i.e., the amount of transcription context representing the quote) and theme (i.e., the theme's composition, name, and definition) was used to decrease any potential biases of individual researchers (Patton, 2015). Discrepancies were resolved by discussion and with the consultation of the first author.

Results

Four main cultural influences impacting elite athletes' development emerged from the data: family culture, coach-athlete relationship, sport culture, and country culture. These cultural influences correspond to three different cultural layers according to Bronfenbrenner's model: microsystem (family culture and coach-athlete relationship), mesosystem (sport culture), and macrosystem (country culture). These categories, along with their corresponding themes, are displayed in Figure 1. Relevant exemplar quotes are presented when they provide additional context and understanding.

Family Culture (Microsystem)

This category refers to the family environment that facilitated the development of sport expertise. Four main themes emerged in this category: athletic family environment, supportive environment, strong family values, and family background.

First-order themes	Second-order themes (Meaning Units)	Third-order themes (Meaning Units)
Family culture	Athletic family environment (20)	General sporty family (14) Professional athlete in the family (6)
		Supportive environment (6)
		Strong family values (6)
	Family background (5)	Family background influence (3) Privileged background (2)
Coach-athlete relationship		Support from coach (7)
		Authoritarian coaching style (10)
		Coach as a mentor (3)
		Coach as a father figure (3)
Sport culture		Sport as a community (2)
		Team sport (2)
Country culture		Playing an unpopular sport (8)
		Motivation to go against the norm (5)
		Country values (4)

Note: numbers in parentheses correspond to the number of meaning units (tags) mentioned by the participants.

Fig. 1. - Cultural themes.

The first theme, athletic family environment, relates to family culture valuing sports and physical activity. Half of the sample reported growing up in an athletic family environment in which everyone was engaged in some sort of sport, and this environment was perceived as conducive to their development as elite athletes. This athletic family environment was materialized as having parents and/or siblings playing sports, leading the athlete to experience early exposure to a variety of sports and enjoying those experiences. For example, A10 described “I have two siblings....and we all grew up doing a lot of sports, that definitely kept us busy. We’re all kind of hyperactive people.” Recreational activities in the family revolved around sports and physical activities, and those activities were often related to the sport the athlete decided to specialize in. For instance, A5 reported his father water skiing for pleasure and spending some time at the ski school. This led A5 to being exposed to water skiing through his father, and later he chose to specialize in this discipline although he was also skilled at basketball. Additionally, some participants mentioned having a professional athlete in the family and reported that being in regular contact with this family member was helpful in gaining instrumental skills for their development as elite athletes. A6 summarized this idea in the following quote:

“My aunt was an Olympian as well. She went to two Olympic Games. So ever since I was little I grew up knowing about her and obviously she was in constant contact with me because she is my aunt... I’ve kind of looked up to her and tried to absorb those qualities.”

Besides the family athletic environment, athletes also reported having grown up in a supportive family environment that helped provide the athlete with opportunities to be involved in sport. For example, many athletes reported that their parents were always willing to take them to practice after work and wanted to give them all the opportunities to improve, without pressuring to perform. This supportive environment, focused on mastering the task rather than outperforming others, was conducive to maintaining the passion for sports that was created by the athletic family environment.

Along with the athletic and supportive family environment, athletes reported their family to have strong values and important principles that contributed to their development as elite athletes. For instance, valuing a healthy lifestyle (e.g., diet) was important for performing consistently at a high level. Some family values also directly transferred to the sport athletes specialized in. For example, A9 reported that caring for others was an important value in his sport, rowing:

“So I feel like serving and helping others has always been part of the culture I was brought up in and I think that helped me quite a bit in rowing because rowing is one of the ultimate serving sports.”

Their family background was often grounded in the racial family origins and social economic status. For example, being Hispanic led A7 to work harder in her sport to compensate for her minority status:

"My mom always reminds us and tells us that we have to work that much harder because we've darker skin, because we are the minority. Her approach has always been 'you have to work hard, you have to do better'".

Additionally, having been raised in a privileged background helped manage the financial burdens involved with sport involvement. This privileged socioeconomic status also helped athletes access schools with high quality facilities and coaches, facilitating their development as experts in their sport.

Coach-Athlete Relationship (Microsystem)

This category represents how athletes perceived coaches' behaviors, coaching styles, and their relationship with their coaches based on common practices in their country of origin as well as how their perception influenced their development as elite athletes. Four themes emerged in this category: support from coach, authoritarian coaching style, coach as a mentor, and coach as a father figure.

Five athletes stated that their coaches supported and motivated them to improve physically and mentally. The support from the coach took many forms, from helping the athlete control their anxiety and showing the athlete they believed in them, to challenging them during practice by teaching them how to do things differently. This support also involved making the athlete comfortable by having a laid-back attitude and being open to discussions unrelated to sport, while still being rigorous during practice and competitions, as mentioned by A6:

"The coach I have now he's like really laid back and-relaxed and when he needs to be on you, he is. But he likes to laugh and have fun with you, and when we're not on the pool deck, I always feel like I can go into the office and talk to him about whatever. Swimming, not swimming, movies, laugh, whatever it is."

In contrast with the supporting coaching style, three athletes reported that their coaches were strict, critical, and authoritative. This authoritarian coaching style was accepted by the athletes because it was part of their culture. This highlights the importance of a culturally-relevant coaching style, as opposed to a one-size fits all approach. Two athletes reported punishment was commonly employed by coaches in their country, while other athletes reported coaches to be both authoritarian and supportive, which fit their needs, as described by A5:

"He was kind of authoritarian with me. Like he commanded-I executed kind of relationship. But always very supportive, like I am speaking strictly on water when we were practicing at tournaments."

Our participants also reported their coach served multiple roles during their development as elite athletes. Besides the coaching/training role, coaches were viewed as a mentor in sport and life, and a friend they can talk to. Because athletes were spending some much time with their coaches, their relationship went beyond the sport, as reported by A8:

"My coach can give me everything I have, and everything I need to be a good athlete. More on that I also see him as a really good friend, I guess mentoring me not only in track, but also in life. The more and more he coached, the more I considered him as a mentor".

In line with the coach being a mentor, athletes described their coaches as being a father figure to them. This close relationship was perceived as supportive, as described by A6:

"When I go home for vacation or holiday or whatever when I'm in [athlete's country] I still go and I swim with one of my coaches who started coaching me when I was 10 years old. So we have a great connection there and he's kind of like a father figure to me. He's always been really supportive."

This father figure was also present in team sports, and was helpful in adding extra motivation to perform well:

"We played for ourselves and we played for the team, but we also played for coach Danny. Because we didn't want to let him down. He was that much of a father figure for all of us like the whole way around." (A7).

Sport Culture (Mesosystem)

Sport culture refers to unique values and norms athletes shared with others in their sport. Two themes emerged from the interviews: sport as a community and team sport.

Two athletes reported experiencing a sense of community through their sport, which increased their sense of support and belonging. Sharing the intensive training and competition reinforced this sense of belonging and was a source of motivation for the athletes. For example, A3 mentioned:

"My own opinion that rowing is like, it builds the tightest community in all of sports. You have eight guys in your boat. We're all from different schools. I would not even know them if they didn't do rowing.... you're sharing this experience, this incredibly intense, grueling, training and racing."

Interestingly, this sense of community was evident in individual sports, as A10 also mentioned that diving “is kind of a tight knit community.” Even in those individual sports, practicing with teammates provided the social support instrumental to maintaining the motivation throughout the years, along with teammates pushing each other.

Related to the sense of community, some athletes reported that the team performance came before the individual performance. For example, in rowing, athletes shared the responsibility in the performance of the team, and serving others was more important than standing as the best athlete in the team:

“There is no MVP in rowing. That just doesn’t exist. Everyone is held really accountable and really focused on serving.... serving and contributing to your teammates through rowing.” (A9).

The team culture and the importance of doing it together was also emphasized by A3:

“Once you cross that finish line, whatever the outcome: first place, second place, third place, you know that you did that together, because it really is a team sport.”

Similar to athletes perceiving their sport as a community, the sense of being part of a team and sharing similar values allowed athletes to feel supported, which fueled their motivation in their path to excellence.

Country Culture (Macrosystem)

Country culture refers to the cultural values and common practices held in the athlete’s country of origin. Three main themes emerged from the interview transcripts: playing an unpopular sport, motivation to go against the norm, and country values.

Playing an unpopular sport refers to athletes choosing a sport that was not mainstream in their country and the challenges associated with this decision. Challenges were perceived as both positive and negative, and facing these challenges developed athletes’ resilience, which helped throughout their developmental path as elite athletes. For example, A6 described how the lack of media exposure in his sport led him to seek opportunities in another country, allowing him to go to the Olympics:

“I think it influences in a negative way because swimming in [athlete’s country] is not popular at all. So back home its soccer, soccer, soccer. Weightlifting a little bit and cycling. That’s about the three sports there that are popular. I feel like it didn’t influence

in a positive way because it never got me the exposure that I guess-not only me but other-good swimmers from [athlete's country] deserved. In a positive way, I think it's good because by swimming not being like a big sport back home that enabled me to look for scholarship and come here to the U.S., which is where the best swimming in the world is. If I had stayed home and gone to college in [athlete's country] and trained there I would have never gotten to the Olympics. So it was a little bit of both-negative and positive".

Related to playing an unpopular sport, some athletes mentioned going against the norm served as a source of motivation. Instead of being a source of stress, going against the norm helped them put forth extra effort and focus totally on their sport, as reported by A1:

"Being athlete in [athlete's country] is a little bit different. Because of the cultural difference and sport system. So actually to start playing rugby, to become a full-time athlete, I had to persuade my parents who were against my decision because to be an athlete in [athlete's country] means I had to give up many other things, like studying. So I had to focus fully on playing the sport."

Similarly, A5 mentioned how doing a different sport made him feel different, which was motivating for him:

"Swimming is big. I mean, it's a very big sporty area of the country. But water skiing is not well known. So I think the fact that I was doing a minor sport made me feel a little rebellious, in a way. I'm like, 'Oh yeah, I'm not doing what everybody does, I'm a water skier'."

Finally, two of the athletes perceived that the shared values in their country of origin facilitated their development as elite athletes. For example, A3 reported how his country's values helped him and his teammates to better adapt and overcome challenges:

"I guess we're good at overcoming huge difficulties and stuff like that as a country. You know everything as a country we have been through over the past 200 years we have adapted and overcome. And I guess that's a huge influence, to be able to do that on a small scale. Like our boats, that's just a little thing, but we're able to overcome that little thing because it's in our history that we've been able to do that on a huge scale."

Similarly, A2 mentioned the importance of hard work and humility in his sport, and those values were ingrained within his country's culture: "I think [athlete's country] culture is hard working. Hard work and maybe being humble". Hence, by being exposed to these values through their culture, athletes worked hard, overcame challenges, and stayed humble, which facilitated their developmental trajectory as elite athletes.

Discussion

The purpose of this study was to extend Castillo et al.'s (2018) previous work by exploring the impact of cultural influences on the development of sport expertise through Bronfenbrenner's (1986, 2004) ecological theory of development. This ecological approach provides a framework that establishes a dynamical transaction between athletes and their environments that shapes human behavior and performance (Araújo, 2010). Our findings indicate that culture is a salient factor that influences the development of elite athletic performance and permeates three out of the four original layers of Bronfenbrenner's ecological model of development. The microsystem, which relates to the interactions that occur in an individual's immediate surroundings, emerged as the family culture and the coach-athlete relationship. The mesosystem corresponded to the sport culture, which was often in accordance with the values shared in the family and shaped by the coach-athlete relationship. Lastly, the wider culture in which athletes lived and developed, known as the macrosystem, was related to each participant's country culture. The indirect environment (exosystem) was not evident in the participants' responses. Taken together, our findings are consistent with previous research (e.g., Henriksen et al., 2010a; Storm et al., 2012), in that culture was found to be a multifaceted phenomenon ranging from broad cultural layers such as national culture to more specific cultural layers such as the culture of a specific sport and customs in the coach-athlete relationship.

Pertaining to family influence, our results are in line with previous research that reported that family culture, particularly an athletic and supportive familial environment, was a central determinant of sport participation (Birchwood et al., 2008; Wheeler, 2011). Specifically, growing up in a family that provided opportunities for participating in different sports helped athletes develop fundamental skills and to associate sport participation with positive experiences. Having a professional athlete in the family also facilitated early skill development and provided a role-model for the young athletes. The family was also instrumental in instilling important values (e.g., hard work, caring for others), which was especially evident in one participant whose minority background led to the installment of a family-based hard-working philosophy. Lastly, most of the interviewed athletes were raised within an athletic family background, which provided early exposure to important cultural practices, such as adopting a healthy lifestyle, and helped associate sport with enjoyment. Thus, the microsystem of family culture represented a foundation for sport expertise development.

Consistent with previous research (e.g., Mageau & Vallerand, 2003), the

coach-athlete relationship was also paramount to the development of elite athletes. Interestingly, athletes in our study mentioned both democratic and authoritative coaching styles, indicating that they were able to reach exceptional levels of performance by adapting to the coaching styles they were exposed to in their respective countries. In reference to the athletes who were exposed to stern coaching styles, some authors have reported that, in some societies, even aversive environmental constraints may play an important role in the development of world-class athletes (Araújo et al., 2010). An authoritative leadership style might be expected or even preferred in some cultures, which would then be facilitative for performance, as is predicted in the Multidimensional Model of Leadership (Chelladurai, 2007).

In line with studies that have shown that certain countries' cultural values permeate into the sporting culture (e.g., Fonte & Buarque de Hollanda, 2014), country culture played an important role in the development of sport expertise. Specifically, cultural values such as adaptation, overcoming challenges, and humility were perceived as important to perform at the highest level. Likewise, the sport culture had a big influence in the athletes' experience in their sports. Some of our participants reported that their relationships with teammates led to shared values that generated a unique sport culture within teams, leading to greater cohesion and performance. The sense of community fostered in team sports has been cited as an important element in the development of sport expertise (e.g., Ullrich-French & Smith, 2009), and it is also a factor that several athletes reported as salient.

A novel and compelling finding was that half of the athletes reported committing to a sport that was atypical in their country's culture. Intriguingly, rather than perceiving this as an impediment to their sport participation, going against the norm actually served as a motivation for some of them. Hence, it appears that for some athletes, electing a sport that is uncommon in their social milieu may have a positive impact on their motivation and athletic development. In our sample, going against the status quo fueled athletes' motivation to prove themselves and forced them to build adaptive skills early on.

Summary and Implications

Overall, the results revealed that different layers of cultural factors, such as family, country, and sport culture were integral to the development of elite athletes. Additionally, the quality of the coach-athlete relationship emerged as an essential factor which contributed to sport expertise development in a

diverse sample of elite athletes. Collectively, these findings contribute to the growing body of research in cultural sport psychology and increase cross-cultural understandings of talent development in sport. Moreover, consistent with AASP's recent diversity and culture criteria required for Certified Mental Performance Consultant certification, this study encourages practitioners to attend to cultural diversity and think more critically about inclusive practice in their applied work.

Helping promising athletes develop their talents can result in long-term benefits both at the individual and at the societal level (Csikszentmihalyi et al., 1993). At the individual level, athletes are able to develop their potential to the fullest extent. At the societal level, the nourishment of athletic talent is evident in Olympic and major international competitions. This in turn can be a collective benefit to the countries being represented by athletes who reach those levels, as athletes in the present study have.

Whilst research has provided evidence that family culture is an essential factor underpinning individuals' propensity to engage in sport (e.g., Wheeler, 2011), findings from this study suggest that promoting supportive environments in which sports are a central element in the family dynamics help foster the development of sport expertise. From an applied perspective, practitioners and coaches should be more cognizant of the salience of family values and may find it fruitful to assist athletes set individual goals that are consistent with their underlying family values. Moreover, our findings highlight the importance of including a general understanding of culture (e.g., family, country, and sport culture) in the design of talent development programs and coach training courses. Lastly, key stakeholders should emphasize the communal aspect of sport and ensure that the quality of coach-athlete relationships is supportive in nature (e.g., close) and in the best interests of the athlete's development, irrespective of the dominant coaching style in a given country.

Limitations and Future Directions

The criteria for defining elite athletes continues to be an issue in the study of expert performance in sport psychology (Coutinho et al., 2016; Swann et al., 2015). Future research can incorporate a more stringent criterion, such as world champion (e.g., Kreiner-Phillips & Orlick, 1993) or Olympic champion (e.g., Durand-Bush & Salmela, 2002) athletes, to study the development of expert athletic performance. Although this study presents a wide scope in terms of cultural representation, future studies could interview athletes from different countries and sports to possibly identify other cultural influences.

Alternatively, it may also be insightful to interview athletes with similar cultural backgrounds to discern the ways in which culture shaped their acquisition of sport expertise. Finally, other theoretical frameworks could be adopted to further the knowledge base. For example, the Athletic Talent Development Environment model and the Environment Success Factors model (Henriksen et al., 2010a, 2010b) could help to identify other important cultural factors in sport expertise development. The importance of cultural diversity and socio-cultural contexts in the study of elite athletes' development and progression through sport is merely in its infancy. It is hoped that this study provides the impetus for researchers and MPCs to immerse into and reflect upon the cultural elements that interact with other factors (e.g., psychological) to facilitate talent development in sport.

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REFERENCES

- Araújo, D., Fonseca, C., Davids, K., Garganta, J., Volossovitch, A., Brandão, R., & Krebs, R. (2010). The role of ecological constraints on expertise development. *Talent Development & Excellence*, 2, 165-179.
- Association for Applied Sport Psychology (2017). 2017 Candidate Handbook Certified Mental Performance Consultant Certification Program. Retrieved from http://www.applied-sportpsych.org/site/assets/files/30025/cmpccandidatehandbook_2017-11.pdf
- Baker, J., & Horton, S. (2004). A review of primary and secondary influences on sport expertise. *High Ability Studies*, 15, 211-228. DOI: 10.1080/1359813042000314781
- Baker, J., Horton, S., Robertson-Wilson, J., & Wall, M. (2003). Nurturing sport expertise: Factors influencing the development of elite athlete. *Journal of Sports Science & Medicine*, 2, 1-9.
- Baker, J., Wattie, N., & Schorer, J. (2015). Defining expertise: A taxonomy for researchers in skill acquisition and expertise. In J. Baker & D. Farrow (Eds.), *Routledge handbook of sport expertise* (pp. 145-155). New York, NY: Routledge.
- Barab, S. A., & Plucker, J. A. (2002). Smart people or smart contexts? Cognition, ability, and talent development in an age of situated approaches to knowing and learning. *Educational psychologist*, 37, 165-182. DOI: 10.1207/S15326985EP3703_3
- Birchwood, D., Roberts, K., & Pollock, G. (2008). Explaining differences in sport participation rates among young adults: Evidence from the South Caucasus. *European Physical Education Review*, 14, 283-298.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development research perspectives. *Developmental Psychology*, 22, 723-742.

- Bronfenbrenner, U. (2004). *Making human beings human*. Thousand Oaks, CA: Sage.
- Butryn, T. M. (2002). Critically examining white racial identity and privilege in sport psychology consulting. *The Sport Psychologist*, 16, 316-336. DOI: 10.1123/tsp.16.3.316
- Castillo, E. A., Lebeau, J. C., Cho, S., Sáenz-Moncaleano, C., & Chow, G. M. (2018). Understanding sport expertise through a motivational perspective. *International Journal of Sport Psychology*, 49, 407-428.
- Chelladurai, P. (2007). Leadership in sports. In G. Tenenbaum & R.C. Eklund (Eds.), *Handbook of Sport Psychology* (3rd ed., pp.113-135). Hoboken, NJ: Wiley.
- Côté, J. (1999). The influence of the family in the development of talent in sport. *The sport psychologist*, 13(4), 395-417. DOI: 10.1123/tsp.13.4.395
- Côté, J., Baker, J., & Abernethy, B. (2007). Practice and play in the development of sport expertise. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of Sport Psychology* (3rd ed., pp.184-202). Hoboken, NJ: Wiley.
- Côté, J., Macdonald, D. J., Baker, J., & Abernethy, B. (2006). When “where” is more important than “when”: Birthplace and birthdate effects on the achievement of sporting expertise. *Journal of Sports Sciences*, 24, 1065-1073. DOI: 10.1080/02640410500432490
- Côté, J., Salmela, J.H., Baria, A., & Russell, S.J. (1993). Organizing and interpreting unstructured qualitative data. *The Sport Psychologist*, 7, 127-137. DOI: 10.1123/tsp.7.2.127
- Coutinho, P., Mesquita, I., & Fonseca, A. (2016). Talent development in sport: A critical review of pathways to expert performance. *International Journal of Sports Science & Coaching*, 11, 279-293. DOI: 10.1177/1747954116637499
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success and failure*. New York: Cambridge University Press.
- Davids, K., & Baker, J. (2007). Genes, environment and sport performance: Why the nature-nurture dualism is no longer relevant. *Sports Medicine*, 37, 961-980.
- Diogo, F., & Gonçalves, C. E. (2014). The path to expertise in youth sport: Using a retrospective interview in three different competitive context. *Perceptual & Motor Skills: Exercise & Sport*, 118, 317-330.
- Domingues, M., & Goncalves, C. E. (2013). The role of parents in talented youth sport. Does context matter? *Polish Journal of Sport & Tourism*, 20, 117-122. DOI: 10.2478/pjst-2013-0011
- Durand-Bush, N., & Salmela, J. H. (2002). The development and maintenance of expert athletic performance. *Journal of Applied Sport Psychology*, 14, 154-171. DOI: 10.1080/10413200290103473
- Fontes, P. & Buarque de Hollanda, B. (2014). *The country of football: Politics, popular culture, and the beautiful game in Brazil*. London: Hurst & Co Ltd.
- Gladwell, M. (2011). *Outliers: The story of success*. New York: Little, Brown & Co.
- Gulbin, J. P., Oldenzel, K. E., Weissensteiner, J. R., & Gagné, F. (2010). A look through the rear view mirror: Developmental experiences and insights of high performance athletes. *Talent Development & Excellence*, 2, 149-164.
- Hacker, C. M., & Mann, M. E. (2017). Talking across the divide: Reflections and recommendations for context-driven, cultural sport psychology. *Journal of Sport Psychology in Action*, 8, 76-86. DOI: 10.1080/21520704.2017.1287144
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010a). Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport & Exercise*, 11, 212-222. DOI: 0.1016/j.psychsport.2009.10.005
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010b). Successful talent development in track and field: Considering the role of environment. *Scandinavian Journal of Medicine & Science in Sports*, 20, 122-132. DOI: 10.1111/j.1600-0838.2010.01187.x
- Hoekman, R., Breedveld, K., & Kraaykamp, G. (2017). Providing for the rich? The effect of public investments in sport on sport (club) participation of vulnerable youth and adults. *European Journal for Sport and Society*, 14, 327-347.

- Krebs, R. J. (2009). Bronfenbrenner's bioecological theory of human development and the process of development of sport talent. *International Journal of Sport Psychology*, 40, 108-135.
- Kreiner-Phillips, K., & Orlick, T. (1993). Winning after winning: The psychology of ongoing excellence. *Sport Psychologist*, 7, 31-31. DOI: 10.1123/tsp.7.1.31
- Kontos, A. P. (2012). Culture/ethnicity and performance. In S. M. Murphy (Ed.), *The Oxford Handbook of Sport and Performance Psychology* (pp. 418-432). New York, NY: Oxford University Press.
- Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: a motivational model. *Journal of Sports Sciences*, 21, 883-904. DOI: 10.1080/0264041031000140374
- Mallett, C. J., & Hanrahan, S. J. (2004). Elite athletes: Why does the 'fire' burn so brightly? *Psychology of Sport & Exercise*, 5, 183-200. DOI: 10.1016/S1469-0292(02)00043-2
- Martens, M. P., Mobley, M., & Zizzi, S. J. (2000). Multicultural training in applied sport psychology. *The Sport Psychologist*, 14, 81-97. DOI: 10.1123/tsp.14.1.81
- Patton, M.Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Thousand Oaks, CA: Sage.
- Roper, E. A., & Fisher, L. A. (2018). Multicultural diversity and issues of difference. In Mugford & J. G. Cremades (Eds.), *Sport, exercise and performance psychology* (pp. 63-74). New York, NY: Routledge.
- Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner's theory of human development: Its evolution from ecology to bioecology. *Journal of Family Theory & Review*, 5, 243-258.
- Reber, A. S. (1995). *Dictionary of psychology* (2nd ed.). Victoria, AU: Penguin.
- Ryba, T. V., Schinke, R. J., & Tenenbaum, G. (2010). (Eds.) *The cultural turn in sport psychology*. Morgantown, WV: Fitness Information Technology.
- Ryba, T. V., Stambulova, N. B., Si, G., & Schinke, R. J. (2013). ISSP position stand: Culturally competent research and practice in sport and exercise psychology. *International Journal of Sport Psychology*, 11, 123-142.
- Ryba, T. V., & Wright, H. K. (2005). From mental game to cultural praxis: A cultural studies model's implications for the future of sport psychology. *Quest*, 57, 192-212.
- Salmela, J. H., & Moraes, L. C. (2003). Development of expertise: The role of coaching, families, and cultural contexts. In J. L. Starkes & K. A. Ericsson (Eds.), *Expert performance in sports: Advances in research on sport expertise* (pp. 275-293). Champaign, IL: Human Kinetics.
- Schinke, R. J., & Hanrahan, S. J. (2009). (Eds.). *Cultural sport psychology*. Champaign, IL: Human Kinetics.
- Schinke, R. J., McGannon, K. R., Parham, W. D., & Lane, A. M. (2012). Toward cultural praxis and cultural sensitivity: Strategies for self-reflexive sport psychology practice. *Quest*, 64, 34-46. DOI: 10.1080/00336297.2012.653264
- Schinke, R., & Moore, Z. E. (2011). Culturally informed sport psychology: Introduction to the special issue. *Journal of Clinical Sport Psychology*, 5, 283-294. DOI: 10.1123/jcsp.5.4.283
- Stambulova, N. B., & Schinke, R. J. (2017). Experts focus on the context: Postulates derived from the authors' shared experiences and wisdom. *Journal of Sport Psychology in Action*, 8, 131-134. DOI: 10.1080/21520704.2017.1308715
- Starkes, J. L., (1993). Motor experts: Opening thoughts. In J.L. Starkes & F. Allard (Eds.), *Cognitive issues in motor expertise* (pp. 3-16). Amsterdam: Elsevier.
- Storm, L. K., Kristoffer, H., & Krogh, C. M. (2012). Specialization pathways among elite Danish athletes: A look at the developmental model of sport participation from a cultural perspective. *International Journal of Sport Psychology*, 43, 199-222.
- Swann, C., Moran, A., & Piggot, D. (2015). Defining elite athletes: Issues in the study of expert performance in sport psychology. *Psychology of Sport and Exercise*, 16, 3-14. DOI: 10.1016/j.psychsport.2014.07.004
- Thorpe, H. (2009). Understanding 'alternative' sport experiences: A contextual approach for sport psychology. *International Journal of Sport and Exercise Psychology*, 7, 359-379.

- Ullrich-French, S., & Smith, A. L. (2009). Social and motivational predictors of continued youth sport participation. *Psychology of Sport & Exercise*, 10, 87-95. DOI: 10.1016/j.psychsport.2008.06.007
- Weinberg, R. S., & Gould, D. (2018). *Foundations of sport and exercise psychology* (7th ed.). Champaign, IL: Human Kinetics.
- Wheeler, S. (2011). The significance of family culture for sports participation. *International Review for the Sociology of Sport*, 47, 235-252. DOI: 10.1177/1012690211403196