



## The Athlete Advantage: Human Capital Resource Emergence through Sport

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*The effects of sport participation experiences have broad implications in college sport. The purpose of this research was to study the perceived impact of competitive athletic participation on life after sport. This purpose was pursued through interviews with 215 former U.S. college athletes five to 44 years post-competition with a majority being white male revenue sport athletes. Results revealed six emergent themes with 28 subthemes attributed to sport participation that impact former athletes' personal and professional lives (drive, resilience, emotional intelligence, teamwork, leadership, and confidence). The knowledge, skills, attributes, and other characteristics (KSAOs) athletes described as lessons learned through intercollegiate athletics provide compelling support for competitive sport as a rich complex environment for human capital emergence.*

*Keywords: human capital, sport for development, transferable skills, career development, athletic participation*

**S**port is often touted as a channel for building community and national pride, promoting health and testing the limits of human physical potential, spurring economic development, and vicariously experiencing epic battles as art unfolds (Chalip, 2006; Mandell 1984). Despite general acceptance that sport can function as a powerful medium for personal and societal development and experience, there is limited research holistically examining specific perceived effects of sport participation. The purpose of this research was to address this limitation in understanding by exploring the perceived impact of competitive athletic participation experiences on life after sport. We pursued this research through interviews with 215 former U.S. college athletes.

There are tremendous discrepancies regarding cited effects of intercollegiate athletics participation ranging from positive academic experiences, holistic development, and career benefits (e.g., Chalfin et al., 2015; Gallup, 2016; Rubin & Moses, 2017; Weight et al., 2018) to exploitation, poor academic experiences, and difficulty adjusting to post-sport life (e.g., Smith & Hardin, 2018). Previous studies that assessed large samples of former athletes were quantitative in nature, lacking in nuance inherent to personal sport experiences (Gallup, 2016). Utilizing a large sample ( $n = 215$ ) of former athletes, we add to research by gathering rich accounts of athletic experience effects. Although much is known about the human capital (HC) experiences of coaches and administrators (Bozeman & Fay, 2013; Cunningham & Sagas, 2002; Cunningham et al., 2001; Sagas & Cunningham, 2005; Weight et al., 2020), less is known about how athletes' experiences or abilities allow HC to emerge. To set a proper foundation, we explore research on HC theory and personal development through sport participation.

## Human Capital Theory and Foundational Literature

Human Capital Theory (Becker, 1962, 1993) was utilized to better understand the perceived impact of athletic participation on life after sport. Schaffer and Zalewski (2011) described HC as a “person’s special knowledge (what do you know?) and skills (what can you do?), regardless of whether the knowledge or skills came from formal education or from any other source such as work-related experience” (p. 76). HC has also been defined as an organizational-level resource built by the emergence of collective *knowledge, skills, abilities, and other characteristics* (KSAOs) (Ployhart & Moliterno, 2011) that originates in the cognition, behaviors, or effect of individuals and can be amplified by interactions manifesting in a greater collective phenomenon (Kozlowski & Klein, 2000). This individual-team synergy is common within the sport context and provides additional support for the use of HC to frame the exploration of lessons learned within the unique environment of athletics.

### *Knowledge, Skills, Attributes, and Other Characteristics Developed through Sport*

Knowledge, skills, attributes, and other characteristics (KSAOs) are expressed as cognitive, noncognitive, context-generic, or context-specific. Cognitive KSAOs are focused on a general sense of intelligence and ability of the individual to understand, retain, and create information, whereas noncognitive skills are more focused on the personality, interests, and values of the individual (Ployhart & Moliterno, 2011). KSAOs have generally been treated as an inclusive category of human capital elements as there is significant overlap between them (Kanfer, 1990; Ployhart & Moliterno, 2011). Previous research has found both general cognitive and noncognitive KSAOs are stable through adulthood, but general cognitive KSAOs allow an

individual to acquire knowledge more quickly, easily, and deeply (Jenson, 1998); noncognitive KSAOs affect the types of situations, experiences, and relationships an individual decides to engage in and cultivate (Kanfer, 1990). KSAOs can be context-generic, in which they endure across broader time and situations, or context-specific, where they are tied and applied to narrower domains (Kanfer, 1990; Ployhart & Moliterno, 2011). Research on perceived sport participation outcomes identify cognitive, noncognitive, context-generic, and context-specific KSAOs.

Sport participation has been described as a “resource caravan” (Walsh et al., 2019, p. 15) athletes can access throughout their lives. Lessons and opportunities gained through sport were described by former athletes as psychological, social, and physiological resources to draw upon that can increase their ability to adapt during life transitions (Walsh et al., 2019). Similarly, Zhou and Kaplanidou (2018) interviewed former athletes and found elements of social capital (e.g., networks, relationships) are built from athletic participation that might extend to other areas of athletes’ lives.

Several studies indicate that athletic participation equips participants with valuable skills to transfer to the workplace. Employers associate former athletes with a set of specific attributes including competitiveness, confidence, ability to handle pressure/mental toughness, time management, strong work ethic, self-discipline, team effort/teamwork, learning how to prioritize, overcoming adversity, and goal setting (e.g., Ackerman, 2012; Chalfin et al., 2015; Weight et al., 2018). These skills associated with former athletes are valued by employers, and can influence initial hiring decisions (Chalfin et al., 2015; Dwyer & Gellock, 2018), athlete self-efficacy to succeed in the workplace (Smith & Whiteside, 2019), and long-term career success (Weight et al., 2018). Demonstrating the long-term effects of sport participation, Weight et al. (2018) compared 992 athlete and non-athlete graduates from a single Division I institution in four graduation cohorts 10, 20, 30, and 40 years post-graduation. Results demonstrated athletes significantly out-earned non-athlete graduating classmates and yielded higher levels of job satisfaction and work engagement across race, age, industry, and sport-type variables, supporting evidence of a positive correlation between sport participation and long-term career success (Weight et al., 2018).

These studies provided a strong foundation for the additional exploration of lessons learned through intercollegiate athletics participation. The intent of this study and the broad sample of participants is to create an inclusive catalogue of knowledge, skills, attributes, and other characteristics (KSAOs) athlete participants attribute to their sport participation.

### *Human Capital Emergence in the Environment of Athletics*

Ployhart and Moliterno (2011) theorized HC emergence as based upon the complexity of the unit’s (e.g., team’s, athletic department’s) environment and the appropriateness of social/psychological processes and states which are mobilized to respond to those demands. Thus, unit members must be able to complete tasks both on their own and coordinated together (synchronicity of performance), in an environment that can fluctuate between static and highly fluid and dynamic (dynamism of the environment), with strong interaction and communication (strength of member linkages within the unit), that can take place across bidirectional, sequential, and collaborative workflow (Ployhart & Moliterno, 2011).

Exploring the process of HC emergence through college sport is fitting for several reasons. Each of the foundational components (knowledge, skills, abilities, and other characteristics) are inherent characteristics of the sport environment. Particularly within team-based sports, individuals collaborate in dynamic environments wherein communication and

dependence upon one another are essential to the unit's workflow. This complex environment can be likened to the soil, water, sunlight, temperature, and pollination necessary for growing crops. For human capital to emerge, nurturing environmental conditions must exist.

There has been a surge in HC research within sport management literature since Cunningham et al. (2001) introduced it to the field. Relevant studies on HC have focused on racial and gender differences in coaches (Bozeman & Fay, 2013; Cunningham & Sagas, 2002; Cunningham et al., 2001; Sagas & Cunningham, 2005), administrators' and coaches' career mobility and growth (Sagas & Cunningham, 2004; Weight et al., 2020), perceptions of athletes' HC development (Shaffer, 1997, 1998; Shaffer & Zalewski, 2011), and athletic participation and early career success (Sauer et al., 2013).

Two studies applying HC theory to college athletics are particularly relevant for the foundation of this research. Huffman et al. (2016) posited athletes sought to maximize their "lifetime human capital" because the most influential college choice factor was the "opportunity to begin a good career other than playing professional football" (p. 90). The second foundational study by Sauer et al. (2013) examined how participation in college athletics affected the success of athletes' careers in their first decade after their transition out of sport. The researchers surveyed 1,940 former athletes and found they scored higher on average than their non-athlete peers in their openness to mentoring, ability to mentor, emotional intelligence, career satisfaction, and mean salaries (Sauer et al., 2013). These two studies examined HC development goals coming into college sport organizations and levels of HC after athletes transitioned out of sport. However, less is known about what perceived elements of HC emerge *through* sport participation. Building on a theoretical foundation of human capital theory, the purpose of this research was to study the perceived impact of college sport participation on life after sport.

## Method

### *Data Collection*

With an exploratory topic which is subjective in nature, we pursued a descriptive qualitative study design (Babbie, 2021). Data collection took place via recorded semi-structured interviews conducted over three years that lasted 30-90 minutes, yielding over 1,000 pages of single-spaced coded transcripts ( $n = 215$ ). The interviews were a part of a larger study exploring experiences of participation in college athletics which required a substantial sample. Two of the six primary questions from the interview guide are the focus of this inquiry:

1. What specific lessons did you learn from your participation in athletics?
2. How have you used these lessons in your career and life after sport?

"Lessons learned" was utilized in the interview setting as a broad and simple, and more natural representation of the KSAOs concepts as outlined within human capital theory (e.g., Campion et al., 2011). Interviewees were probed to more deeply explain specific knowledge, skills, attributes, or other characteristics that they initially mentioned to facilitate additional depth to previous quantitative or smaller-sample studies exploring human capital emergence through sport in an effort to develop an inclusive catalogue of perceived sport participation outcomes.

### *Participants*

Participant recruitment occurred through chain referral sampling which involves "a series of participant referrals to others who have experienced the phenomenon of interest" (Penrod et al., 2003, p. 102). Sample chains began from 18 researchers trained in interview methods who

conducted between eight and 15 interviews each to encourage a broad, rich, diverse sample. Given the “insider” sampling methodology, there were only a handful of instances that invited participants declined the interview, yielding a compliance rate of over 90%. Each interviewer utilized the same interview guide, and the study PI reviewed each interview to ensure validity. Six interviews that included deviations from the interview protocol were not included in the final sample. Inclusion criteria specified participants were college athletes at least five years removed from their intercollegiate sport experience to facilitate a degree of separation and professional post-college exposure.

Though the sample chains originated from an equal number of men and women with varied ethnic backgrounds and affiliation across sports and competitive divisions, the sample ( $n = 215$ ) included primarily Division I (79%) White (72%) men (73%) who participated in the most visible sports of football (22%), baseball (16%), and men’s basketball (13%). The years of separation from intercollegiate sport participation for members of the sample ranged from five to 44 years, with the greatest proportion of athletes’ graduating in the 1990s (30%) and 2000s (26%). Participant occupations were varied with fields most highly represented including education (18%), finance (12%), and sport (12%). While these demographics are not representative of college athletes, the sample facilitated analysis of data from a broad variety of athletes in 20 sports. As the research team analyzed the transcripts, no significant differences in lessons learned were evident based upon sub-analyses of demographic groupings providing support for criterion validity across the sample. For a complete listing of demographic information, refer to Table 1.

### *Data Analysis*

An inductive approach to data analysis (Creswell, 2009) was used to code the effects of sport participation. Responses were organized, interpreted, and quantified through two rounds of coding conducted through ATLAS.ti. During the initial round, researchers utilized memoing to record reflective notes, extract meaning from the data, and facilitate direction for the second round of coding (Birks et al., 2008). Themes and patterns were established to guide the second round of coding (Birks et al., 2008). The first round of capital emergence coding yielded 56 themes among 1,331 unique codes. These themes were reviewed and condensed to six first-level themes with 29 sub-themes that were utilized in the second round of coding which was conducted independently by two researchers via pattern coding (Saldaña, 2005). The large sample facilitated a rich source of varied perspectives and examples, especially given that outcomes from sport involvement are individualized per Nicholson et al. (2013). Inter-coder reliability was tested via the Coding Analysis Toolkit (CAT) add-on tool to ATLAS.ti to demonstrate reliability and validity of the coding scheme per code family (first-level codes). Analysis yielded a high level of inter-coder agreement (93.1%) with a Krippendorff’s Alpha of  $\alpha = .914$ .

## **Results**

As participants reflected on the impact college athletics had on their lives, there was remarkable saliency and consistency. Despite the years removed or the quality of the experience, many of the athletes mentioned the frequency with which they access the lessons learned from this time in their life. For example, one participant’s experiences summed up many others’: “I have many lessons learned from college baseball that I apply every day of my life as a dad with

Table 1  
*Demographic Information*

	%	<i>n</i>
<b>Gender</b>		
Male	73%	158
Female	27%	57
<b>Ethnicity</b>		
White	72%	155
Black	21%	44
Other	7%	16
<b>Grad Year by Decade</b>		
1970's	5%	11
1980's	21%	46
1990's	30%	64
2000's	26%	56
2010's	18%	38
<b>Sport</b>		
Football	22%	47
Baseball	16%	34
Men's Basketball	13%	29
Men's Soccer	7%	15
Women's Basketball	7%	15
Swimming	7%	14
Women's Soccer	6%	12
Track and Field	6%	12
Other	21%	46
<b>Division Level</b>		
NCAA Division I	79%	169
NCAA Division II	7%	16
NCAA Division III	12%	26
NAIA/NJCAA	2%	4

Note: "Other" sports (< 8 athletes each) in order of prevalence include: W Tennis, M Tennis, Wrestling, Volleyball, Cross Country, M Lacrosse, M Golf, Rowing, W Lacrosse, Cheer, Gymnastics, Ice Hockey. There were  $n = 9$  multi-sport athletes.  
 $n = 215$

my children, as a coach, and in my professional career” (DI White male baseball 1989, #65). Though the sources varied (e.g., demanding/abusive/supportive coaches, failure, triumph, repetition, injury, teammates, or time demands), life lessons consistently emerged.

Emergent themes were grouped into six overlapping categories as expressed in Table 2. Short quotes from athlete interviews are included throughout the following sections to demonstrate examples of the themes in the athlete voice. Participant information including the competition division, race, sport (by gender), graduation year, and interview number are included to provide demographic context to the quotes.

### *Drive*

The most prevalent lesson learned through sport discussed by the former athletes was that of drive. Drive included sub-themes of work ethic, personal accountability/time management, dedication/determination/discipline, goal-setting/goal-seeking, a consistent pursuit of excellence, seeking and embracing feedback, persistence/tenacity, and competitiveness. This mindset emerged as athletes shared “a desire to constantly be better” (DI White male baseball 1992, #186), “commanding what you’re trying to achieve and taking full responsibility for the outcomes” (DI White male swimming 2010, #177), and “warding off the complacency that comes with success and continually working harder and harder” (DI Black male basketball 1986, #139). This mindset in action was shared by a DI Black male football athlete who completed participation in 1996:

When I am writing a speech or when I am about to speak to a large group, it’s the determination and drive from sports that gets me through. It involves the same tenacity of preparing for a game and being pumped up about it, wanting to do my best, and out-working everyone else to win or achieve excellence. (#17)

Participant #24 expressed, “You’ve just got to put in the time. Nobody becomes a master unless they put in 10,000 hours, regardless of the skill, regardless of the trade. A lot of success in sport and life is just about being able to be persistent, working through challenges day in and day out” (DI White male baseball 2009). Participant #219 shared an example of perseverance: “It is a life lesson that I still carry with me today. When things get tough, you don’t quit; you don’t throw in the towel and go do something else. You keep going...you hang in there...you just keep going” (DI White male football 1989). Connected to persistence/tenacity, Participant #217 emphasized, “There is no substitute for hard work. Talent will only get you so far. If you don’t put in the extra effort on your own you will never get ahead. We all have the ability to push ourselves further than we think we are able” (DI White male tennis 1997).

Many participants described moments in life when the drive and tenacity practiced and refined as an athlete sustained them in their career, marriage, graduate school, and parenting. They exemplified their desire to keep going, never quit, work hard, and push through all obstacles. Regarding dedication/determination/discipline, Participant #179 discussed “having an internal fire and desire to keep pushing” (DI White male football 1992). Participant #200 stated, “Hard work pays off, repetitions make you better at all things and you have to discipline yourself to push through plateaus that will occur” (DI Black male basketball 2009).

Table 2

*Perceived knowledge, skills, abilities, and other characteristics (KSAOs) strengthened through participation in athletics*

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**Drive**

Work-ethic  
 Personal accountability/time management  
 Dedication/determination/discipline  
 Goal-seeking/results-driven  
 Consistent pursuit of excellence  
 Seek/embrace feedback  
 Persistence/tenacity  
 Competitiveness

**Resilience**

Ability to overcome obstacles  
 Perspective in failure and success  
 Toughness  
 Humility/coachability  
 Adaptability  
 Ability to perform under pressure

**Teamwork**

Can unite toward a common goal/cause  
 Collaborative  
 Know how to depend on others  
 Care about others success

**Leadership**

Always leading / influential  
 Strong character/ ethical  
 Credibility with others  
 Philanthropic  
 Vision-centric

**Confidence**

Identity/pride  
 Self-efficacy  
 Physical acumen

**Emotional Intelligence**

Communication / social skills  
 Empathy  
 Situational awareness

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## *Resilience*

Resilience was another prevalent theme. Sub-themes included ability to overcome obstacles, perspective in failure and success, toughness, humility/coachability, adaptability, and ability to perform under pressure. A DI White female track & field 2006 graduate described these themes of resilience as follows:

Learning how to come back from failure, even if in the moment if you feel like it was the biggest failure of your life – learning how to bounce back and keep going and staying motivated when it might be difficult was a huge lesson that I use in my sales career daily. If you fail, fail quickly, solve the problem, then go onto the next thing...and remember that when you lose, sometimes you actually win. (#9)

Several participants mentioned how failure fits into success. Participant #212 said, “Failure is part of life and how you deal with it is how you succeed” (DI White male baseball 1993). Similarly, Participant #166 commented, “If you don’t fail at something along the line, you don’t get any better” (DI White male football 1996). Athletes faced tough times in competition, which could translate to other situations in life: “Even today, when faced with adversity, I look back at the awful experiences I had through sport and I use them to fuel me” (DI White male football 2006, #148). Athlete participants described how the sport environment provided unique pressures and experiences that shaped the athletes’ emergence of resiliency. For example, Participant #185 shared, “I developed mental strength and resilience in the face of mistakes through football. After you mess up in front of 50,000 people, there is a rough environment in the stands, and you just have to keep going, that mentality sticks with you” (DI White male football 1987). As one participant summarized, “Being through different pressure situations in different phases of life prepares you to handle new stressors in a more positive way” (DI White male soccer, 1985, #145).

## *Emotional Intelligence*

The next emergent theme was emotional intelligence. We relied upon Salovey and Mayer’s (1990) definition of emotional intelligence to categorize relevant sub-themes which include communication/social skills, empathy, and situational awareness. Salovey and Mayer defined emotional intelligence as “the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions” (p. 189). There was some overlap between this theme and teamwork, as much of the learning came through teammate interactions as demonstrated by a DI White male basketball (1981) participant:

The drama that is part of every single locker room I have been in is also a part of the household and workplace. You have to learn how to mediate, how to give and how to take, and how to make sure everyone is getting along. Sport helps you understand different types of people pretty deeply, and that foundation helps build empathy and relationships throughout your life. (#38)

The deep relationships that were formed with diverse individuals were emphasized by many of the participants. A DI White male basketball 2012 graduate summarized his experiences as follows:

You have guys coming from across the world, from Belarus to Bel Aire, to the roughest neighborhoods in Philly. All of these guys coming together, putting aside their differences and working toward a common goal is totally applicable to what I do today. You can't choose your coworkers or colleagues, and sports teaches you how to build relationships. (#126)

These elements of emotional intelligence development were described by participants as “respect others and treat others the way you want to be treated – leave the room better than you found it and leave the person feeling better than when you first found or saw them” (DI White female basketball/volleyball 1981, #194), “learning to keep a level head – to keep steady and steady others” (DI White male soccer 1986, #188), “have manners because coaches are going to make you have manners” (DI White male football 1974, #193), and “pay attention to little things because they can go a long way in another's perception - whether it's what you're wearing or how you greet a stranger” (DI Black male basketball 2005, #151).

Several participants described analyzing a situation and filling in where needed as part of the lessons learned from sport participation. Participant #199 noted, “Just to be what the team needs you to be that day and not make it about you and what you need that day. That is a lesson that translates really well into life and friends and family” (DI White male basketball 1986). Additionally, Participant #154 suggested, “Due to being a part of a team, I'm able to understand people's needs, understand where they need mentoring, and mentor them appropriately” (DI White male ice hockey 2010). The type of emotional highs, lows, victory, and defeat shared among diverse strangers and guided or misguided by coaches provided a laboratory of learning ripe with opportunities to extend emotional intelligence.

### *Teamwork*

Teamwork emerged as another salient lesson from sport participation. Sub-themes included uniting toward a common goal/cause, being collaborative, knowing how to depend on others, and caring about others' success. A DI 1990 White female track & field participant recounted:

You come in as an individual athlete, but you learn quickly that's not how things work. It's about being a part of something bigger than yourself and doing everything you can to make the team better. You prioritize differently, you depend on each other, and you win and lose together. I learned through sport it's a lot more fun that way, and you're able to be a lot more productive. That is what I tell new employees and that is how I run my company. (#215)

Participants reflected on the varying roles they played throughout their time in sport and how that influenced their perspective on leadership: “Sometimes I was asked to lead, other times I was asked to follow, and in doing both I learned the importance of having a great attitude because both positions are equally important in reaching the ultimate goal of team success” (DI Black male basketball 2005, #151). Reflecting on working as a team, Participant #219 expressed, “To be a good teammate, you have to put in the work and carry your weight” (DI White male football 1989). Beyond the individual experience, Participant #203 shared, “I gained the realization that what you do is much bigger than the individual. It's for the team, it's for the coach. It's for the university” (DI White female cheer 2014).

## *Leadership*

Participants discussed that their athletic environments facilitated the development of leadership with sub-themes that included always leading/being influential, having strong character/leading with ethics, building credibility with others, and being vision-centric. A DI White male football 1993 graduate mentioned,

Watching my coach, I learned to treat people fairly, be positive and upbeat, and push like crazy to accomplish more as a unit than people thought was possible. I try to take that exact approach to everything I do in my life whether it is getting my own work done, leading a team, managing people, working with business partners, or being a father or husband. (#18)

Sport experiences empowered the athletes to step up and lead regardless of their position. Participant #171 commented, “Making an impact can be as easy as just giving your teammate a high five or giving them a smile or telling your coworker that they did a good job” (DI White female swimming 1991). Broadly, Participant #185 said, “I learned how to lead as a baseball player as I was looked to for guidance. I had to lead both by example and in voice” (Division I White male baseball 1991).

Many of the athletes recounted a moment when they were needed to fulfill a leadership role. Participant #174 mentioned:

I was a rising senior and the head coach called me to his office. He was like “look man, I just feel like you’ve got potential to be a leader on this team and I see you hanging out with these dudes on the team that are kind of unhappy...and you can keep hanging out with those guys or you can really step up and be a leader...and I need you to step up and be a leader.” I realized I had the opportunity to have a platform and be a leader just by virtue of being a senior, being somebody who had been around for a while and had some playing experience. I responded to the challenge and had the best year I’ve ever had. (DI White male football 1996)

Similar to leadership development, many participants described building confidence through sport participation.

## *Confidence*

Confidence was another prevalent theme within the conducted interviews. Sub-themes included identity/pride, self-efficacy, and physical acumen. This theme exhibited a lot of overlap with both the drive and resilience themes, but the authors felt that confidence deserved a category of its own because of the unique presence it held within many of the athlete stories as an overarching “other characteristic” of the athlete mindset that seemed to both transcend and emerge from sport experiences. This confidence was described by a DI Black male football 2009 graduate:

Sport defines me in just about everything I do.... You want to win all the time at everything, and you know you can. Success does not come easy, but you know if you set your mind to something you can do it...so I get up at 5:30 and work out...then attack the day. I also have pride in my health and who I am as an athlete. (#34)

This athlete identity seemed to equate with confidence, strength, and self-efficacy. Participants described overcoming challenges, accomplishing unthinkable feats, surviving coach abuse, transforming their bodies, and gaining strength through it all because they knew they could persist. They knew they would succeed. The development of this mindset was shared by a DI Latina track & field 2000 graduate:

I put on 20 pounds of muscle my freshman year in college and went from losing miserably to a world champion in my first race to crushing her as a senior. Four years of grueling workouts, failures, injuries, and triumphs coupled with constant leadership lessons from a coach who I owe my life to transformed me from a girl who was insecure and weak to a strong, powerful woman who knows I can accomplish anything I put my mind to. I am a confident force in business and in life because of my athletics experience. This confident mindset has guided me through labor with my children, mediation of conflict between coworkers, handling rejection and sexism in a brutal male-dominated industry and showing grace when I inevitably succeed. Even though my body isn't as strong as it once was, in my mind, I'll always be a powerful athlete. It's who I am. It's who I'll always be...and I'm very proud of it. (#12)

This physical and mental confidence gained through sport adversity and success was a prevalent theme that athletes described as a fundamental advantage throughout their lives.

## Discussion and Theoretical Implications

The purpose of this research was to study the impact of competitive athletic participation on life after sport. Results revealed six KSAOs attributed to sport participation that impact former athletes' personal and professional lives: drive, resilience, teamwork, leadership, confidence, and emotional intelligence. Transferability of these general cognitive KSAOs is important because they transfer across domains and are not industry-specific, but rather marketable even without traditional work experiences (e.g., internships). These results support Ployhart and Moliterno's (2011) findings that skill development can extend beyond the unit-specific contributions. This is also significant as context-generic individual KSAOs endure broadly across time and situations whereas context-specific KSAOs are applied to narrower domains and often are not as salient (Kanfer, 1990; Ployhart & Moliterno, 2011).

Supporting Shaffer and Zalewski (2011), our results revealed that former athletes developed HC KSAOs that employers look for in prospective workers. Barnes (2020) and Chalfin et al. (2015) indicated athletes enter a unique environment, experiencing setbacks, challenges, risk, and resilience in their training and competitions, through sport participation. Participants detailed they understood and frequently used the learned lessons from sport to succeed outside of their role as athletes, reiterating that these skills make them marketable to employers despite their time demands which often do not allow for other professional experiences (Chalfin et al., 2015; Smith & Hardin, 2018). Similar to previous literature, this study points to the idea that HC KSAOs can be learned from sport and extended to a work environment context.

Focusing on the individual level, this study found that despite sport type or time removed from athletic competition, the participants felt sport participation contributed uniquely to their individual development of knowledge, skills, abilities, and other characteristics, directly relating to their ability to be successful individuals, partners/spouses, parents, and contributing

employees. Aside from a link in confidence tied to physical acumen, non-sport specific KSAOs were attributed to the sport experience supporting the idea that perhaps HC emergence happens naturally in the college sport environment setting because of the inherent complexity of the environment.

Athletes described rich behavioral, cognitive, and affective enabling states within their athletic environments with strong team-focused cultures. On the other end of the spectrum, there were disturbing examples of difficult sport contexts wherein HC enabling states were lacking. These included grueling environments, injuries, setbacks, coaches, losses, and heartbreaks. Within these varied contexts were rich lessons of resilience – of athletes gaining perspective, toughness, and adaptability through coaches and organizational climates that yielded significant obstacles, trials, and stress amid the educational environment – significant environmental complexity.

Previous management literature noted an assumption that a “relationship between individual KSAOs and unit-level performance (organization) exists, but there is little theory to directly support this association” (Ployhart & Moliterno, 2011, p. 129). This study signifies a relationship between the micro and organizational levels does exist. Ployhart and Moliterno (2011) found that “only a very narrow range of individual-level attributes” are typically developed within a given environment (p. 130). However, we found KSAOs that were not specific to only sport tasks or skill, but could transfer once participants left sport (Shaffer, 1997). Additionally, Becker (1993) noted that organizations’ investments in HC is significant for “younger people...because they can collect the return over more years” (p. 86). Since college athletes are in a critical developmental period in their lives, the effects of these experiences have a long-lasting impact.

### *Practical Sport Environment Implications*

Similar to the results found by Sauer et al. (2013), this research demonstrates college athletics may offer a unique avenue for HC emergence in the form of sport training, education, and relationships that non-athletes may not be able to access. Yet, just as athletes need repetition and practice to hone their athletic skills, they also need opportunities to learn and practice transferable skills for life after sport. Thus, sport managers and coaches must provide resources to directly incorporate HC resource emergence by allowing athletes to hone KSAOs that could benefit them in the future.

This HC resource emergence might be fostered through creating networks with former athletes; developing support groups; incorporating service-learning opportunities; advising practices that include personal, cultural, and career development; job shadowing, mentorship, for-credit courses that facilitate experiential learning; and internships (Navarro et al., 2020; Nicholson et al., 2013; Petitpas & O’Brien, 2008;; Weight et al., 2015; Zhou & Kaplanidou, 2018). Furthermore, it is imperative that coaches and athletic personnel create environments where athletes advocate and participate in their own decision-making regarding career paths. Shaffer (1997) explained, “Each time the principle of maximizing human capital is considered, students are actively engaged in considering their futures and the preparatory role of their current educational activities” (p. 11). Consequently, it is important that athletes be given the autonomy and support to determine their own career paths, something that previous literature noted does not always occur in athletics, as advisors or coaches might persuade athletes to pursue certain majors over others limiting the potential for HC emergence (Navarro & McCormick, 2017; Navarro et al., 2020; Petitpas & O’Brien, 2008).

### *Limitations and Future Research*

The sample was limited to U.S. intercollegiate athletes and weighted heavily toward Division I, White, male participants from revenue-producing sports (football, basketball, and baseball). As such, the experiences of this sample may not be reflective of all former athletes. The interviewing protocol may have led to social desirability bias, as data was based on reflections of the impact of their experiences between five and 44 years post competition. Athletes are often told that sport builds character, and they may attribute specific KSAOs to sport. Similarly, the study is limited to self-reported data which presents athlete perceptions of their skills, and their memory and perception of the environment wherein they competed. This is inherently valuable and a keystone of qualitative research, however these results cannot be broadly generalized. Another limitation is that the outcomes explored within this study may not be attributable to the sport environment per se, but rather to the types of individuals who become college athletes.

Future research should examine how specific athletic environments create KSAO acquisition opportunities and the influence of HC emergence. Additionally, future studies could focus on the perceptions and experiences of athletic personnel regarding the macro- and micro-levels of HC emergence that take place within the intercollegiate athletic environment. Future research should also consider surveying and interviewing former athletes about their social capital – their ability to leverage peers, colleagues, and supervisors to build mentors and networks – as college athletics is a unique environment for forming these relationships (Day & McDonald, 2010). It would also be interesting to explore the relationship between KSAO development and team dynamics within the varying intercollegiate athletics financial landscapes after the passing of NIL legislation. Lastly, future research can explore whether a connection exists between KSAOs emergence and positive transition out of sport.

## **Conclusion**

Results contribute six general categories with 28 sub-themes of athlete advantage to the literature. Former athletes shared how the lessons learned through sport participation impacted their current personal and professional lives, with many remarking they draw upon the salient lessons learned through sport on a daily basis. Main overlapping themes and a selection of their subthemes include 1) drive (accountability, dedication, competitiveness, and tenacity); 2) resilience (an ability to overcome obstacles, demonstrate perspective in failure and success, and an ability to perform under pressure); 3) teamwork (an ability to unite toward a common goal, collaborate, and depend on others); 4) leadership (a propensity to lead/influence, build credibility with others, and manage time effectively); 5) confidence (having a strong sense of identity/pride, self-efficacy, and physical acumen); and 6) emotional intelligence (demonstrating situational awareness, empathy, and strong social skills). Results support that the sport environment of intercollegiate athletics is sufficiently complex to directly foster human capital emergence.

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