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# The Influence of Social Agents on Learning, Developing, and Growing Through Athletic Participation: A Theory of Athlete Development

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The Influence of Social Agents on Learning, Developing,  
and Growing Through Athletic Participation:

A Theory of Athlete Development

A Dissertation by

Rikishi T. Rey

Chapman University

Orange, CA

School of Communication

Submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in Communication Studies

Sport and Health Communication

August 2022

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June 2022

The Influence of Social Agents on Learning, Developing, and Growing Through Athletic  
Participation: A Theory of Athlete Development

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by Rikishi T. Rey

## ACKNOWLEDGEMENTS

Fair warning... this section may arguably be longer than the dissertation itself... and since there is no page limit, this is going to act as my journal entry—my reminder to myself for when I start to forget what it was like to go through a Ph.D. program. So, if you're reading for like the “*real*” information, skip down about 11 pages to the abstract... for everyone else, seriously, this is a full-on rant... but here we are because unfortunately, I know that there will be a day where I'll start to forget all of the late nights, the phone calls, the doubt, the stress... I'll start to think, oh it wasn't *that* bad... and although it wasn't... everything that occurred in these last three years will blend into a distant memory. So, to ensure that in five, ten, fifteen years from now that I remember the parts that matter, this section is going to be a combination of stories, memories, and thank yous to those who walked beside me every step of this program and to myself as a reminder of all I have accomplished.

First, it is incumbent upon me to recognize how blessed I am to have had the opportunity to pursue and accomplish earning a Ph.D. Five-year-old Kishi, who used to be so sad that she finished her homework that she would erase it all to be able to do it over again would be so proud of the 30-year-old woman today who has now accomplished more than she ever thought possible, and it was all in the Lord's timing. Although I have always struggled with such timing, and tried to plan my own path, my own timeline, it has always come back to Him and His plan, and for that I am grateful. These three years have challenged my faith. One would have thought that I learned many of these lessons while completing my master's degree, yet here we are. I still found myself questioning if I believed, what his plan was for me, if he had forgotten me, if he was trying to push me away... but all this time was to allow my faith to be just that, my own.

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am not made for isolation, that it is a really *really* dark and difficult place for me to be alone in my thoughts. And during a time where the world stopped, you kept mine going. I will never be able to thank you enough. You called me out when I was being a girl, challenged me when I thought I had it together, supported me, in your own way encouraged me, and always took care of me. I am so grateful to have coached alongside someone who valued my opinion, allowed me to lead, respected me, and complemented my coaching style so well – 100%... I would do it all over again in a heartbeat, no questions asked. As lucky as we were to have our girls, and man Jay, we were so lucky, they too were so lucky to have two coaches who loved them so well... wish we do, but we really don't suck (you're welcome girls).

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even when I didn't know what I needed. Thank you for your sacrifice. Thank you for holding down the fort all of these years. Thank you for being my punching bag when I was stressed. Thank you for being my encourager when I wanted to quit, always reminding me I was right there, almost at the finish line. Thank you for trusting me with our future and choosing to uproot your life 2,339 miles away so that I could pursue my career. You've never questioned my path. You've never questioned this next chapter. You've sat supportively every step of the way and encouraged me to achieve more. Thank you for that. Thank you for everything. I love you.

Lastly, to myself because I know that this is what I will forget. I'll forget all that it took to get here. So, from past Kishi to future Kishi, remember all of these things: Hate to break it to you, but you seemingly lost yourself, just to find yourself during this program. You went through the hardest years of your life and still finished. From health issues to your best friend moving away, from continuously working three jobs throughout this program (psycho) to trying to create a work-life balance, you did not quit. You did not give up. And really, you knew that was never an option. Because of those mentioned above, you knew that you would sacrifice the world to make them proud. You have beat yourself up, you have hated yourself, you have been your own worst enemy... but you've grown as a woman through all of that. You've learned how to ask for help without asking for it (insert begging Keith for a story, drinks with Tess, coffee runs with Jay, and nights off from work with Danny). You learned more about yourself these last three years than ever before and it only took 1 good mental breakdown, cheers to that. Always remember though, that there will be times like this again. There will be really *really* hard days where you will want to call it quits, you will want to give up, you will want to run away from it all... that wasn't an option here and it's not an option then. You have and can do really freaking



hard things, so as you would tell anyone else, in a more loving way than you tell yourself, put your big kid pants on and figure it out, suck it up, and do your effing job.

So, to summarize these last couple of years, I could do so in this Peaky Blinders quote, “There’s a part of me that is unfamiliar to myself and I keep finding myself there...” For anyone thinking about embarking on this journey, for me—and it won’t be the same for everyone—this was my experience. I kept on finding myself in unfamiliar territory... not knowing what I was feeling, how to manage, who to go to, and what to do... but through it all, remember that the spirals are temporary, the stress will fade, and the process is half the battle... and more than anything in the world, remember that you are loved, cherished, and that the people around you love you, not because you got a Ph.D., not because you publish or are knowledgeable on a certain topic... they love you because you just don’t suck.

So, at the end of the day... do your job and be a good person... it’s not that hard.

# ABSTRACT

The Influence of Social Agents on Learning, Developing, and Growing Through Athletic

Participation: A Theory of Athlete Development

by Rikishi T. Rey

Sports can significantly influence the lives of those who play them. Psychosocial outcomes such as values, skills, self-esteem, and goal setting are some of the referenced benefits associated with playing sports and are the result of athletes being exposed to situations in an environment that is favorable to learning. Due to the abundant nature of sports in the United States, there is a growing need to understand how to effectively create environments that are conducive to positive outcomes. However, such results and experiences are often anecdotally supported rather than scientifically driven. Therefore, the purpose of this dissertation was two-fold. First, it looked to develop and validate a reliable measure (i.e., Learned Lessons in Sport; LLS) to assess athlete's perceptions that participating in sports led to their learning of valuable skills that transcend the sporting context. Second, it attempts to provide an empirical explanation and model to discern and assess how coaches' communication affects a set of variables acting on learned lessons in sport. The designed measure and models serve to demonstrate the inherently communicative nature of sport and athlete development and identify the intersection of individual development and human growth that is the effect of playing sports. Using factor analytic techniques and serial mediation, three studies were conducted. Results of Study One ( $N = 207$ ) and Study Two ( $N = 206$ ), via exploratory factor analytics and confirmatory factor analytics, successfully developed and validated the LLS scale that assesses an athlete's perception of their learning lessons through sport. The third study ( $N = 636$ ) proposed and tested a model to demonstrate how coaches' communication significantly affects a set of variables,

such as values, orientation, and attitudes, that act on learned lessons via serial mediation. Results of Study Three support the proposed relationships but the data was not an overall good fit for the model and a revised model is proposed. Overall, this dissertation contributes to the growing field of sport communication and provides implications for stakeholders invested in creating meaningful environments for athletes to compete in.

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# **1 Learning in Sports**

## **1.1 Introduction**

Sports can have a long-lasting impact on the lives of the athletes who play them. From character development, friendships, and life lessons, sports are a meaningful activity for individuals to engage in (Lee et al., 2008; Smoll et al., 2011). Some positive outcomes associated with sport are values, skills, self-esteem, and goal setting that transcend into other aspects of one's life (Danish et al., 2004; Gould & Carson, 2008; Lee et al., 2008; Smoll et al., 2011). These benefits are a result of the exposure to situations in an environment that is favorable to learning (Bean et al., 2018; Holt et al., 2017; Shields & Bredemeier, 2007; Turnnidge et al., 2014).

Yearly, almost half a million athletes participate at the collegiate level, more than 7.2 million athletes participate in high school sports, and 21,095,000 million children reported playing organized sports in 2020 (NCAA, 2020; State of Play, 2021). These numbers highlight not only how many participate in sports, but the opportunity sports provide to have a positive impression on individuals. The abundant nature of sports in America, and the possible impact it can have on those who participate as they mature and grow, demonstrates the need to understand how to effectively create environments that are conducive to positive outcomes.

## **1.2 Athlete Development**

Athlete development research strives to understand and highlight many of the positive outcomes of sport participation. Notably, sport participation can lead to both physical (i.e., skill level, strength, speed, endurance) and psychosocial development (i.e., interrelationship of psychological and social thoughts and behaviors). Physical development encompasses one's overall body physique and athletic abilities, often influenced by genetics, talent, and sport-



specific coaching and training (Lloyd & Oliver, 2012; Vaeyens et al., 2008). While some fields such as kinesiology and sport psychology attempt to develop ways to identify and increase athletic talent (e.g., Johnston et al., 2018; Williams & Franks, 1998; Williams & Reilly, 2000), of specific interest to the field of sport communication researchers are the meaningful psychosocial results as an outcome of participating in sports (Abbott & Collins, 2004; Cranmer et al., 2017; Turman, 2006; Vaeyens et al., 2008).

Although the physical development of athletes is important to study, of greater interest is the unique social environment sports provide which influence psychosocial outcomes and development (Dunn et al., 2003; Weiss, 2008). Specifically, Martin et al. (2015) calls for research to examine how the athlete's social environment significantly contribute to their experiences and psychosocial development. While psychosocial outcomes may lead to outcomes that influence an athlete's ability within sport, they also influence athletes' lives outside of sport (Santos & Callary, 2021; Vella et al., 2013). These outcomes are often related to the maturation and development of the participant with regards to concepts such as motivation, values, coach-athlete-parent relationships, and prosocial and antisocial behaviors (e.g., Hellstedt, 1987; Lee et al., 2008; McLaren et al., 2021; Rey et al., 2022; Smoll et al., 2011; Stanger et al., 2018).

Influences that affect these outcomes are of interest to sport researchers and particularly this manuscript.

### **1.3 Influences on Psychosocial Outcomes and Learning**

Recently, sport researchers (i.e., both those in sport psychology and sport communication fields) have addressed the influence of communicative agents' (e.g., coach) impact on such psychosocial outcomes (Erickson & Côté, 2016; Gould & Carson, 2008; Holt et al., 2009; Ishak, 2017; Kendellen & Camiré, 2019; Nicholls, 1989; Wenner, 2021, 2021). Literature suggests that

athletes learn psychosocial concepts through their interactions with communicative actors (e.g., coaches) and that these lessons transcend into contexts outside of sports (Erickson & Côté, 2016; Holt et al., 2017; Lee et al., 2007; Vallerand, 1994; Vierimaa et al., 2018). Communicative agents' significant influence on athlete's psychosocial outcomes related to athlete development speaks to the meaningfulness of such interactions (Danioni & Barni, 2019; Harter, 1978; Lee et al., 2000; Papaioannou et al., 2008; Raabe & Zakrajsek, 2017; Stanger et al., 2018; Weiss, 2008; Vallerand et al., 1997). More importantly, the findings forwarded in sport psychology literature furthermore postulate the centrality of communication within the sport context (Holt et al., 2017; Weiss, 2008). Specifically, the literature asserts that the influence on psychosocial outcomes takes place as a result of the interactions that occur between communicative actors and athletes,

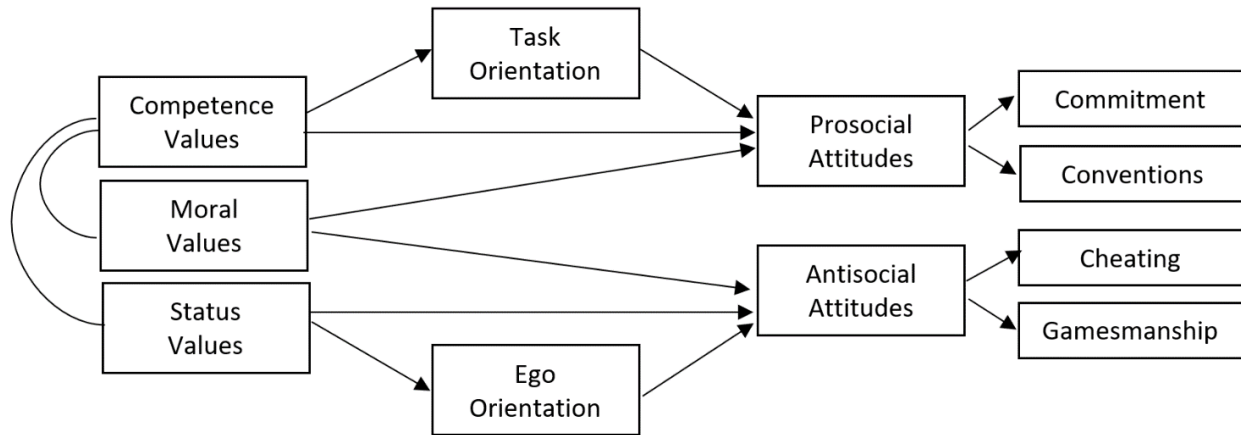
Children's experiences in sport are affected by the behaviors, attitudes, and beliefs of significant adults and peers, including family members (notably parents), coaches, teachers, and peers, such as classmates, teammates, and nonsport friends. Social relationships and interactions with adults and peers are critical information sources for forming self-perceptions, deriving motivation, and learning values in sport... In sum, parents, coaches/teachers, and peers are important sources of social influence on motivational and moral variables. (Weiss, 2008, pp. 437-438)

However, psychosocial outcome variables such as individual values, motivation, and sportpersonship have been heavily explored from a psychological lens with theories such as self-determination theory (Deci & Ryan, 2000) and achievement goal theory (Nicholls, 1984), and fail to incorporate the communicative actors who influence these learned lessons.

To date, there is a scant amount of research on communicative actor's influences on sport outcomes. Often, the importance of communicative actors are implied but not empirically

examined. Such is true for Lee et al.'s (2008) work who alludes to the notion of communicative actors role in influencing athletes values, but overall concludes that achievement orientation (i.e., achievement goal theory; task, ego) mediates the relationship between an athlete's individual values (i.e., competence, moral, status) and sportspersonship (i.e., prosocial attitudes, antisocial attitudes) in the context of sports (see Figure 1-1) without the inclusion of such individuals.

Figure 1-1 Lee et al. (2008) Model

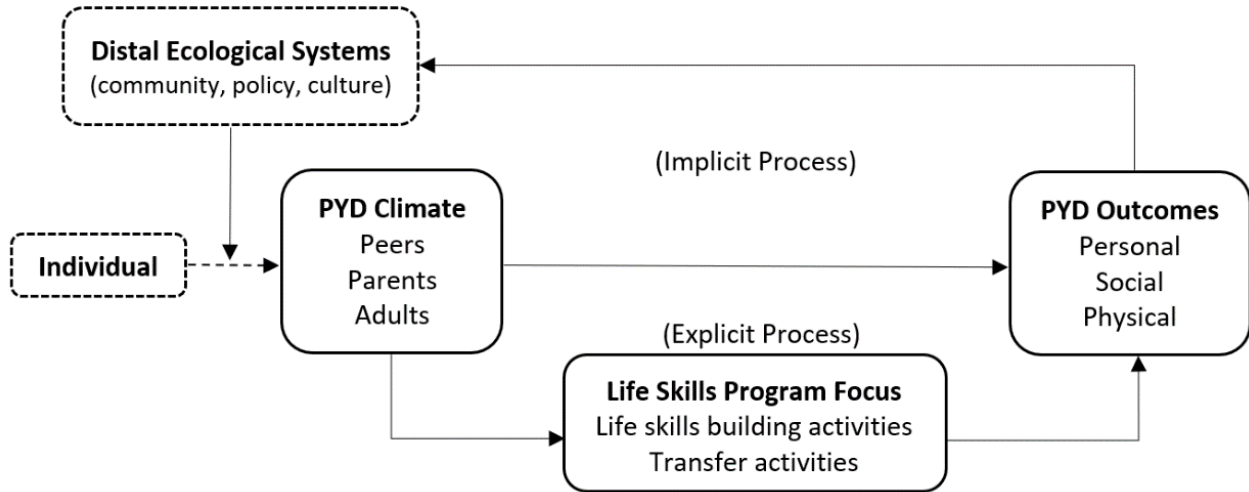


Because they forward the notion that athletes learn their values from their interactions with communicative actors, this assertion further supports the idea that the communication between athletes and communicative actors significantly influences psychosocial outcomes related to sports.

Although this line of research is warranted, Lee et al.'s (2008) model fails to capture how communicative actors influence athletes' experiences and the lessons they learn (e.g., Camiré et al., 2012; O'Rourke et al., 2012), and highlights that their model fails to incorporate these influences as antecedents. As such, the positive outcomes associated with sports are from more than just simply participating. Instead, learning such lessons are rather the outcome of the socialization one receives from the interactions they have with others (Lee et al., 2000; Lee et al., 2007; Lee et al., 2008; Vallerand, 1994).

Notably, the importance of communicative actors has not been entirely overlooked. Indeed, researchers have examined communicative actors' role in assisting in the development of athletes' psychosocial outcomes often labeled as positive youth development (PYD; Holt et al., 2017; see Figure 1-2). Holt et al. (2017) explores how communicative actors communicative

Figure 1-2 Holt et al. (2017) Model



actors' influence positive youth outcomes and are interested in the activities that help athletes transfer their skills to contexts outside of sport. Researchers have used this model to identify if the explicit lessons learned in youth sport participation translate into life skills appropriately demonstrated outside of sport (Bean et al., 2018; Côté et al., 2014; Danish et al., 2004; Holt et al., 2017; Turnidge et al., 2014). Specifically, PYD research often proposes that PYD climates consist of peers, parents, and adults (i.e., coaches/leaders) who influence outcomes such as personal development, social development, and physical development through life skills programs and activities that explicitly teach transferable skills (Bean et al., 2018; Côté et al., 2014; Holt et al., 2017). Literature supports the notion that PYD climate can directly influence PYD outcomes through life-skill based programs (e.g., Play it Smart program for football, First Tee program for golf, Holt et al., 2020), but fails to examine the implicit process of sport

participation. This is notable as Holt et al. (2017) forwards that PYD often includes communication from communicative actors and that,

It should be noted that there was relatively little information about explicit pedagogical strategies designed to promote [life skills] transfer. In fact, there were several examples that showed that transfer could occur implicitly, without deliberate attempts to focus on how skills learned in sport transfer to other areas in life... reflecting the notion of implicit transfer, the idea that skills could ‘easily’ transfer from sport to life. (Holt et al., 2017, p. 34)

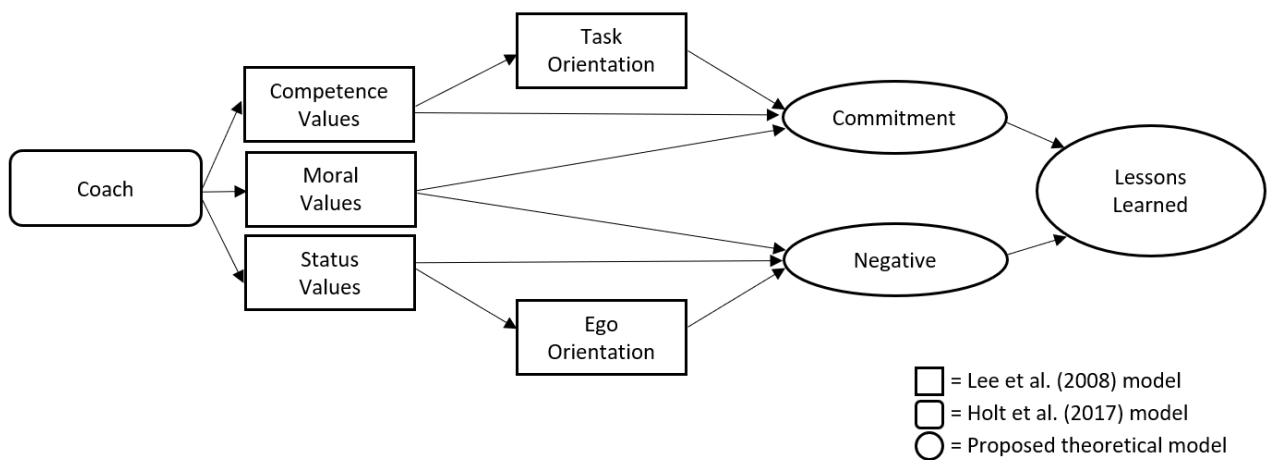
Although this line of research does incorporate communicative actors, the authors state that one’s achievement orientation (i.e., motivation to improve, task orientation; motivation to win, ego orientation) may significantly impact the relationships between PYD climate and PYD outcomes (Holt et al., 2017).

This assertion made by Holt et al. (2017) is valid as previous research has indicated that one’s motivation acts as a stimulant to development (Larson, 2006). For example, life-skills explicitly or implicitly provided to youth athletes may not lead to PYD outcomes if the athlete does not demonstrate motivation for the sport (Larson, 2006; Lee et al., 2008; Stanger et al., 2018; Stupuris et al., 2013). As researchers imply, this phenomenon is fundamentally communicative in nature (Dorsch et al., 2015; Holt et al., 2017; Lee et al., 2008; Weiss, 2008) and therefore sport communication research needs to address how communication from communicative actors influences the psychosocial outcomes and the lessons athletes learn.

Thus far, sport communication highlights that coach-athlete communication greatly contributes to an athlete’s experience in sports (Cranmer et al., 2017, 2019; Jowett, 2017; Rey et

al., 2022). Although literature postulates a meaningful relationship between coaching communication and psychosocial outcomes, to our knowledge there have been no attempts to integrate these areas of study that look at how coaching communication influences athletes' values, orientation, and attitude as forwarded by Lee et al. (2008). Furthermore, Coakley (2013) posits that the benefits of sport such as psychosocial outcomes are often “the focus of personal testimonials than social research” (p. 310). One reason for the dearth of social research on athlete's perceptions of learning psychosocial outcomes from sport may be due in part to the lack of a model that empirically measures athlete development and moreover, a measurement such as learning to support these claims. The development of such a model would provide researchers with a more holistic understanding of how these influences come together to affect athlete's psychosocial development and if athletes perceive to learn these lessons through sport (see Figure 1-3). Specifically, this model would combine Lee et al. (2008) and Holt et al. (2017), measure athletes who are no longer participating in competitive sports to elicit their perceptions of the influence of their coach's communication on their values, orientation, attitudes, and if they perceive that they learned lessons in sports that transcend into other contexts.

Figure 1-3 Proposed Model



Combining Lee et al.'s (2008) and Holt et al.'s (2017) models are warranted as sport communication scholar, Wenner (2021), recently discussed how previous literature from neighboring fields such as sociology and psychology can assist in sport communication research stating, "for the area to truly succeed, its center and core in communication and media studies needs to reach across sport studies most notably to the sociology of sport and sport psychology..." (p. 39). This call comes from a need to further our understanding of ways to support athlete's development and for people who are re-examining the place of sport in society. Therefore, the main purpose of this study is to build upon previous research to create a scale and a model indigenous to the field of sport communication that measures a sport-specific outcome and proposes a set of constructs and their relationship with one another to contribute to the advancement of sport communication as an academic discipline.

A model that is representative and based in the field of sport communication will need to be constructed and grounded in the communicative interactions that are inherent in sport. This is to say, that although parts of athlete development have been examined, thus far, only implicit inferences can be made about the relationships and influence they have on one another. Next, an understanding of the process of learning psychosocial outcomes athletes go through is needed to assist in supporting and encouraging meaningful and positive athlete development. Simply put, the model will explain and illustrate the relationship and extent to which the process of athlete development relies on communicative actors.

A model of sport communication should build upon the work of other sport researchers such as Lee et al. (2008) who has examined the relationships among values, achievement orientations, and sportpersonship in youth sports. Of special concern for researchers in the area of sport communication, is that Lee et al. recognizes that the values their work examines are

learned by athletes from their social networks but fail to empirically examine how communicative actors influence such values. Therefore, a model of sport communication should build upon and extend Lee et al.'s original concept to include communicative actors (e.g., coaches) and a negative attitude towards sport in order to further assess athlete development.

Moreover, the development of a more comprehensive model of sport communication is necessary for several reasons. First, a model of sport communication will explain and predict athletes learning in sport that is yet to be explored from a communication lens. Second, the model will provide coaches the knowledge necessary to make meaningful adaptations to their communication with athletes. Last, as previously mentioned, this model answers a call made by both sport disciplines (i.e., sport psychology, sport communication) to assist in the further development of each field. As such, this dissertation proposes a new model that looks at how coaches influence an athlete's values, how values are associated with attitudes as mediated by goal orientation, and how attitudes relate to athlete's perceptions of having learned life lessons through sport.



## 2 Literature Review

### 2.1 Overview

Aspects of sport such as values (Lee & Cockman, 1995; Lee et al., 2000), achievement orientation (see Lochbaum et al., 2016 for review), and pro and antisocial attitudes (Lee et al., 2007; Vallerand et al., 1997) have been explored at great lengths in sport psychology research. Exploring this line of athlete development has highlighted that the communication from communicative actors significantly influences an athlete's development and overall sport experience (Bruner et al., 2021; Gould & Carson, 2008; Newman et al., 2020; Riley & Anderson-Butcher, 2012; Santos et al., 2019; Šukys et al., 2015). These interactions can have a meaningful impact on an athlete both during and after their sport experiences (Holt et al., 2009; Santos et al., 2019; Turnnidge et al., 2014).

Athletes also indicate that communicative actors influence their development in sport and the skills they learn and apply to contexts outside of sport later in life (Chinkov & Holt, 2016). Although sources illustrate these connections, less known is how communicative actors influence athlete development within the same study (Gould & Carson, 2008). Not only is there a gap in the literature, but sport researchers often cite these relationships as important factors in understanding the development of athlete's psychosocial outcomes (i.e., athlete development) and the lessons they learn. Yet, empirical research neglects to include them in their models (e.g., Holt et al., 2017; Lee et al., 2008). Failure to incorporate communicative actors into these models could be because the study of these influences, while vital to gaining a better understanding of the sport experience, is outside the realm of sport psychologists foci.

Although there is evidence to indicate that athlete development may include both explicit and implicit lessons, the lack of theoretical understanding as to how this influences athlete

development and to what extent is less known (Danish et al., 2004; Gould & Carson, 2008; Newman, 2020; Smoll et al., 2011). As Gould and Carson (2008) forward, “given the infancy of the scientific study of life skills development through sport, there is a need for more and better research” (p. 68). In their proposal for ways to improve this line of research, they specifically identify the need for quantitative research, the development of valid measures, the importance of studies to focus on theoretical explanations for the relationship between athlete development and sport participation, and the ability to identify if the learned lessons transcend sport (Gould & Carson, 2008). Simply put, the process in which development occurs and if athletes, later in life, perceive sport as something they learned from is understudied. As Gould and Carson (2008) state,

a review of the current literature on life skills development through sport reveals an area that lacks extensive theoretical explanations. This deficit weakens the area, as few overarching ideas exist to guide research and explain why life skills do or do not develop through sport participation. (p. 67)

Indeed, less known is how athletes develop while playing sports and how this development leads to using lessons that were implicitly taught through sport in athletes’ lives today.

Therefore, in line with the goals of this research, in the pages that follow, the review of literature will demonstrate how the proposed model fills the current gap by extending the sport psychology literature and taking a uniquely communicative view to addressing how these human interactions influence psychological outcomes and athlete’s perception of their learning life lessons through sport. The communication from communicative actor (i.e., coach), one’s individual values (i.e., competence, morals, status), achievement orientation (i.e., task and ego), sportpersonship (e.g., attitudes; Lee et al., 2008), and learned lessons will be discussed, and

pertinent literature reviewed. Since the model itself hinge on communication with communicative actors, we will begin with explaining their influence in the process.

## **2.2 Communicative actor**

Within sport, athletes have communicative actors who heavily impact their experience. A communicative actor is an individual who interacts and communicates with the athlete (Chu & Zhang, 2019). For athletes, coaches play a significant role in shaping their experience due to the amount of time spent with one another (Backman, 1985; Beets et al., 2006; Bruner et al., 2021; Sheridan et al., 2014; Vallerand et al., 1997). An athlete's values towards sport will reflect their experience, relationship, and communication with their coach.

Athletes often create meaningful connections with their coach as some argue that coaches are the most influential in regard to athlete development (Amorose & Anderson-Butcher, 2007; Chelladurai, 1984; Raabe & Zakrajsek, 2017). Due to the amount of time spent with one another, athletes indicate that coaches can have a strong influence on their individual self-worth and overall memory of their athletic development such as enjoyment (Bell, 1997; Wang et al., 2009). Specifically, the communicative interactions inherently contribute to an athlete's perception of psychosocial outcomes and overall development. For example, Pennington (2019) posits that a coach can enhance or hinder the social and character development of an athlete while under their care. Davis et al. (2019) echoes this assertion highlighting the meaningfulness of a coach's communication to relationship with their athletes to teach psychosocial outcomes such interpersonal knowledge regarding relationships and intrapersonal knowledge such as motivation, values, attitudes, and other valuable life skills. Similarly, because of a coach's position to provide experiences that promote lessons that transcend sport, a coach's communication has a unique influence on the athlete's social, cognitive, and emotional

development (Becker, 2009; Camiré et al., 2011; Côté et al., 2010; Cranmer & Brann, 2015). Specifically, athletes often desire to play for a coach who motivates them, increases their affect for the sport, who they can form a positive relationship with, and who improves their self-efficacy within the sport (Rey et al., 2022; Vella et al., 2011).

Coaches are often expected to teach athletes skills that transcend sport and become personal assets in other aspects of life (e.g., school, home, work, community) (Gould & Carson, 2008; Pierce et al., 2017). As forwarded by Turnnidge et al. (2014), this can happen explicitly or implicitly. Explicitly means that the coach specifically and intentionally creates an environment that athletes can learn and practice life skills in and outside of sport (e.g., a coach signing the team up for a sport development program that teaches the athletes what skills they can learn from sport that will be applicable later in life). Implicitly using sport to teach life skills indicates that a coach creates a climate that may later resonate with the athlete as a life skill building moment, but it may or not be the coach's intentions to provide that type of instruction to the sport environment (e.g., explaining to athletes the value in being early to practice and this lesson teaching them the value in being early to their job later in life). Regardless, both approaches indicate that athletes learn valuable lessons (Chinkov & Holt, 2016; Weiss et al., 2016).

Previous literature has demonstrated that coaches are also an essential factor in fostering athlete motivation (Buning & Thompson, 2015; Fransen et al., 2018; Wang et al., 2009). For instance, when coaches effectively use their power (e.g., Power Bases; French & Raven, 1959) an athlete's motivation to play the sport also increases (Martin et al., 2009; Rey et al., 2022). Similarly, athlete development is influenced by their coach's ability to both effectively motivate and challenge them (Larson, 2006). To motivate and challenge an athlete, a coach must be able

to push their athlete to play at a desired level, provide constructive criticism, and express encouragement when the athlete succeeds (see Cranmer & Brann, 2015; Cranmer et al., 2017).

In previous literature has been identified as the motivational climate (Hollembek & Amorose, 2005; Martin et al., 2009; Turman, 2003). As demonstrated above, a motivational climate refers to the affective and social conditions created by interpersonal relationships (Ames, 1992; Hollembek & Amorose, 2005). Coaches are often tasked with creating these environments for their teams through the relationships they develop with their athletes (Duda & Balaguer, 2007).

Important to note however, is that not all athletes are motivated the same way. As demonstrated by Mageau and Vallerand (2003), some ways that coaches can motivate their athlete is to acknowledge the athlete's perspectives and feelings, provide constructive feedback, or explain the logical reasons behind a specific task, rule, or limitation. Indeed, an athlete's perception of the type of communication a coach is using is one of the most influential factors in stimulating motivation (Buning & Thompson, 2015). These types of communication include verbal feedback, open, clear, and direct communication, as well as the absence or avoidance of communication (Buning & Thompson, 2015). Coaches who provide verbal feedback communicate encouragement, corrective instruction, and praise. A coach's communication that is open, clear, and direct often informs the athlete of their expectations and goals for both the broad team and environment, but also the individual. When a coach is absent in regards to communicating with their athlete or avoids speaking with them, they will fail to provide feedback, clarity, or acknowledgement. Simply put, a coach's communication can significantly influence an athlete's motivation in the sport. These findings parallel Cranmer et al. (2017) who examined coaching confirmation.

From a broad communicative lens, confirming communication has the ability to make adolescents and young adults feel supported, connected, valued, and recognized in a particular area (Dailey, 2009). From a more specific sport communication lens, coaching confirmation is built on Dailey's work and when used appropriately can lead to improved coaching effectiveness (Gilbert & Côté, 2013) and increased motivation in athletes (Cranmer et al., 2016). Specific to this study and building off Cranmer and his colleagues, *coach confirmation* refers to the “transactional process by which coaches communicate to players that they are endorsed, recognized and acknowledged as valuable, significant individuals” (Cranmer & Brann, 2015, p. 195). Cranmer and Brann (2015) offer six different communicative themes that reflect coach confirmation: individual communication (e.g., when a coach confirms you in a unique way specific to your communication style), personal communication (e.g., when a coach discusses topics with you outside of sport), recognition (e.g., when a coach highlights your performance or perceives you to have contributed to the success of the program), improvement (e.g., when a coach challenges the athlete to improve in a specific skill), encouragement (e.g., when a coach demonstrates that they have confidence in what you will be able to accomplish in the future), and investment (e.g., when a coach invests time or resources on you or the team). Cranmer et al. (2018) found that athletes like to be confirmed in challenging ways that push them to improve while recognizing their potential, while also providing acknowledgement when the athlete performs well. Coaching confirmation has proven to be valuable in highlighting a specific communicative action a coach can incorporate into their regimen to create psychosocial outcomes and improve athlete development.

## 2.3 Values

Values have been defined as learned beliefs obtained through interactions with one's social groups and through personal experiences that help individuals decipher which goals and behaviors are most preferable given a certain context (Rokeach, 1973; Schwartz, 1994). Of specific interest to the current discussion are the values athletes hold within a sport environment. Often, these values are reflective of their interactions with parents, coaches, and teammates because they are inherently taught through the communicative process (Danioni & Barni, 2019; Dixon et al., 2008; Harter, 1978). According to Lee et al. (2008), salient values for athletes include competence (i.e., perceptions of playing well, achievement, and skill), moral (i.e., playing fair, obedience), and status (i.e., winning, public image). These values represent the principles or standards athletes consider important which innately influence one's attitudes and behaviors in sport (Lee et al., 2008; MacLean et al., 2008). Unfortunately, athletes are not always judged based on the values they hold but more so their performance, "players are often evaluated based on the outcomes of their actions rather than the means through which they achieve them" (Boardley & Kavussanu, 2007). This indicates that on a societal level, performance outcomes (i.e., winning) outweighs overall athlete development. More recently, as more attention is being paid to the psychosocial development of the athlete, researchers have started to draw attention to the importance of values, and their influence on these psychosocial outcomes (Danioni et al., 2017; Lee et al., 2008; Lucidi et al., 2017).

*Competence* values refers to the reasons athletes play sport and the importance of these reasons in driving such decisions (Lee et al., 2008). Often, this includes decisions that emphasize achieving goals and improving skills (Danioni et al., 2017). Furthermore, perceived competence is an athlete's own evaluation of their ability and what they find important while performing

their sport (Lee et al., 2000; Lee et al., 2008). As Harter (1978) predicts, these perceptions can be influenced by one's coaches, parents, and peer support. This influence from stakeholders may lead to higher or lower levels of perceived competence as the conversations are either positive or negative in nature (Allen & Howe, 1998; Harter, 1978; Mertens et al., 2018). Research further demonstrates that high levels of perceived competence influence higher levels of motivation, commitment, respect for social conventions, and persistence (Adell et al., 2019; Danioni & Barni, 2019; Lee et al., 2008; Rottensteiner et al., 2015).

*Moral* values refer to the extent that an athlete believes it is important to demonstrate fairness, honesty, and obedience while engaging in sports (Lee et al., 2008). Specifically, sports are highly credited for developing moral values due to athletes' engagement with communicative actors (Stanger et al., 2018). Often, this is examined by exploring how athletes conduct themselves while competing in their sport (Lucidi et al., 2017). For example, there is evidence to support that athletes are more willing and likely to enact behaviors, such as unfair play, if they perceived their teammates to be likely to do the same (Romand et al., 2009; Traclet et al., 2015). Decisions that athletes make often stem from interactions with coaches and teammates who may encourage and provide environments conducive to specific moral behaviors (Stanger et al., 2018; Traclet et al., 2015). As such, moral values have been noted to directly predict prosocial and antisocial sportspersonship behaviors. For example, Adell et al. (2019) and Lee et al. (2018) found that those high in moral value demonstrated prosocial sportspersonship and those low in moral values demonstrated antisocial sportspersonship behaviors. Additionally, literature identifies moral values as a strong influence in an athlete's decisions related to sportspersonship, cheating, and listening to direction (Lee et al., 2008; Traclet et al., 2015; Vallerand et al., 1997).



*Status* values refer to the importance that athletes give to their image and performance in relation to others (Lee et al., 2008). Researchers exploring athletes' values, while competing in sports, indicate that status values are often the least important to athletes (Goggins, 2015). However, this does not indicate that they are not present, it is just to say that competence and moral values are strongly associated with their decisions and behaviors in sport (Danioni et al., 2017; Goggins, 2015; Lee et al., 2008). One way that researchers have tested status values is as an antecedent to achievement orientation such as ego orientation (Lee et al., 2008; Saldanha et al., 2020). Their results indicate that status is the strongest predictor of ego orientation (Lee et al., 2008; Saldanha et al., 2020). Communicative actors also influence an athlete's status value. When pressure to perform or win is the focus of communication from communicative actors, athletes report higher levels of perceived status value (Danioni et al., 2017, Dorsch et al., 2015). This means that athletes are more interested in winning, proving they are better than others, their individual performance more than how the team does, learning, or long-term development. Overall, the values an athlete develops are influenced by the communication they have with various communicative actors such as parents, coaches, and teammates (Kremer-Sadlik & Kim, 2007). As demonstrated by previous literature, an individuals' values underpin their achievement orientation (i.e., motivation) within the sport context (Lee et al., 2008).

## **2.4 Achievement Orientation**

Achievement orientation is defined as one's cognitive approach to an activity that may influence their motive to engage in and respond to the activity (Amorose & Horn, 2000; Weiner, 1986). Studied in various contexts including organizational, instructional, and sport settings, achievement orientation is a construct labeled to reflect the motivational process under investigation (Dweck & Leggett, 1988). For example, previous researchers have referred to the

achievement orientation construct as the difference between learning goals versus performance goals (e.g., Elliott & Dweck, 1988), task-orientation versus ego-orientation (e.g., Weber, 2003), and mastery goals versus competitiveness (e.g., Roberts & Balague, 1991). Pertinent to this discussion, achievement orientation will be defined as task and ego orientation within the context of sport.

Built on the assumption that individuals are goal-driven and intentional, task and ego orientations guide ones' decisions and behaviors in a sport context (Lee et al., 2008; Roberts et al., 1998). As Mageau and Vallerand (2003) postulate, athletes may be motivated to compete in or complete an activity to demonstrate mastery (e.g., task orientation) or for personal success (e.g., ego orientation). *Task orientation* is what motivates an athlete to complete a task. Often, task-oriented athletes' predisposition is to focus on improvement and hard work when performing an activity. This approach often leads to greater affect for the activity and can lead to mastery of a task (Jagacinski & Nicholls, 1984; Roberts et al., 1998). The concept of ability is not pertinent to the disposition because task-oriented athletes perceive that the activity will help them become better at the skill than when they started (Nicholls et al., 1989; Roberts et al., 1998). Additionally, task orientation has been related to the communication and endorsement of sport later in life (Roberts et al., 1989). This is an important facet of the orientation as Roberts et al. (1998) explains that "when the participants were task oriented, they generally endorsed personal development and lifetime skills as purposes of sport, motivation or effort as the cause of success, and mastery experiences as sources of satisfaction" (p. 342). This finding demonstrates that athletes who are task oriented may communicate about the psychosocial outcomes, and athlete development they experienced, later in life.

*Ego orientation* is the predisposition to focus on completing an activity to establish dominance or superiority over another (Jagacinski & Nicholls, 1984). Athletes who are ego oriented often attempt to use the least amount of effort required and focus on the goal of winning above anything else (O'Rourke et al., 2013; Roberts et al., 1998). Ego oriented athletes are concerned with being better than their opponent as a means to gain recognition, awards, approval, and are willing to do so with a win at all costs mentality (Amorose & Horn, 2000; Roberts et al., 1998). Furthermore, ego orientation has been positively related to antisocial sportspersonship outcomes, negatively related to long-term achievements, and negatively related to positive psychosocial outcomes such as persistence and hard work (Amorose & Horn, 2000; Lee et al., 2000; Lee et al., 2008; Roberts et al., 1998). This means that athletes who are ego oriented are more likely to cheat and show poor gamesmanship, are less likely to continue playing their sport long term, and are less likely to perceive that they learned life lessons. Task and ego orientation are also learned from the communicative actors athletes socialize with (Duda et al., 1991; Harter, 1978; Lee et al., 2007; Roberts et al., 1998). As such, one's motivation towards sports can be stimulated by the conversations athletes have with communicative actors. For instance, research indicates that if communication from parents, coaches, and teammates indicates that winning is valued over development, the athlete will likely demonstrate ego-oriented decisions and behaviors (Pennington, 2019; Roberts et al., 1994). Amorose and Horn's (2001) results indicated that a coach's communication can significantly influence an athlete to approach sports with a task-oriented disposition. Moreover, Lee et al. (2007) indicate that task and ego orientation mediate the relationship between individual values and sportspersonship.

## 2.5 Sportspersonship

The definition of sportspersonship has evolved through the years (Giebink & McKenzie, 1985; Haskin, 1960; Kistler, 1957; Kroll, 1976; Shields & Bredemeier, 1995; Weiss & Bredemeier, 1986). Originally, sportspersonship represented a general attitude toward certain sport behaviors, a positive prosocial interaction related to game play, a demonstration of respect for rules, a demonstration of moral reasoning, or the pursuit of success in sports in ethical and moral ways. However, Vallerand et al. (1996) argued that the definition of sportspersonship was not well defined and that without a clear definition it would be impossible to continue research on this topic. As such, Vallerand et al.'s (1996) research examined and defined sportspersonship as:

A general or core tendency toward the respect of and the concern for the sport environment, the rules, and its participants (coaches, teammates, referees and officials, and the opponent), and a concomitant avoidance of a negative win-at-all-costs approach toward participation in sport by putting the emphasis on the social component of sportsmanship... (pp. 96-97)

There are five dimensions offered by Vallerand et al. (1996), meant to provide a more holistic understanding of how athletes demonstrate sportsmanship. First, athletes can demonstrate sportsmanship by displaying commitment for the sport. This means that athlete's work hard, acknowledge mistakes, and strive for improvement. Second, athletes exemplify respect for the social conventions within sport by engaging in handshakes with opponents after games, losing well, and recognizing talented others. Third, athletes have respect and concern for the rules of their sport and those who officiate even when they disagree with calls. Fourth, athletes will demonstrate true respect and concern for their opponents. An example of this is

allowing an opponent to play even if they are late, sharing equipment if necessary, and assisting injured opponents instead of taking a competitive advantage. Last, Vallerand et al. (1997) assert that athletes can also develop a negative approach towards sportsmanship. This is characterized by athletes who exhibit a poor attitude and approach sports with a win-at-all-costs mentality, become visibly angry after making a mistake, and compete for individual prizes or recognition. Vallerand et al. (1997) postulate that athletes learn what sportsmanship is and what it is not through their interactions with communicative actors such as parents, coaches, and teammates as well as contextual situations.

Vallerand and his colleagues notably highlight that by providing a multidimensional definition for sportsmanship, it allows researchers to separate the dimensions (Vallerand et al., 1996; Vallerand et al., 1997) thereby allowing researchers to investigate how specific facets influence the personal and contextual determinants of individuals behaviors (Vallerand et al., 1996). This last point made by Vallerand et al. (1996) is significant to the current discussion of the development of the athlete. As stated earlier, because of the ubiquitous nature of youth sports in this country, sport has the potential to have a significant impact on the development of the individuals that participate in them.

This means that athletes can develop a positive or a negative attitude towards sports. In a context that finds more than 21 million youths participating in each year, such as sports, the current discussion of sport is less concerned with youth athletes learning the social conventions and even the rules of a given sport, and is more centered on how these athletes learn some of the positive social-emotional outcomes of sport such as the value of hard work, acknowledging mistakes, and striving for improvement (the first dimension of Vallerand et al.'s model called commitment). As such, if not managed appropriately, sport appears to be a context where youth

participants can learn negative outcomes such as a need for recognition and an inability to learn from mistakes (Vallerand et al.'s last dimension called negative). Therefore, it is the first and fifth dimensions of Vallerand et al.'s model of sportsmanship that is the main concern to this discussion of the development of the athlete.

To further clarify, *commitment* reveals a positive attitude towards one's engagement with sport that often aligns with one's task orientation and competence values (Lee et al., 2008; Lemyre et al., 2002; Lochbaum et al., 2016). For example, an athlete who perceives themselves to be skillful and finds meaning in the effort it takes to perform a task (e.g., to improve their skills) will demonstrate stronger commitment attitudes towards the sport. A *negative approach* is a negative attitude towards one's engagement with sport. This behavior is often predicted by ego orientation and status values (Lee et al., 2008; Lemyre et al., 2002; Lochbaum et al., 2016). For example, if an athlete is playing their sport to show that they are better than others and are more concerned with winning than anything else, they will have a negative approach towards the sport. As demonstrated, one's values, orientation, and sportpersonship are closely aligned (Chantal et al., 2013; Guo et al., 2021).

Recently, studies have examined sportpersonship and behavioral intentions (see Çağlayan et al., 2021; Guo et al., 2021). Guo et al.'s (2021) examined how sportpersonship mediated the relationship between achievement orientation and doping intentions. Their results indicate that there were both direct and indirect effects on athlete's achievement orientation and doping intentions. Specifically, task and ego orientations had significant influences on sportsmanship and doping intentions. Furthermore, Çağlayan et al. (2021) examined the relationship between sportpersonship and communication skills (i.e., communication principles, self-expression, active listening and non-verbal, and willingness to communicate). Their findings

indicate that sportpersonship significantly relates to individuals' willingness to communicate, active listening, nonverbal communication, and self-expression. Overall, these studies are necessary to address because they draw attention to sportsmanship's ability to predict behaviors one enacts in other contexts outside of sport.

## **2.6 Lessons Learned in Sport**

Researchers within the area of sport forward that the different experiences athletes encounter affect their overall development and promote skills and behaviors that are transferable to contexts outside of sport (Barber et al., 2005; Danish, 2002; Larson, 2000). Through the years, researchers have identified skills that athletes hone while playing sports and the psychosocial outcomes associated with being an athlete (e.g., Gould & Carson, 2008; Hodge et al., 2013; Moote & Wodarski, 1997; Newman et al., 2020). For instance, Moote and Wodarski (1997) conclude that an athlete's ability to control their emotions, demonstrate high levels of self-efficacy, problem-solve, communicate honestly, and gain and maintain social support from others are skills that can be enhanced through sport and are transferable to the rest of an athlete's life. Gould and Carson (2008) support this notion when they write that athlete's learn "those internal personal assets, characteristics and skills such as goal setting, emotional control, self-esteem, and hard work that can be facilitated or developed in sport and are transferred for use in non-sport settings" (p. 60).

While researchers in the realm of sport discuss how athletes develop, they also draw a distinction between lessons that are learned via explicit means versus implicit means (e.g., Bean et al., 2017; Gould & Carson, 2008; Turnnidge et al., 2014). When researchers or coaches use explicit means to teach athletes lessons, they often do so by incorporating a specific life skills program alongside a sport experience. In other words, explicit-based learning involves

implementing workshops and curriculums designed to teach athletes about valuable life skills and the ability to transfer these lessons to contexts outside of sport. This design uses sport as a medium to gain the participation and attention of participants to complete the program (e.g., after school program, camps, etc.). It is important to note that investigations into the benefits of sports often focus on the athlete's development through these explicit-based learning programs as opposed to looking at what the athlete learns or gains through sport participation itself (e.g., Allen et al., 2014; Allen & Rhind, 2019; Hodge et al., 2013; Hodge et al., 2017; Newman, 2020; Newman et al., 2020; Pepitas et al., 1992). Youth complete these programs in addition to, and outside of, their normally scheduled practice (Hodge et al., 2017; Newman et al., 2020). For instance, Hodge et al. (2017) integrated the Sports United to Promote Education and Recreation (SUPER) curriculum alongside the Hockey is For Everyone (HIFE) ice hockey workshop designed for local Boys and Girls Club members. Each day after practice, participants completed one of eleven sessions with trained staff, designed to target Positive Youth Development (PYD). Their results indicate that both participants, and their parents, recognized the lessons learned during these sessions (e.g., goal setting, seeking help, managing emotions, confidence, etc.) applied to contexts outside of their camp.

Similarly, Newman and his colleagues examined PYD using a similar program (Newman, 2020; Newman et al., 2020). They integrated a sport-based PYD program with a Learning in Fitness and Education through Sports (LiFesports) summer camp provided for underserved urban youth (Newman, 2020; Newman et al., 2020). At the end of the four-week summer program interviews with youth athletes revealed that they learned, developed, and applied both intrapersonal and interpersonal skills learned through the program into other aspects of their lives (e.g., school, relationships, other sports) (Newman, 2020). These included



interpersonal lessons such as communication skills, as well as intrapersonal lessons such as controlling their emotions, giving maximum effort, persistence, resiliency, teamwork, respect towards others, developing relationships, social responsibility learning personal responsibility (Newman, 2020).

Newman and his colleagues have also examined the ways parents and staff may influence underserved urban youths' development (Newman et al., 2020). During this 4-week, 19-day summer camp, participants played sports for 99 hours and participated in the *LiFEsports* program for 15 hours. Staff who ran the program were members of the community (e.g., teachers, students, etc.) and trained over a two-day period. Participants' parents attended a two-hour orientation that explained the program to them and encouraged them to discuss and reinforce what their children learned throughout the program while at home. At the end of the program, participants not only responded to questions regarding the development of the life skills mentioned above, but they also provided feedback concerning their perceptions of their staff/coach and parent's support during the program. Such programs indicate that individuals with supportive staff and parents will experience higher levels of development in skills such as effort, teamwork, social responsibility, social competence, and transfer of learning (Hodge et al., 2017; Newman et al., 2020).

While the results presented above focus on programs that train the individual, similar results have been found when assessing supplemental sport programs that focus on athletic team development. For example, programs such as the United States Olympic Committee's (USOC) Career Assistance Program for Athletes (CAPA) have been used to help athletes understand how they can transfer their skills from sports into future endeavors. Pepitas et al. (1992) held eight, one-day workshops, in several locations for athletes to learn how to manage their transition out

of sport, increase their awareness and understanding of the attributes they had to assist in the transition and future goals, and teach them about life outside of sport. Moreover, coaches are encouraged to explicitly promote athlete development by including activities into their training sessions that encourage the transfer of skills beyond sport into other contexts (e.g., Camiré et al., 2018; Pierce et al., 2017). For example, Newman, Black, et al. (2020) highlight that coaches can explicitly encourage athlete development by teaching, discussing, creating, encouraging, and promoting opportunities to learn and apply their skills inside and outside of sport.

Much of the aforementioned literature illustrates the benefits of using sport as a vehicle to explicitly encourage positive youth development, although scant, researchers do indicate that athletes develop from implicit means as well while engaging in sport (e.g., Barton, 2011; Holt, Tink, et al., 2008; Jones & Lavalley, 2009; Turnnidge et al., 2014). Implicit learning occurs when athletes develop life skills as a result of the actual participation in sport. In other words, the opportunities for growth and development occur naturally as a result of the situations the athlete experiences without these lessons being overtly pointed out. Here, the athlete is not consciously trying to learn and develop life skills that transcend the sport context, they just simply play and learn from the experience (Bean et al., 2018; Turnnidge et al., 2014). Turnnidge et al. (2014) highlight that the implicit lessons do “not focus on employing intentional strategies to promote the transfer of these skills. The basis of the implicit approach is that the values and skills that are taught in sport are not different from those required in real life” (p. 209). In other words, individuals learn lessons as a result of their in-sport experiences. For instance, an individual may learn the value of hard work through first-hand experience of preparing for an event and reaping the benefits of their hard work, such as winning or playing time. Research by Chinkov and Holt (2016) demonstrates that athletes often believe that they learn valuable life lessons implicitly

through their sport participation. Specifically, they found that when Brazilian Jiu-Jitsu athletes reflected upon their experiences within that sport, they feel that that they learned respect for others, self-confidence, healthy habits, and perseverance. Furthermore, these athletes reported that these lessons transcended to outside the sport context and influenced their everyday life.

Holt, Tink, et al. (2008) conducted interviews and field work with high school athletes and found further support for the assertion that that these athletes developed life skills implicitly through sport participation. Participants reported believing that they learned integrity, respect, and responsibility from playing and participating in sports. Moreover, athletes emphasized the implicit nature of their development by indicating that it was through their interactions with coaches and peers through training and competing that led to many of these lessons.

While development occurring from explicit means should not be ignored, it is often the lessons that are learned through the more implicit means that seem to stay with athletes after the conclusion of their playing days. Specifically, athletes have indicated that sports helped them develop skills that they are now able to implement into different contexts outside of sport such as their careers, emphasizing the benefits of sport experiences that implicitly taught them valuable lessons (Barton, 2011; Jones & Lavallee, 2009; Kendellen & Camiré, 2015, 2017). Jones and Lavallee (2009) conclude that it may be more beneficial to athlete development to allow them to learn through their lived experiences within sport than to explicitly focus on athlete development pertaining to the transferability of skills outside of sport. In other words, athletes often indicate that the lessons they learn come from being an athlete rather than specific lessons designed to teach them these skills. Although it is important to ensure that athletes learn in sport, explicitly designing lessons and programs to do so is not necessary (Turnnidge et al., 2014).

Simply put, the lessons learned from sport resonate, are often viewed as by athletes as more valuable, and transcend the sport context when they are implicitly introduced through their engagement with communicative actors and their experiences in sport than when they are explicitly introduced (Barton, 2011; Chinkov & Holt, 2016; Jones & Lavallee, 2009). In summary, the aforementioned literature demonstrates the role communicative actors have in athlete development specific to athletes' values, achievement orientation, sportspersonship, and perceptions of learned lessons in sport. Moving forward, this study will provide a further rationale for the proposed study, hypotheses, and a methods section outlining how the study will be conducted.

## **2.7 Rationale and Research Design**

To date, neither sport communication, sport psychology, or sport sociology research has proposed a model that explicitly explains and describes how communication shapes psychosocial outcomes and perceptions of learning. Although not always empirically tested within their research, sport psychologists and sociologists indicate that communication is inherent in sports, and particularly in athlete development (Coakley, 2016; Holt et al., 2017; Lee et al., 2007, Lee et al., 2008; Vallerand et al., 1997). Simply stated, there is yet to be a holistic examination of the athlete development process from a communication specific lens. As such, this study builds off work by Lee et al. (2008) and Holt et al. (2017) and proposes a communicative based sport scale and model that looks to advance the field of sport communication. Specifically, it postulates a set of constructs (i.e., communicative actor, values, achievement orientation, sportspersonship, learned lessons) and their relationships with one another to be able to explain the phenomenon of athlete development.

As previously discussed, although researchers posit that athletes learn lessons that transcend the context of sport, there is a lack of empirical evidence to support these assertions. This missing element in the research literature is of interest, and concern, since so many sport researchers espouse the development of transferable lessons as one of the main advantages to sport participation (Coakley, 2013). One possible explanation as to the lack of tangible evidence for this outcome is due to the lack of a validated measure to assess whether former athletes believe that the skills they learned as an athlete have had a discernable effect on their lives outside of sports. Without an appropriate measurement instrument, researchers are unable to verify if, and how, the athlete develops in this regard through sport participation. Therefore, in addition to forwarding the proposed theoretical structure discussed to gain a better understanding of athlete development, the current proposal calls for the development and validation of measure assessing an athlete's belief that the lessons they learned in the sport context have transferred and impacted other aspects of their life.

Former athletes are a valid population for this study pertaining to inclusion criteria. Notably, former athletes include individuals who have played a sport at the high school level for at least one season—either for a high school team or outside of high school or travel or club—and are not currently participating in a sport at either the college or professional level. Sampling from individuals no longer involved in sports is appropriate because as Bean et al. (2018) and Bronfenbrenner (1999) have indicated, the life skills learned through sport are not always readily apparent to the current athlete. This means that lessons learned may be better recognized later in life as athletes reflect and resonate on their sport experiences and development. As such, retrospective data is appropriate in this context.

Therefore, this manuscript forwards a three-part study. As previously discussed, although researchers often postulate that athletes learn lessons that transcend the context of sport, there is a scarcity of research that provides this assertion with empirical support. One reason why there might be a lack of research in this area is due to the lack of an appropriate measure for this concept. Without suitable measurement, it is difficult for researchers to observe a clear understanding of how the athlete develops through sport and how sport plays a significant role in providing athletes with lessons that are beneficial outside of sport. Therefore, Study One and Two looks to develop and validate the Learned Lessons in Sport (LLS) scale. The purpose of this measure will be to assess athlete's perceptions that participating in sports led to their learning valuable skills that transcend the sport arena. Upon using factor analytic techniques to determine a cogent factor structure, the LLS will then be used to test the forwarded model.

Study three will then employ the newly designed and validated LLS measure to test the model outlined previously examining the meaningful impact coaching communication has on athlete development. A model such as this will serve to demonstrate the inherently communicative nature of sport and athlete development and identify the intersection of individual development and human growth that is the effect of playing sports. In the chapters that follow, each study will have an introduction into the research design, participants, procedures and instrumentation, results, and a small summary. After all three studies are provided, the following chapter will discuss the meaningfulness of the results pertinent to each chapter before addressing implications, limitations, and future directions.

### **3 Study One: Exploratory Factor Analysis**

In Study One, items were created to appropriately assess athlete's perceptions that they learned lessons in sport that later transfer into other contexts of their lives and to determine a factor structure of those items. Data were then collected subjected to factor analytic techniques to determine if a cogent factor structure could be detected with those items. Since a central aim of sport is to promote lessons that transcend the boundaries of sport (Becker, 2009; Camiré et al., 2011; Côté et al., 2010), it is important to examine if the lessons learned in the sport context transfer to other contexts of an athlete's life. Unfortunately, scant amount of research has effectively measured the implications of sport in one's life or sports ability to teach lessons that are identifiable in athletes after their sporting experience (e.g., after a high school career). The importance of identifying this transfer of information is because lessons that are used outside of the context in which they are learned, demonstrates a transfer of learning (Newman, 2020).

Although the concept of learning is new to sport communication, it is not in the field of instructional communication. Within the instructional context, learning indicators are the "certain behaviors or activities that students perform when they were involved in learning content" (Frymier et al., 1996, p. 193). Often, when an individual learns something, they self-disclose to others about their experience and encourage others to feel similar towards the event (i.e., affinity) (Frymier, 1994). Several factors can influence learning such as content relevance, state motivation, confirmation, and affective learning (Ellis, 2000, 2004; Frymier & Houser, 1999; Goodboy & Myers, 2008) These studies highlight some of the antecedents to learning and draw attention to the similarities between instructional and sport communication literature.

Since the act of coaching is very similar to the behaviors demonstrated by instructors, instructional measures are often encouraged for use in a sport setting (Kassing et al., 2004;

Martin et al., 2009; Rey & Johnson, 2021; Turman, 2003; Turman & Schrodt, 2004). As such, sport communication researchers have found value using constructs and theories from instructional communication literature to help make sense of sports (e.g., Kassing et al., 2004; Martin et al., 2009; Rey et al., 2022; Turman & Schrodt, 2004). Thus far however, from our knowledge, there is still a limited amount of literature in sport communication pertaining to how athletes demonstrate that they use the lessons they learn while competing in sports in other contexts. Therefore, it is important for research to measure if lessons learned in sports transcend to other contexts.

### **3.1 Item Generation**

Consistent with previous literature and standard procedures for scale development (DeVellis, 2012), an initial pool of items were created based on a thorough review of the literature, a method used in previous sport communication research (Basinger, 2020). The foci of items created was to represent cognitions and behaviors that indicate individual's perceptions that they learned life lessons through the sporting context. More specifically, the conceptualization of the measure being created is thoughts and behaviors that indicate perceptions of learning through sport. Operationally, the Frymier and Houser (1996) Learning Indicators scale served as a model in item generation. This decision seemed to make conceptual sense since the Frymier et al. measure assesses behaviors that represent learning in the classroom and the current measure attempts to assess behaviors that represent learning through sport. For example, sport psychologists and sport communication scholars often discuss how athletes display learning outside of the realm of sport. Literature by Danish et al. (2004), Gould and Carson (2008), Chinkov and Holt (2016), and Smoll et al. (2011) propose that athletes, and former athletes exhibit positive psychosocial outcomes and behavior and often attribute it to the



lessons they learned through sport. These include higher levels of self-esteem, responsibility, the ability to effectively set goals, healthy habits, and perseverance (see Appendix A). Item generation resulted in 20-items, 5 which were inversely worded (e.g., don't, rarely) to avoid acquiescence bias.

To demonstrate face validity, a method utilized by LaBelle and Johnson (2018) was utilized. First, the initial items were shared with outside experts in the field, who indicated that the items adequately represent behaviors and conversations one would have had they learned lessons during their sporting experience. Second, the items were shared with former athletes, who agreed that the items were consistent with conversations and behaviors they have demonstrated as a result of learning lessons while playing sports. As such, it was determined that the items demonstrated face validity and could be used to measure learning in sports.

### **3.2 Participants**

As part of a larger dataset, participants were recruited from Amazon Mechanical Turk (MTurk) and Cloud Research Prime Panels (Cloud Research) (Chandler et al., 2019). Before combining the datasets, an independent sample *t*-test was conducted to test for significant differences between the two samples. Results indicate that there is not a significant difference ( $t(411) = .46, p = .64$ ) between Cloud Research ( $M = 3.82, SD = .76$ ) and MTurk ( $M = 3.78, SD = .74$ ). Inclusion criteria required participants to pass a captcha designed to eliminate robots, indicate that they played sports during high school (e.g., for the high school team, club, travel, etc.), currently live in the U.S., and provide consent that they were 18 years or older and could recall their sporting experiences to be eligible to complete the survey. Upon completion of the survey, participants received compensation (¢75, Mturk; \$1.25, Cloud Research). The final sample included a nationwide community sample of 207 individuals ( $n = 59$ , MTurk;  $n = 148$ ,

Cloud Research), 92 (44.4%) who identified as male, 113 (54.6%) as female, and 2 (1%) as non-binary. The mean age of the sample was 39.97 ( $SD = 14.93$ ) and ranged from 18 to 78. A majority of participants identified as white/Caucasian ( $n = 162$ ; 78.3%), black/African American ( $n = 24$ ; 11.6%), Asian ( $n = 9$ ; 4.3%), Hispanic/Latina/Latino ( $n = 6$ ; 2.9%), Native American ( $n = 4$ ; 1.9%), and 2 (1.0%) who identified as prefer to self-describe. When asked which sport they played, participants reported baseball ( $n = 260$ ; 9.7%), basketball, ( $n = 48$ ; 23.2%), cheer ( $n = 10$ ; 4.8%), cross country ( $n = 11$ , 5.3%), dance ( $n = 4$ ; 1.9%), football ( $n = 22$ ; 10.6%), gymnastics ( $n = 2$ ; 1.0%), lacrosse ( $n = 4$ ; 1.9%), soccer ( $n = 17$ ; 8.2%), softball ( $n = 18$ ; 8.7%), tennis ( $n = 8$ ; 3.9%), track and field ( $n = 8$ ; 3.9%), volleyball (court) ( $n = 15$ ; 7.2%), and other ( $n = 20$ ; 9.7%). Participants currently reside in 41 different states with a majority ( $n = 21$ ; 10.1%) living in California and reported on 35 different states where they played the sport during the time they reported on with a majority ( $n = 25$ ; 12.1%) playing in California. The highest level of competition played included 5 (2.4%) recreationally, 5 travel (2.4%), 139 (67.1%) high school, 10 (4.8%) community college, 40 (19.3%) 4-year university, 5 (2.4%) semi-professionally, and 3 (1.4%) other (i.e., military, university's club team, Olympics). To the best of their knowledge, the coach they reported on identified as male ( $n = 130$ ; 62.8%), female ( $n = 76$ ; 36.7%), and 1 (.5%) non-binary/third gender. Participants stopped playing their sport due to aging out ( $n = 125$ ; 60.4%), quitting ( $n = 46$ ; 22.2%), being cut ( $n = 8$ ; 3.9%), or other ( $n = 28$ ; 13.5%). Their roles on the team included being a starter ( $n = 144$ ; 69.6%), non-starter ( $n = 54$ ; 26.1%), and a captain ( $n = 29$ ; 14.0%). When referring to their sporting experience, on average, participants had been away from their sport for 18.02 years ( $SD = 15.07$ ) and ranged from 0-60 years removed. Personal education levels included High School degree ( $n = 76$ ; 36.7%), Associates degree ( $n =$

25; 12.1%), Bachelor's degree ( $n = 78$ ; 37.7%), Master's degree ( $n = 17$ ; 8.2%), Ph.D. ( $n = 5$ ; 2.4%), JD ( $n = 1$ ; .5%), and other ( $n = 5$ ; 2.4%).

### **3.3 Procedures and Instrumentation**

After obtaining approval by the university's Institutional Review Board (IRB), the survey was posted on both Mturk and Cloud Research. Participants were able to complete the survey on their own time, confidentially, voluntarily, and were screened for previous sporting experience. Data collected from these platforms is known to be as reliable as data collected from more traditional methods such as college student samples and laboratory settings (e.g., Buhrmester et al., 2011; Casler et al., 2013; Hauser & Schwarz, 2016). Before answering the questions on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*, participants were prompted with:

Please take your time moving forward as you answer the following questions. As a reminder, there are no right or wrong answers. Please keep in mind your experiences as an athlete and what you learned from participating in sports and answer the following questions to the best of your ability. Base your responses on your sport experience and your perceptions of it today unless otherwise indicated.

### **3.4 Results**

In order to complete Study One, a series of exploratory factor analyses (EFA) were conducted. This is an appropriate analysis as an EFA's general purpose is to examine the pairwise relationships between the individual variables to extract latent factors from the measured variables as a dimension reduction tool (Osborne, 2015). In line with suggestions provided by Hatcher (1994), with 20 items, a minimum of 100 participants were required. Therefore, a sample size of 207 far surpasses the recommendation of "5 times the number of

variables being analyzed” (Hatcher, 1994, p. 73). To begin, assumptions were checked. Factorability was determined by looking at the anti-image matrix which was  $>.5$ . The Kaiser-Meyer-Olkin (KMO) measure of sampling (.93) and Bartlett’s test of sphericity ( $\chi^2 (190) = 2875.04, p < .001$ ) also indicated that a factor analysis was appropriate for the data in the preliminary item pool. To be retained, a factor had to meet the following criteria: (1) be above the “break” in the scree plot, (2) obtain an eigenvalue above the value obtained while conducting a parallel analysis, (3) have primary factor loadings at, or greater than .50, (4) a secondary loading less than .20 between the primary factor loadings, and (4) account for at least 5% of the variance (Hatcher, 1994; Weber et al., 2011).

Results of an EFA using maximum likelihood extraction method with orthogonal varimax rotation as recommended by DeVellis (2012) for item deletion resulted in 6 rounds of item removal. Using the criteria stated above, the final iteration consisted of 11 of the original 20 items and produced 2 dimensions accounting for 61.53% of the variance. Finally, after reviewing the items that remained, two ad hoc decisions were made prior to running the confirmatory factor analysis as seen in Study Two. First, item 4 was removed because it did not conceptually fit with the rest of the items. Specifically, item 4 asked participants what they thought others do, while the remaining items referenced what the participants themselves do. As a result, item 4 was removed for conceptual clarity even though it fit empirically. The second ad hoc decision made was to condense the 2 factors produced in the EFA into a unidimensional scale. This decision was made based on three pieces of evidence. First, the second factor consisted of the three negatively worded items. Second, results of the factor transformation matrix value (.57) indicates that the two factors are highly correlated. Third, the eigen break appears below the break on the

scree plot. The final 10 items obtained a reliable Cronbach's alpha ( $\alpha = .90$ ;  $M = 3.72$ ;  $SD = .75$ ) and were used for Study Two.

Table 3-1: EFA Factor Loadings for Learned Lessons in Sport Scale.

<b>Items</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>M</b>	<b>SD</b>
1. I often have conversations with others about the lessons I learned while playing sports	<b>.82</b>	.11	3.28	1.07
2. I explain the value of sport to others	<b>.80</b>	.26	3.59	1.06
3. I often think about the lessons I learned while playing sports	<b>.77</b>	.34	3.55	1.07
4. I volunteer my opinion about the value of being an athlete with others	<b>.76</b>	.21	3.43	1.04
5. I like to talk about my sport experience(s) with friends and family	<b>.70</b>	.30	3.71	1.04
6. I believe that because I played sports, I communicate honestly with others	<b>.59</b>	.26	3.48	.91
7. In the past as an athlete, I actively participated in discussions with teammates about strategies and how to be better as a team	<b>.57</b>	.25	3.88	1.00
8. I don't believe that my time playing sports has taught me valuable life lessons	.30	<b>.79</b>	4.05	1.07
9. I don't see any value in playing sports when it comes to personal development	.13	<b>.78</b>	4.33	.87
10. I don't apply the lessons I learned in sports to non-sport settings.	.45	<b>.73</b>	3.94	.96

*Note.* Maximum Likelihood with Varimax Rotation. Bold font indicates primary factor loadings

### 3.5 Summary

The purpose of Study One was to establish an instrument that effectively measured if the lessons that athletes learn in sport transfer to other contexts. After demonstrating face validity, data was collected and analyzed. The results of an EFA reduced the initial item pool from 20- to 10-items and demonstrate a unidimensional instrument. As indicated above, this instrument is appropriate to use moving forward in Study Two.

## 4 Study Two: Confirmatory Factor Analysis

The purpose of Study Two was to confirm the factor structure found in Study One and demonstrate preliminary degrees of validity for the proposed scale. To demonstrate validity, evidence that the instrument is measuring the construct it claims to measure (Kerlinger, 1986), a number of concepts were measured along with the previously developed scale.

### 4.1 CFA

The unidimensional structure found in Study One was tested with data collected from different participants and was subjected to confirmatory factor analytic techniques (CFA). A CFA provides empirical validation for the given measurement for an a priori model based on theoretical assertions or previous research and is used to test the correlation structure of the data set against the hypothesized structure to rate its goodness of fit (Hatcher, 1994; Kerlinger, 1986; Kline, 2011). For this study, based on the results of Study One's EFA and the theoretical assumptions of a CFA (DeVellis, 2012), the following hypothesis is proposed:

**Hypothesis 1:** The unidimensional instrument produced in Study One will be confirmed via a CFA.

### 4.2 Criterion-related Validity

#### 4.2.1.1 Concurrent Validity

One way to demonstrate validity is with criterion-related validity. Criterion-related validity can establish how a new instrument matches up with previously established measures of outside criteria. Specifically, *concurrent validity*, indicates the amount of agreement between two different assessments occurring at the same time (DeVellis, 2012; Kerlinger, 1986). Specific to learning lessons that transcend sport, previous literature in sport communication research has measured affect (Rey et al., 2022; Turman & Schrodt, 2004). When reviewing all of the potential

criterion variables that could be associated with the transfer of learned lessons in sport to other contexts, participants' affect is a reasonable outcome to consider. This is because affect demonstrates one's attitudes towards a concept or behavior and as forwarded and measured by Turman and Schrodt (2004), athletes are encouraged to demonstrate what they learn through participating in sports in other areas of life, often measured as affect. Specifically, affect has been associated with attitudes towards teammates, coaches, the sport, the likelihood of using the skills learned in sports in other contexts, and the likelihood of returning to sports (Rey et al., 2022; Turman & Schrodt, 2004). In other words, affect should be correlated with lessons in sport albeit not isomorphic. Therefore, the following hypothesis was forwarded:

**Hypothesis 2:** Athletes' perceptions of lessons learned in sports will be positively related to their affect.

### **4.3 Construct Validity**

#### **4.3.1.1 Convergent and Discriminant Validity**

Another way to demonstrate validity is by providing construct validity. Construct validity concerns the theoretical relationship between two variables and consists of convergent and divergent validity. *Convergent validity* is when a construct is related to theoretically related variables (DeVellis, 2012). Demonstrating convergent validity indicates that the construct being measured really exists. As such, one particular construct that should be related to learned lessons in sport is participants evaluation of the sport environment (Bruner et al., 2014; Eys et al., 2009). The sport environment consists of both task and social cohesion. Task cohesion refers to the extent to which athletes perceive that they and their teammates work together towards a common goal. Social cohesion reflects athlete's perceptions that they enjoy the company of and get along well with their teammates in a social environment. The sport environment has been related to life

lessons for athletes as researchers indicate that teamwork is often one of the first lessons athletes learn (Lower et al., 2017) which is influenced by the social ties athletes have with one another (Bruner et al., 2014).

*Discriminant validity* is interested in being able to empirically differentiate between two similar constructs as well as highlight where the two instruments diverge in relatedness (Kerlinger, 1986). Although it is important to illustrate how concepts are related to one another in scale development, it is equally important to distinguish between like constructs. Given that the perception of learning life lesson is related to one's sporting experience, it is reasonable to assume that a perceived learned lessons and the sport environment would be similar, yet different from as demonstrated by not reaching isomorphism, a correlation of .70, at which point the measures are no longer reflecting distinct constructs (Dembrowski, 1968, Weber & Patterson 2000). Therefore, in line with the construct, the following hypothesis is proposed:

**Hypothesis 3:** Athletes' perceptions of lessons learned in sport will be positively, but not isomorphically, related to their perceptions of the sport environment they played in.

#### **4.4 Participants**

As part of a larger dataset, participants were recruited from Amazon Mechanical Turk (Mturk) and Cloud Research Prime Panels (Cloud Research) (Chandler et al., 2019). The final sample included a nationwide community sample of 206 individuals ( $n = 58$ , Mturk;  $n = 148$ , Cloud Research). Inclusion criteria required participants to pass a captcha designed to eliminate robots, indicate that they played sports during high school (e.g., for the high school team, club, travel, etc.), currently live in the U.S., and provide consent that they were 18 years or older and could recall their sporting experiences to be eligible to complete the survey. Upon completion of the survey, participants received compensation (€75, Mturk; \$1.25, Cloud Research). The final



sample included those who identified as male (95; 46.1%), female (107; 51.9%), and non-binary (4; 1.9%). The mean age of the sample was 40.46 ( $SD = 15.32$ ) and ranged from 18 to 82. A majority of participants identified as white/Caucasian ( $n = 139$ ; 67.5%), black/African American ( $n = 35$ ; 17.0%), Asian ( $n = 10$ ; 4.9%), Hispanic/Latina/Latino ( $n = 12$ ; 5.8%), Native American ( $n = 2$ ; 1.0%), who prefer to self-describe ( $n = 7$ ; 3.4%). When asked which sport they played, participants reported baseball ( $n = 26$ ; 12.6%), basketball, ( $n = 41$ ; 19.9%), cheer ( $n = 13$ ; 9%), dance ( $n = 2$ ; 1.0%), football ( $n = 19$ ; 9.2%), gymnastics ( $n = 6$ ; 2.9%), hockey ( $n = 1$ ; .5%), lacrosse ( $n = 2$ ; 1.0%), soccer ( $n = 18$ ; 8.7%), softball ( $n = 18$ ; 8.7%), tennis ( $n = 5$ ; 2.4%), track and field ( $n = 12$ ; 5.8%), volleyball (sand) ( $n = 1$ ; .5%), volleyball (court) ( $n = 21$ ; 10.2%), and other ( $n = 12$ ; 5.8%). Participants currently reside in 41 different states with a majority ( $n = 19$ ; 9.2%) living in California and reported on 42 different states where they played the sport during the time they reported on with a majority ( $n = 21$ ; 10.2%) playing in California. Highest level of competition played included 12 (5.8%) recreationally, 8 travel (3.9%), 133 (64.6%) high school, 13 (6.3%) community college, 32 (15.5%) 4-year university, 2 (1.0%) semi-professionally, and 4 (1.9%) other (i.e., military, university's club team, Olympics). To the best of their knowledge, the coaches they reported on identified as male ( $n = 14$ ; 68.0%), female ( $n = 64$ ; 31.1%), and 2 (1.0%) preferred not to answer. Participants stopped playing their sport due to aging out ( $n = 113$ ; 54.9%), quitting ( $n = 36$ ; 17.5%), being cut ( $n = 5$ ; 2.4%), or other ( $n = 52$ ; 25.2%). Their roles on the team included being a starter ( $n = 127$ ; 61.7%), non-starter ( $n = 48$ ; 23.3%), and a captain ( $n = 53$ ; 25.7%). When referring to their sporting experience, on average, participants had been away from their sport for 18.81 years ( $SD = 16.40$ ) and ranged from 0-68 years removed. Personal education levels included High School degree ( $n = 90$ ; 43.7%), Associates

degree ( $n = 34$ ; 16.5%), Bachelor's degree ( $n = 48$ ; 23.2%), Master's degree ( $n = 21$ ; 10.2%), Ph.D. ( $n = 2$ ; 1.0%), and other ( $n = 11$ ; 5.3%).

## 4.5 Procedures and Instrumentation

After obtaining approval by the university's Institutional Review Board (IRB), the survey was posted on both Mturk and Cloud Research. Participants were able to complete the survey on their own time, confidentially, voluntarily, and were screened for previous sporting experience. Data collected from these platforms is known to be as reliable as data collected from more traditional methods such as college student samples and laboratory settings (e.g., Buhrmester et al., 2011; Casler et al., 2013; Hauser & Schwarz, 2016). For the present study, participants had to pass a captcha designed to eliminate robots, indicate that they played sports during high school (e.g., for the high school team, club, travel, etc.), currently live in the U.S., and provide consent that they were 18 years or older and could recall their sporting experiences to be eligible to complete the survey (see Appendix B). Participants completed the questionnaire that consisted of the learned lessons, perceptions of their coach's use of verbal aggression, affect towards the sport, and sport environment.

### 4.5.1.1 Learned Lessons

Learned lessons that transcend sport was operationalized with the 10-item instrument created in Study One. Participants' responses to the items were recorded using a 5-point likert scale from (1) *strongly disagree* to (5) *strongly agree*. Items included, "I like to talk about my sport experience(s) with friends," "I often have conversations with others about the lessons I learned while playing sports," and "I explain the value of sport to others." This instrument performed reliably in the previous study ( $\alpha = .90$ ) as well as the current study ( $\alpha = .91$ ,  $M = 3.89$ ,  $SD = .76$ ).

#### 4.5.1.2 Affect

Affective learning for sport was operationalized using an adapted version of Andersen's Affective Learning Scale (1979) to measure affect for sport in athletes. The 20-item scale is measured on a 5-point semantic differential format anchored by two bipolar adjectives (e.g., bad/good; valuable/worthless; unlikely/likely; would/would not). Items included, "I feel my teammates were," "I feel my coach was," "I feel that playing my sport was overall," "The likelihood of me using the skills I've learned from participating in my sport is," and "The likelihood of me telling others to participate in sport is." The adapted scale has performed reliably in previous literature ( $\alpha = .95$ ; Turman & Schrodtt, 2004) and performed reliably in this study ( $\alpha = .93$ ,  $M = 4.33$ ,  $SD = .68$ ).

#### 4.5.1.3 Sport Environment

Participants were asked about their perceptions of the sport environment using Eys et al., (2009) 18-item Youth Sport Environment Questionnaire (YSEQ). Specifically, the two dimensions measure task cohesion (e.g., "We all shared the same commitment to our team's goals") and social cohesion (e.g., "I kept in contact with my teammates after the season ended"). Each dimension included 8 items measured on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Both dimensions have performed reliably in the past (e.g., task cohesion,  $\alpha = .91$ ; social cohesion,  $\alpha = .92$ ) and performed reliably in this study (i.e., task cohesion,  $\alpha = .92$ ,  $M = 4.17$ ,  $SD = .72$ ; social cohesion,  $\alpha = .95$ ,  $M = 3.93$ ,  $SD = .92$ ).

### **4.6 Data Analysis**

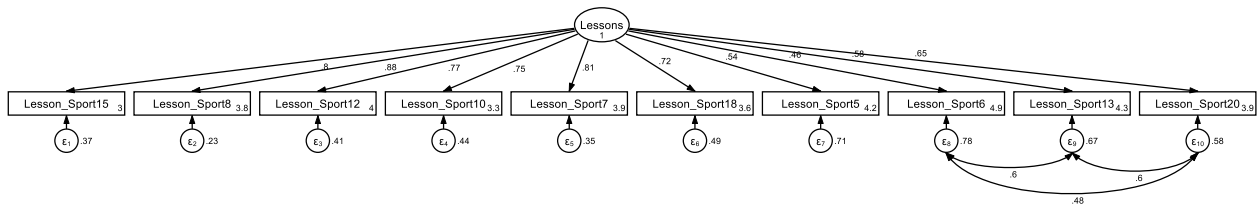
The first hypothesis regarding the structure of the 10-item learned lessons instrument was examined with a CFA using Stata/SE 17.0. The CFA was evaluated using the model  $\chi^2$ , normed  $\chi^2$  ( $\chi^2/df$ ), Steiger-Lind root mean square error of approximation (RMSEA), Bentler's

comparative fit index (CFI), Tucker-Lewis index (TLI), and standard root mean square residual (SRMR). Criteria for an acceptable model fit was based on Hu and Bentler (1999) which include (1) a low, ideally nonsignificant  $\chi^2$ , (2) RMSEA < .08, (3) a CFI > .90, (4) TLI > .90, and (5) SRMR < .09. The remaining hypotheses were examined via a series of two-tailed Pearson correlations.

## 4.7 Results

The first hypothesis predicted that the unidimensional instrument would be confirmed. The 10 items retained from study one were subjected to a CFA based upon the criteria outlined above. All 10 items were loaded on to a single factor and the error terms from the three negatively worded items were correlated as a result of the evidence previously discussed in study one. Results supported the unidimensional nature of the measure,  $\chi^2 (32) = 72.78, p < .001$ ; normed  $\chi^2 = 2.27$ ; RMSEA = .08; CFI = .97; TLI = .95; SRMR = .05.

Figure 4-1 LLS – Confirmatory Factor Analysis



The second hypothesis predicted that athletes' perceptions of using lessons learned in sports in other contexts of their lives would be positively related to their affect. Results of a two-tailed Pearson correlation revealed that lessons learned are positively related to affect ( $r = .54, p = 0.01$ ). This hypothesis was supported.

The third hypothesis predicted that athletes' perceptions of using lessons learned in sport in other contexts of their lives would be positively related to their perceptions of the sport environment they played in. Results of a two-tailed Pearson correlation revealed that lessons

learned are positively related to the sport environment (i.e., task cohesion,  $r = .47, p = 0.01$ ; social cohesion,  $r = .56, p = 0.01$ ). This hypothesis was supported.

Table 4-1: CFA Correlation

	$\alpha$	$M$	$SD$	1	2	3	4
1. Learned Lessons	.91	3.89	.76	-			
2. Affect	.93	4.33	.68	.54**	-		
3. Task Environment	.92	4.17	.72	.47**	.65**	-	
4. Social Environment	.95	3.93	.92	.56**	.51**	.74**	-

*Note.* \*\* Indicates that the correlation is significant at the 0.01 level (2-tailed).

## 4.8 Summary

The purpose of the second study was to confirm the factor structure identified in Study One and demonstrate criterion-related and construct validity. Results of study two provide further evidence for the unidimensional 10-item measure. Additionally, the performance of the measure with theoretically related constructs and measures provides evidence that it is accurately assessing the variable in question; lessons learned in sports. These results argue that future sport communication researchers can have confidence in using the measurement to obtain significant findings when empirically examining this instrument with other constructs, should those constructs also be reliable (DeVellis, 2012). As such, this instrument will be used in the following study.

## 5 Study Three: Learned Lessons in Sport

### 5.1 Hypotheses

Building off Studies One and Two, and given the aforementioned importance of values, orientation, and sportspersonship in learning lessons in sports, the purpose of study three was to examine the relationship between these constructs via serial mediation analysis using StataSE/SE 17.0. As stated, coaches are influential communicative actors in an athlete's life, often credited with influencing athletes' values and teaching them lessons that transcend the sporting environment (Becker, 2009; Camiré et al., 2011; Stupuris et al. 2013). A coach's ability to appropriately challenge their athletes has been found to increase perceived competence, moral, and status values (Larson, 2006; Pennington, 2019). One way that researchers have established proper challenging techniques is through coaching confirmation (Cranmer et al., 2017). Given the logical relationship between coaching confirmation and athlete's values, the following hypothesis is presented:

**Hypothesis 4:** Higher levels of coaching confirmation will be positively related to a) competence values, b) moral values, and be negatively related to c) status values.

As previous literature has indicated, an individual's values are often associated with their attitudes (Lee et al., 2008). Lee et al. (2008) specifies this relationship between values and attitudes to be specific to one's attitudes towards sportspersonship. Due to the differing operationalizations of sportspersonship (see Lee et al., 2007; Lee et al., 2008; Vallerand et al., 1997), this study will use the aforementioned position of Vallerand et al. (1997)—that sportspersonship orientations should reflect the current situation being investigated—to understand how values influence commitment (e.g., positive attitude) to the sport and negative approach (e.g., negative attitude) to the sport as mediated by achievement orientation. Moreover,

moral values will be directly related to commitment and negative approach as literature does not forward a meaningful relationship between moral and achievement orientation. Furthermore, because the study is interested in athletes learning during their sport experiences and how their attitudes may be an indicator of such development, dimensions that measure orientation towards oppositions, referees, or cheating will not be included as they do not exemplify development orientation. Vallerand et al.'s (2016) position on using sportpersonship situationally supports the use of the negative approach subscale. Specifically, as supported by previous literature, commitment is often associated with competence values as mediated by task orientation and a negative approach is associated with status values as mediated by ego orientation (Lee et al., 2008; Lemyre et al., 2002). As a result of the assertions that attitudes are associated with values through motivation, the following hypotheses are forwarded:

**Hypothesis 5:** The relationship between competence values and commitment will be mediated by task orientation

**Hypothesis 6:** Moral values will be a) positively associated with commitment and b) negatively associated with negative approach

**Hypothesis 7:** The relationship between status values and negative approach will be mediated by ego orientation

Although researchers have identified the association of values, motives, and attitudes with one another, there is still a gap in the literature that fails to examine how the process of this influence lessons learned in sports. Scholars in the sport realm continue to assert that playing sports can have an impact on athletes later in life (Holt et al., 2017; Vierimaa et al., 2018), but to our knowledge, none have empirically tested this relationship (Coakley, 2011). Moreover, while much of the sport literature discusses the importance of a coach creating a positive learning

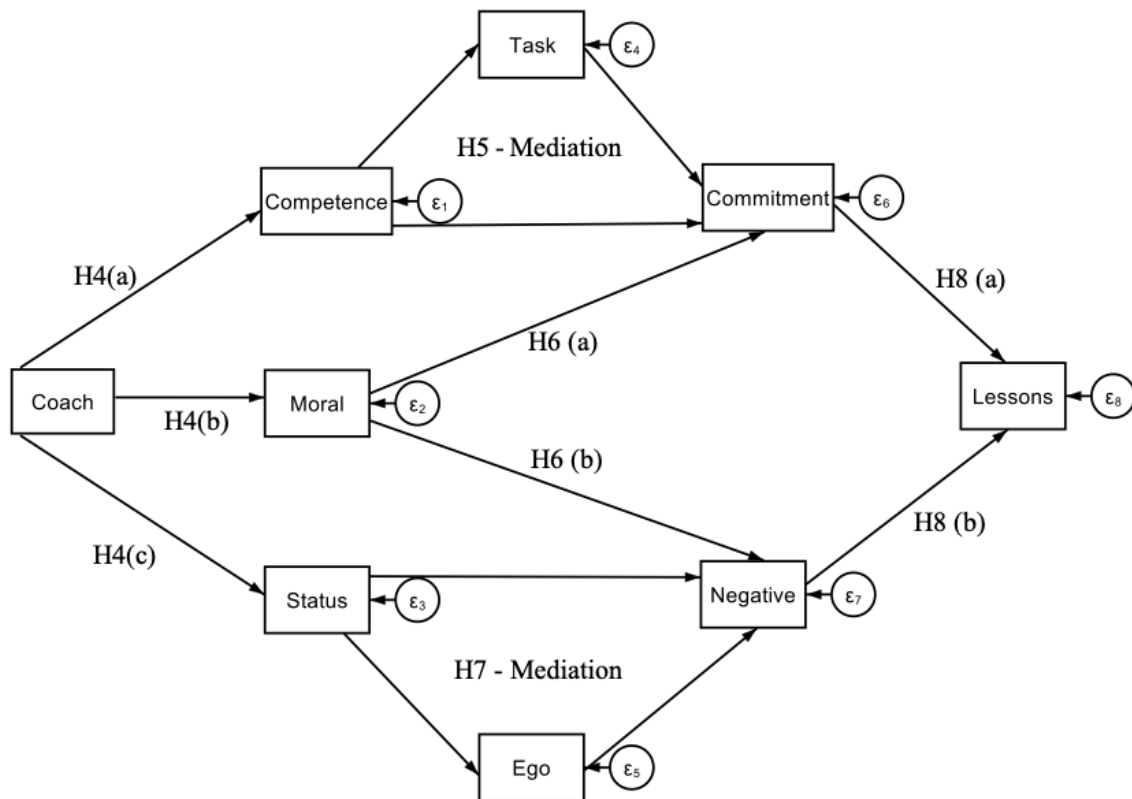
environment for their athletes, but less attention has been given to if athletes actually learn and use these lessons outside of sport (Gilbert and Trudel, 2004). Therefore, given the assumption that lessons are learned through the sporting experience, the way one's attitudes dictates their orientation for the sport (i.e., commitment and negative approaches) should be associated with perceived lessons learned in sport. As such, the following hypothesis is proposed:

**Hypothesis 8:** Commitment will be a) positively associated with lessons learned and negative will be b) negatively associated with lessons learned

Given the previous rationale for each hypothesis, as a result of the proposed relationships, the following hypothesis is presented:

**Hypothesis 9:** The data will demonstrate good fit for the model.

Figure 5-1 Hypothesized Proposed Model

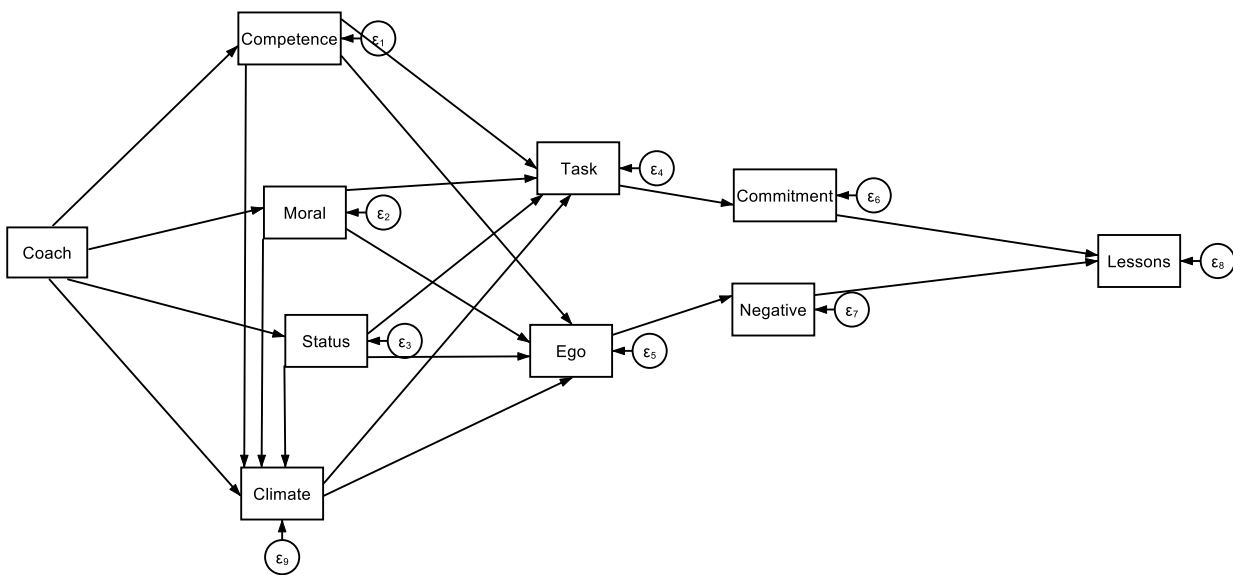




### 5.1.1.1 Alternative model

Additionally, an alternative model is proposed to include the climate that athletes develop in. Communication climate is the communication from one individual to another that demonstrates openness, support, and respect (Johnson, 2009) (see Figure 5-2). Once again, building off instructional communication literature that examines student-student interactions (Johnson, 2009), teammate-teammate interactions may have a significant influence on outcomes such as learned lessons that translate to contexts outside of sport. This is because sporting environments significantly influence athletes' sport behaviors and overall experience (Lavoie & Stellino, 2008).

Figure 5-2 Alternative Model



For teachers, when a positive climate is created, students feel more connection with their peers which leads to stronger friendships and enjoyment in the course (Dwyer et al., 2004). Given the similarities between classmates and teammates (Turman & Schrod, 2004), it is warranted to assume that the climate created in sports would influence athletes in a similar manner. This assumption is also supported by the notion that athlete's engagement with teammates has also been linked to athlete development, due in part to the relationship teammates

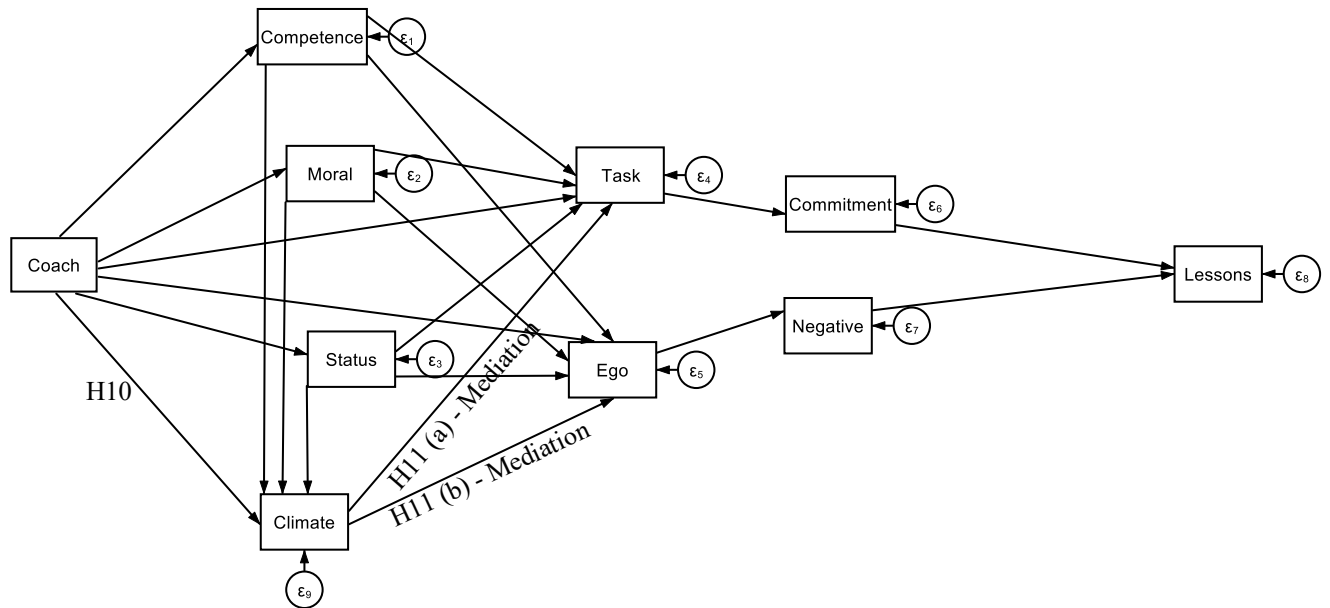
build and the behavior modeling athletes engage in (Benson & Bruner, 2018). Therefore, together, coaches can create a climate between teammates that is beneficial or harmful to an athlete's experiences and the lessons they learn. Prior research has concluded that supportive climates significantly influence students' experiences (Sollitto et al., 2013), but less examined is how climate influences athletes in a sport context. The proposed alternative model is similar to the previous one with only an additional variable and added routes. As such, the following hypotheses are forwarded.

**Hypothesis 10:** Higher levels of coaching confirmation will be positively related to perceived climate.

**Hypothesis 11:** The relationship between a) coach and task orientation and b) coach and ego orientation will be mediated by climate

**Hypothesis 12:** The data will demonstrate good fit for the model.

Figure 5-3 Hypothesized Alternative Model



## 5.2 Participants

Participants included 636 individuals collected from Cloud Research (Chandler et al., 2019) and included 47 different states in the United States. Inclusion criteria required participants to pass a captcha designed to eliminate robots, indicate that they played sports during high school (e.g., for the high school team, club, travel, etc.), currently live in the U.S., have not participated in the previous study uploaded to Cloud Research, and provide consent that they were 18 years or older and could recall their sporting experiences to be eligible to complete the survey. Upon completion of the survey, participants received compensation (\$1.50). The final sample included those who identified as male (222; 34.9%), female (411; 64.6%), non-binary (1; .2%), and prefer to self-describe (2; .3%). To the best of their knowledge, the coach they reported on identified as male (419; 65.9%), female (206; 32.4%), non-binary/third gender (6; .9%), and prefer to self-describe (5; .8%). The mean age of the sample was 33.97 ( $SD = 9.28$ ) and ranged from 18 to 70. A majority of participants identified as white/Caucasian ( $n = 459$ ; 72.2%), black/African American ( $n = 86$ ; 13.5%), Asian ( $n = 19$ ; 3.0%), Hispanic/Latina/Latino ( $n = 48$ ; 7.5%), Native American ( $n = 10$ ; 1.6%), 13 (2.2%) prefer to self-describe. As previously mentioned, participants currently reside in 47 different states with a majority ( $n = 73$ ; 11.5%) living in California and reported on 47 different states where they played the sport during the time they reported on with a majority ( $n = 72$ ; 11.3%) playing in California. Highest level of competition played included 36 (5.8%) recreationally, 14 travel (2.2%), 423 (66.5%) high school, 43 (6.8%) community college, 80 (12.6%) 4-year university, 13 (2.0%) semi-professionally, 19 (3.0) professionally, and 8 (1.3%) other (i.e., military, university's club team, Olympics). Participants stopped playing their sport due to aging out ( $n = 348$ ; 54.7%), quitting ( $n = 162$ ; 25.5%), being cut ( $n = 31$ ; 4.9%), or other ( $n = 95$ ; 14.9%). When referring to their

sporting experience, on average, participants had been away from their sport for 15.23 years ( $SD = 9.86$ ) and ranged from 0-50 years removed. Their roles on the team included being a starter ( $n = 410$ ; 64.5%), non-starter ( $n = 162$ ; 25.5%), and a captain ( $n = 155$ ; 24.4%). Personal education levels included High School degree ( $n = 296$ ; 46.5%), Associates degree ( $n = 93$ ; 14.6%), Bachelor's degree ( $n = 130$ ; 20.4%), Master's degree ( $n = 70$ ; 11.0%), Ph.D. ( $n = 9$ ; 1.4%), MD ( $n = 5$ ; .8%), JD ( $n = 4$ ; .6%), and other ( $n = 11$ ; 5.3%).

### **5.3 Procedures and Instrumentation**

Following approval from the Institutional Review Board (IRB), participants over the age of 18 were recruited from Cloud Research. Participants were able to complete the survey on their own time, confidentially, voluntarily, and were screened for previous sporting experience. As stated previously, data collected from this platform is known to be reliable. For the present study, participants had to pass a captcha designed to eliminate robots, indicate that they played sports during high school (e.g., for the high school team, club, travel, etc.), currently live in the U.S., and provide consent that they were 18 years or older and could recall their sporting experiences, and could not have participated in the previous studies to be eligible to complete the survey (see Appendix C). Cloud Research provides the ability to only recruit participants who have not taken previous studies associated with your account. Participants completed the questionnaire that consisted of coaching confirmation, values, climate, orientation, sportspersonship, and lessons learned.

Once participants were informed as to the main objectives of the study (to better understand athletic experiences and how athletes develop<sup>1</sup>), they were then asked to reflect on their previous athletic experience and their relationship with their coach and teammates at this

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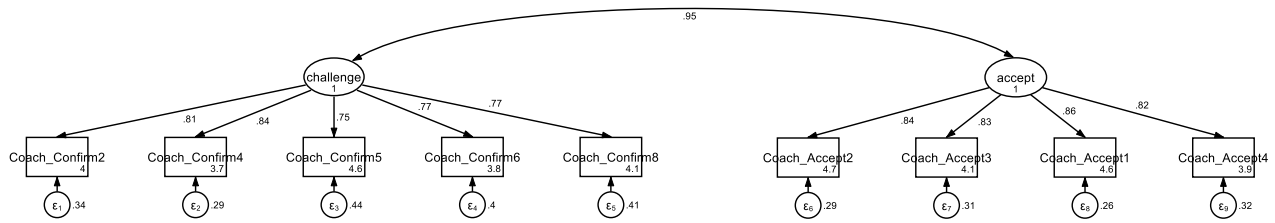
<sup>1</sup> Participants were not informed that we were interested in learning in order to minimize acquiescence bias.

time. Allowing participants to self-select their coach and teammates elicited the most meaningful and influential experiences in their athletic career. Furthermore, they were informed throughout the survey to that there is no right or wrong answer. Before completing the questionnaire, demographic questions were collected.

#### 5.3.1.1 Coaching Confirmation

Coaching confirmation was measured using Cranmer et al.'s (2016) Coach Confirmation Instrument. In an unpublished manuscript, the 15-item CCI measure was reduced using scale reduction techniques into a 9-item measure. The 9-item, two-dimensional measure, assessed participants' perceptions of coaches' use of challenge (5-items; e.g., "my coach continually pushed me to get better") and acceptance (4-items; e.g., "my coach acknowledged when I performed well") behaviors of confirmation. Responses were recorded on a 5-point Likert-type scale that ranged from *never true* (1) to *always true* (5). This scale has performed reliably in previous research (e.g., challenge  $\alpha = .93$ ; acceptance  $\alpha = .88$ ; Cranmer et al., 2018). For this study, the two dimensions were made into a composite measure to account for coaching confirmation. Higher scores indicate more confirmation. This scale performed reliably as two dimensions and together (i.e., challenge  $\alpha = .89$ ,  $M = 4.02$ ,  $SD = .83$ ; acceptance  $\alpha = .90$ ,  $M = 4.08$ ,  $SD = .83$ ; composite  $\alpha = .94$ ,  $M = 4.06$ ,  $SD = .81$ ). Moreover, since this was the first time the short form of the scale was used, a CFA was performed with the nine-items loading onto the appropriate 2-factors. Results indicate that the data provided a good fit for the 2-factor model ( $\chi^2(26) = 151.16$ ,  $p < .001$ ; normed  $\chi^2 = 5.81$ ; RMSEA = .09; CFI = .91; TLI = .96; SRMR = .03,  $r = .96$ .)

Figure 5-4 CCI – Confirmatory Factor Analysis



### 5.3.1.2 Values

Participants' values were assessed using the Youth Sport Values Questionnaire-2 (Lee et al., 2008). This 13-item scale has three dimensions: competence values (4-items; e.g., I use my skills well), moral values (5-items; e.g., "I help other people when they need it"), and status values (4-items; e.g., "I show that I am better than others"). Participants responded to the prompt, "When I play my sport, it is important to me that..." using a 5-point Likert-type scale ranging from (1) *the opposite of what I believe* to (5) *extremely important to me*. This scale has performed reliably in previous research (e.g., competence values  $\alpha = .82$ ; moral values  $\alpha = .83$ ; status values  $\alpha = .72$ ; Goggins, 2015) and performed reliably in this study (competence values  $\alpha = .78$ ,  $M = 4.30$ ,  $SD = .70$ ; moral values  $\alpha = .76$ ,  $M = 4.33$ ,  $SD = .61$ ; status values  $\alpha = .75$ ,  $M = 3.34$ ,  $SD = 1.01$ ).

### 5.3.1.3 Achievement Orientation

Achievement orientation was measured using the Perceptions of Success Questionnaire (POSQ; Roberts et al., 1998). This 12-item, two-dimensional measure assessed task orientation (e.g., "I succeed at something I could not do before") and ego orientation (e.g., "I am clearly better"). Participants read the prompt often used when measuring task and ego orientation (see Duda & Nicholls, 1992; Lee et al., 2008; Roberts et al., 1998), "In my sport I feel successful when..." before completing the 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. In line with Lee et al. (2008), one item was added to task orientation (i.e., "I learn

something new to me”) and ego orientation (i.e., “I do things more easily than others”). This scale has performed reliably in the past (e.g., task  $\alpha = .95$ ; ego  $\alpha = .89$ ; Lee et al., 2008) and obtained a reliable Cronbach’s alpha in this study (task  $\alpha = .86$ ,  $M = 4.38$ ,  $SD = .55$ ; ego  $\alpha = .91$ ,  $M = 3.50$ ,  $SD = .95$ ).

#### 5.3.1.4 Multidimensional Sportspersonship

Participants attitude towards sportspersonship were measured using Vallerand et al.’s (1997) Multidimensional Sportspersonship Orientation Scale. Two subscales from this 25-item measure were used: commitment (6 items; e.g., “I do not give up after mistakes”) and negative approach (4 items; e.g., “I criticize coach’s instructions”). Using specific subscales is a commonly used practice in sport psychology research (e.g., Chantal et al., 2013; Lee et al., 2008) as it relates to sportspersonship literature and therefore it is warranted to only use two of the five dimensions. Participants responded on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. This scale has performed reliably in the past (e.g., commitment  $\alpha = .70$ , Miller et al., 2004; negative approach  $\alpha = .72$ ; Vallerand, 1996). Commitment orientation performed reliably in this study (i.e.,  $\alpha = .81$ ,  $M = 4.23$ ,  $SD = .63$ ). Upon running the reliability analysis, the negative dimension failed to achieve an acceptable reliability (i.e.,  $\alpha = .68$ ,  $M = 2.67$ ,  $SD = .88$ ). However, after reviewing the Item-Total Statistic, by removing the item, “I competed for personal honors, trophies, and medals,” the Cronbach alpha for this dimension performed reliably (i.e.,  $\alpha = .79$ ,  $M = 2.36$ ,  $SD = 1.04$ ). Moving forward with the analyses, negative approach consists of 3-items<sup>2</sup>.

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<sup>2</sup> Note: a CFA was not performed on the remaining 3-items as a three-item scale would result in a saturated model where the number of free parameters equals to the number of elements in the variance-covariance matrix resulting in a degree of freedom value of zero (Schumacker & Lomax, 2004).

#### 5.3.1.5 Climate

Climate was measured using Johnson's (2009) Connectedness Classroom Climate Inventory measure and adapted to ask participants to assess their perceptions support, cooperation, and connectedness they perceived between them and their teammates. This 13-item, unidimensional scale was measured on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. Items included, "I felt a strong bond with my teammates," "the players on my team praised one another," and "the players on my team were supportive of one another." This scale has performed reliably in the past with 18-items ( $\alpha = .93$ ; Sollitto et al., 2013) and as a 13-item measure in this study ( $\alpha = .94$ ,  $M = 4.13$ ,  $SD = .67$ ).

#### 5.3.1.6 Lessons Learned

To measure if athlete's lessons learned in sport translate into other context later in life, this study used the Lessons Through Sports scale. This 10-item unidimensional instrument measures if athletes use the lessons they learned in sports in other contexts outside of sport. Participants' responses to the items were recorded using a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. Items included, "I like to talk about my sport experience(s) with friends," "I often have conversations with others about the lessons I learned while playing sports," and "I explain the value of sport to others." This instrument performed reliably in study one and two, obtaining a Cronbach's alpha of .90 and .91, respectively. This instrument performed reliably in this study ( $\alpha = .89$ ,  $M = 4.03$ ,  $SD = .69$ ).

### **5.4 Data analysis**

Hypotheses were tested simultaneously via serial mediation with maximum likelihood estimation using Stata/SE 17.0. This is a common procedure in communication research (Ball & Wozniak, 2021; Donnelly et al., 2021; Fontana et al., 2021). Model fit was evaluated using the



model  $\chi^2$ , normed  $\chi^2$  ( $\chi^2/df$ ), Steiger-Lind root mean square error of approximation (RMSEA), Bentler's comparative fit index (CFI), Tucker-Lewis index (TLI), and standard root mean square residual (SRMR). Criteria for an acceptable model fit was based on Hu and Bentler (1999) which include (1) a low, ideally nonsignificant  $\chi^2$ , (2) RMSEA < .08, (3) a CFI > .90, (4) TLI > .90, and (5) SRMR < .09. Before running the serial mediation analysis, assumptions were checked. The scatterplot demonstrated no issues with homoscedasticity. Next, the histogram and P-P plot were checked and were normally distributed. Outliers were checked using a box and whisker plot which indicated that one participant (participant 507) needed to be removed. The obtained Durbin-Watson (1.84) was checked for independence and was not violated. One issue regarding multicollinearity was raised (VIF = 2.93, Tolerance = .34, lowest Eigenvalue = .005). Notably, the lowest Eigenvalue denotes the probable issue of multicollinearity, however, the variance proportions of variables were not associated with this value and thus, there is no evidence of collinearity among the variables (Shrestha, 2020). Mediation for the respective were tested using Zhao et al. (2010) and Monte Carlo simulation for resampling (Preacher & Selig, 2012; Selig & Preacher, 2008) using a syntax via do-file editor (see Appendix D).

## **5.5 Results**

The fourth hypothesis forwarded that higher levels of coaching confirmation would be positively related to a) competence values, b) moral values, and be negatively related to c) status values. Results indicate that coaching confirmation is positively related to a) competence values ( $\beta = .46, SE = .03, p < 0.001, 95\% CI [.40, .52]$ ), b) moral values ( $\beta = .42, SE = .03, p < 0.001, 95\% CI [.36, .48]$ ), and c) status values ( $\beta = .29, SE = .04, p < 0.001, 95\% CI [.22, .36]$ ). This hypothesis was confirmed.

The fifth hypothesis posited that the relationship between competence values and commitment would be mediated by task orientation. Results of the indirect effects indicate that competence values to commitment through task orientation is significant ( $B = .29$ ,  $\beta = .33$ ,  $SE = .03$ ,  $p < 0.001$ , 95% CI [.24, .34]). Results of mediation indicate that competence values influences commitment attitudes through task orientation ( $B = .28$ ,  $SE = .03$ ,  $z = 8.55$ ,  $p < 0.001$ , 95% CI [.21, .34]). Using the commentary that is provided below the table (Iacobucci et al., 2007), routes c (competence  $\rightarrow$  commitment;  $B = .28$ ,  $p < 0.001$ ), a (competence  $\rightarrow$  task;  $B = .53$ ;  $p < 0.001$ ), and b (task  $\rightarrow$  commitment;  $B = .58$ ,  $p < 0.001$ ) as well as Monte Carlo's ( $B = .31$ ,  $SE = .03$ ,  $z = 11.75$ ,  $p < 0.001$ , 95% CI [.26, .36]) significantly demonstrate mediation. Furthermore,  $RIT = a*b/(a*b) + c$  indicates that 52% of the effect of competence on commitment is mediated by task and  $RID = a*b/c$  forwards that this mediated effect is about 1.1 times as large as the direct effect of competence on commitment. The second hypothesis was supported.

Hypothesis six stated that moral values would be a) positively associated with commitment and b) negatively associated with negative approach. Results indicate that moral values are a) positively associated with commitment ( $\beta = .09$ ,  $SE = .04$ ,  $p = 0.03$ , 95% CI [.01, .17]) and b) negatively associated with moral values ( $\beta = -.35$ ,  $SE = .03$ ,  $p < 0.001$ , 95% CI [-.41, -.28]) This hypothesis was supported.

The seventh hypothesis forwarded that the relationship between status values and negative approach would be mediated by ego orientation. Results of the indirect effects indicate that status values to negative approach through ego orientation is significant ( $B = .16$ ,  $\beta = .15$ ,  $SE = .04$ ,  $p < 0.001$ , 95% CI [.08, .24]). Results of mediation indicate that status values influence negative approach through ego orientation ( $B = .07$ ,  $SE = .06$ ,  $z = 1.17$ ,  $p = .24$ , 95% CI [-.05, .19]). Using the commentary that is provided below the table (Iacobucci et al., 2007), routes c

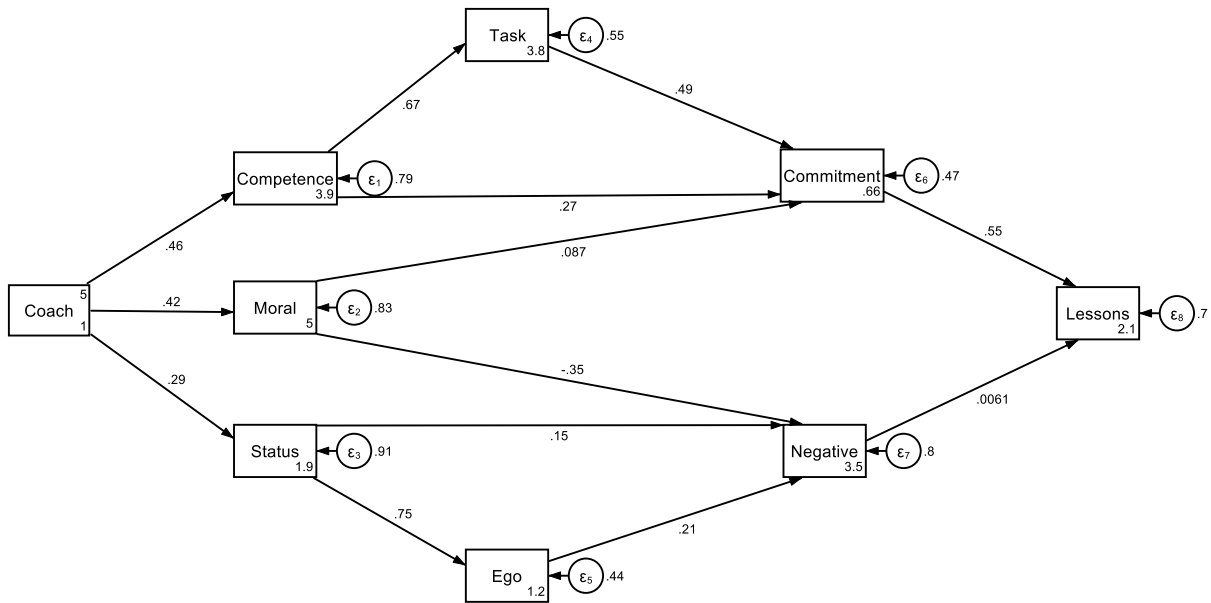
(status → negative;  $B = .07, p < 0.24$ ), a (status → ego;  $B = .71; p < 0.001$ ), and b (ego → negative;  $B = .23, p < 0.001$ ) as well as Monte Carlo ( $B = .17, SE = .05, z = 3.59, p < 0.001, 95\%$  CI [.08, .25]) significantly demonstrate mediation. Furthermore,  $RIT = a*b/(a*b) + c$  indicates that 70% of the effect of status on negative is mediated by ego and  $RID = a*b/c$  forwards that this mediated effect is about 2.4 times as large as the direct effect of competence on commitment. This hypothesis was supported.

Hypothesis eight stated attitudes such as commitment would be a) positively associated with lessons learned and that attitudes such as negative would be b) negatively associated with lessons learned. Results indicate that commitment is a) positively associated with lessons learned ( $\beta = .55, SE = .03, p < 0.001, 95\%$  CI [.49, .61]) and that negative attitudes are b) negatively associated with learning lessons ( $\beta = .01, SE = .04, p = 0.86, 95\%$  CI [-.06, .07]). This hypothesis was partially supported.

#### 5.5.1.1 Initial Model

The ninth hypothesis forwarded that the data would demonstrate a good model fit. Results indicate that the data is not a good model fit,  $\chi^2 (23) = 727.26, p < .001$ ; normed  $\chi^2 = 31.62$ ; RMSEA = .22; CFI = .75; TLI = .62; SRMR = .19,  $r^2 = .56$ . This hypothesis was not supported.

Figure 5-5 Serial Mediation on Initial Model



### 5.5.1.2 Alternative Model

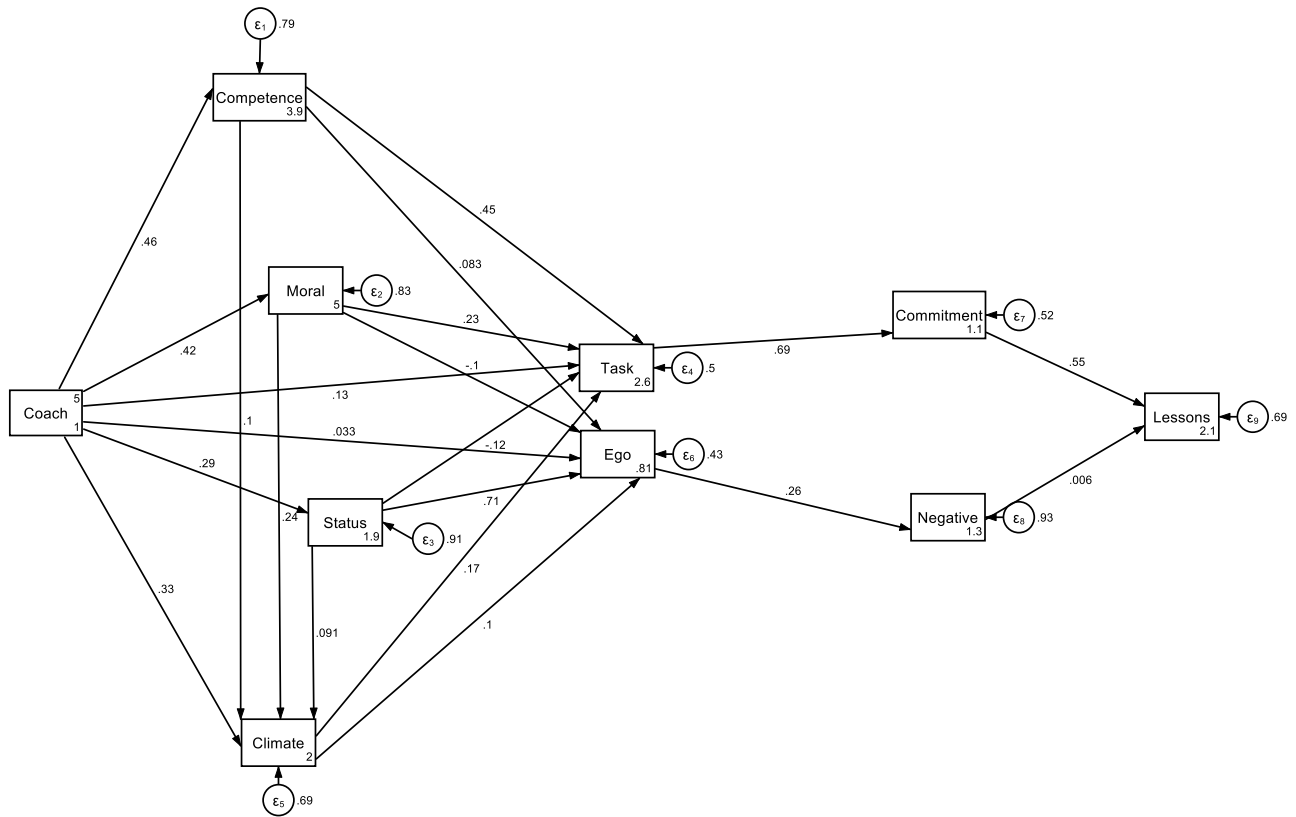
The tenth hypothesis posited that higher levels of coaching confirmation would be positively related to perceived climate. Results indicate that coaching confirmation is positively related to perceived climate ( $\beta = .33, SE = .03, p < 0.001, 95\% CI [.26, .40]$ ). This hypothesis is supported.

The eleventh hypothesis forwarded that the relationship between a) coach confirmation and task orientation and b) coach confirmation and ego orientation would be mediated by climate. Results of the analysis for indirect effects indicate that coach confirmation to task orientation through climate is significant ( $\beta = .35, SE = .02, p < 0.001, 95\% CI [.20, .28]$ ) and b) that coach confirmation to ego orientation through climate is significant ( $\beta = .25, SE = .04, p < 0.001, 95\% CI [.22, .37]$ ). Results of mediation indicate that coaching confirmation influences task orientation through climate ( $B = .20, SE = .03, z = 7.80, p < 0.001, 95\% CI [.15, .25]$ ). Using the commentary that is provided below the table (Iacobucci et al., 2007), routes c (coach  $\rightarrow$  task;  $B = .20, p < 0.001$ ), a (coach  $\rightarrow$  climate;  $B = .41; p < 0.001$ ), and b (climate  $\rightarrow$  task;  $B = .28, p <$

0.001) as well as Monte Carlo ( $B = .12, SE = .02, z = 7.53, p < 0.001, 95\% CI [.09, .15]$ ) significantly demonstrate mediation. Furthermore,  $RIT = a*b/(a*b) + c$  indicates that 37% of the effect of coaching confirmation on climate is mediated by task orientation and  $RID = a*b/c$  forwards that this mediated effect is about .6 times as large as the direct effect of coaching confirmation on task orientation. Results of the serial mediation indicate that coaching confirmation influences ego orientation through climate ( $B = .21, SE = .05, z = 4.09, p < 0.001, 95\% CI [.11, .31]$ ). Using the commentary that is provided below the table (Iacobucci et al., 2007), routes c (coach  $\rightarrow$  ego;  $B = .21, p < 0.001$ ), a (coach  $\rightarrow$  climate;  $B = .41; p < 0.001$ ), and b (climate  $\rightarrow$  ego;  $B = .31, p < 0.001$ ) as well as Monte Carlo test ( $B = .13, SE = .03, z = 4.67, p < 0.001, 95\% CI [.07, .19]$ ) significantly demonstrate mediation. Furthermore,  $RIT = a*b/(a*b) + c$  indicates that 38% of the effect of coaching confirmation on climate is mediated by ego and  $RID = a*b/c$  forwards that this mediated effect is about .6 times as large as the direct effect of coaching confirmation on ego orientation. This hypothesis was supported.

Hypothesis twelve stated that the data would demonstrate a good fit for the model. Results indicate that the data is not a good model fit,  $\chi^2 (24) = 844.80, p < .001$ ; normed  $\chi^2 = 35.20$ ; RMSEA = .23; CFI = .74; TLI = .51; SRMR = .19,  $r = .43$ . This hypothesis was not supported.

Figure 5-6 Serial Mediation on Alternative Model

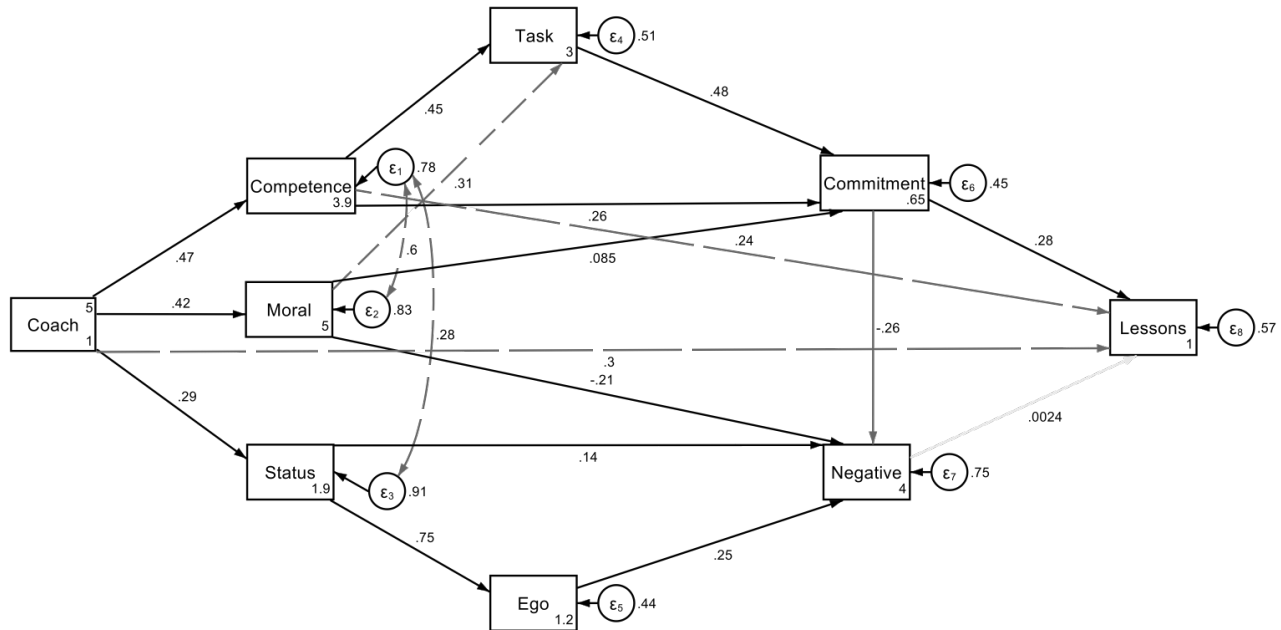


### 5.5.1.3 Revised Initial Model

Changes to the model were made according to modification indices. First, error terms were correlated between competence values and both moral and status values. Correlating error terms is appropriate if there is probable cause for acquiescent response, if correlated items are worded similarly, or if the questions relate to the same topic (Brown, 2015). Theoretically examining the wording of these variables indicated that it was appropriate to correlate competence's error with moral and status values. Goodness of fit indicated a better fitting model, although still not acceptable,  $\chi^2(20) = 328.24, p < .001$ ; normed  $\chi^2 = 16.41$ ; RMSEA = .16; CFI = .89; TLI = .80; SRMR = .10. Changes were once again made according to modification indices. Additional paths were recommended and added one by one until model fit was obtained,

$\chi^2 (17) = 109.97, p < .001$ ; normed  $\chi^2 = 6.47$ ; RMSEA = .09; CFI = .97; TLI = .93; SRMR = .06,  $r^2 = .34$ .

Figure 5-7 Serial Mediation on Revised Initial Model

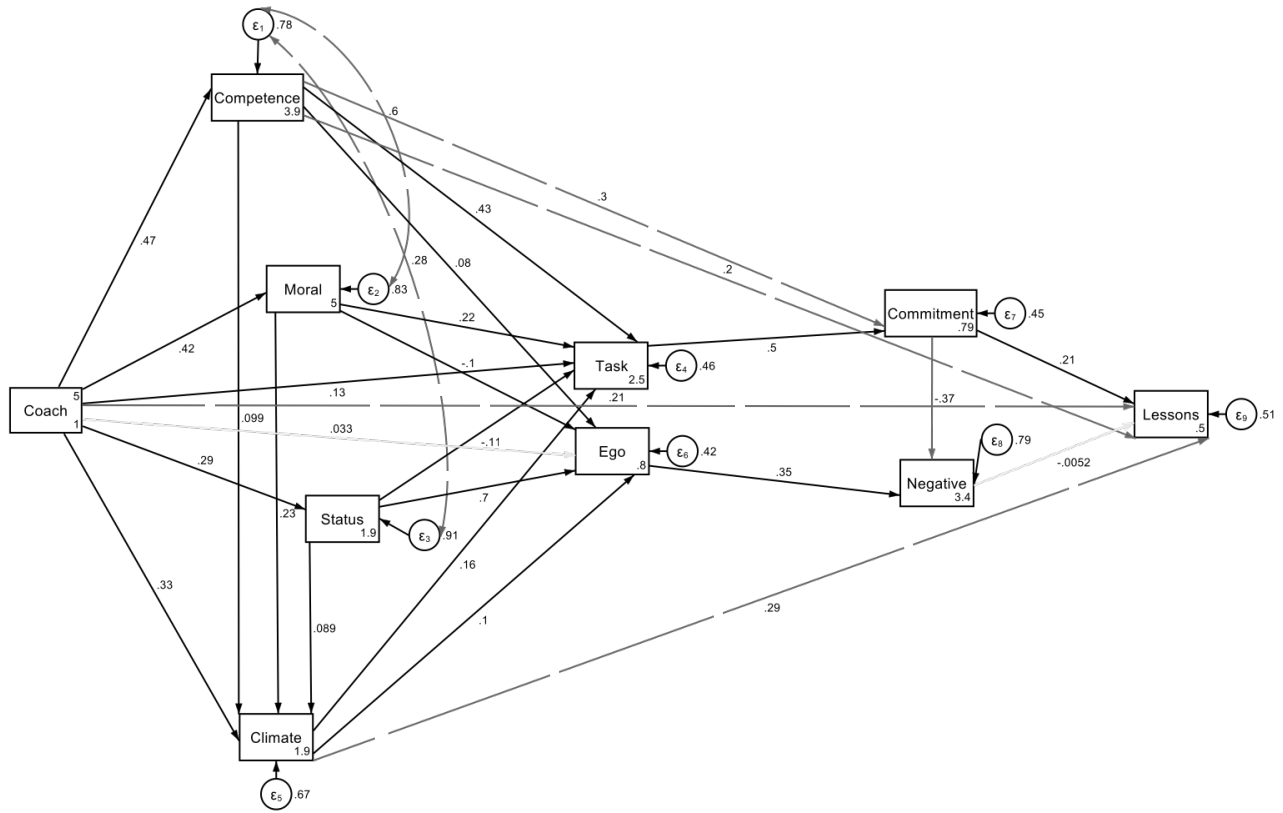


*Note.* Black lines indicate original proposed model. Dashed lines indicate additional paths according to modification indices. The path from Negative to Lessons was not statistically significant ( $p = .94$ ) and therefore is light gray.

#### 5.5.1.4 Revised Alternative Model

Once again, changes to the model were made according to modification indices. First, error terms were correlated between competence values and both moral and status values. As previously mentioned, correlating the error terms is appropriate for this model. Goodness of fit indicated a better fitting model, although still not acceptable,  $\chi^2 (22) = 457.16, p < .001$ ; normed  $\chi^2 = 20.78$ ; RMSEA = .18; CFI = .86; TLI = .72; SRMR = .15. Changes were once again made according to modification indices. Additional paths were recommended and added one by one until model fit was obtained,  $\chi^2 (17) = 93.53, p < .001$ ; normed  $\chi^2 = 5.50$ ; RMSEA = .09; CFI = .98; TLI = .94; SRMR = .05,  $r^2 = .39$ .

Figure 5-8 Serial Mediation on Revised Alternative Model



*Note.* Black lines indicate original proposed model. Dashed lines indicate additional paths according to modification indices. The path from Negative to Lessons ( $p = .82$ ) and Coach Confirmation to Ego Orientation ( $p = .30$ ) were not statistically significant and therefore are light gray.

## 5.6 Summary

In summary, the third study used the scale developed in Study One and Study Two to hypothesize how communication from coaches to athletes influences athlete's perceptions that what they learned in sports transfers to other contexts. More specifically, it built off two models previously presented and presents meaningful discussion and implications to future research empirically examining this phenomenon. As such, discussion of the three studies, theoretical and practical implications, and limitations and future directions are discussed.



## 6 Discussion

The purpose of this dissertation was two-fold. First, it was to develop and validate a reliable measure to assess an athlete's perception of their learning life lessons through sport. The construction of this measurement was based upon previous literature that indicates that sports teach athletes lessons such as how to work hard, control their emotions, and problem-solve among many others (Danish, 2002; Larson, 2000, Moote & Wodarski, 1997). The second purpose was to provide an empirical explanation and model to discern and assess how coaches' communication affects a set of variables acting on learned lessons in sport via serial mediation analysis. To address these two purposes, three studies were conducted. This chapter provides a collective discussion of the three studies, followed by theoretical and practical implications, limitations, and future directions for research.

### 6.1.1.1 Scale Development

Addressing the first purpose of this dissertation involved creating a pool of items that assessed if individuals, who no longer play competitive sports, believe that they learned valuable lessons playing as they are identifiable and addressed in other contexts later in life. As mentioned previously, the notion that sports teach athletes valuable life lessons has been forwarded; however, measuring the notion of learned lessons as a product of sport participation has not been examined. Therefore, the initial pool of 20-items was created. Data was then collected from 207 participants and subjected to exploratory factor analytic techniques resulting in a unidimensional 10-item measure. The final 10-items measures individuals' perceptions that they learned lessons that transcend the sporting environment into their current lives.

In study two, this measure was then tested and validated using a separate second data set ( $n = 206$ ) via confirmatory factor analytic methods. Results of study two confirmed the

unidimensional nature of the measure. These results provide evidence that the Learned Lessons in Sport (LLS) scale assesses individuals' perceptions that sports provide valuable life lessons that they are able to apply to other contexts, and that they are able to communicate these lessons to other people. This last part is particularly interesting as the measure indicates that not only do athletes perceive sports to teach them lessons, but that as part of learning lessons in sports, athletes then communicate this with others. This finding is in line with previous instructional research that posits that self-disclosure to others about one's experiences, and encouraging others to feel similar, indicates learning (Frymier, 1994). Notably, the representativeness of these factors to previous literature provided in this study establishes content validity. Content validity is often demonstrated via a CFA's goodness of fit as it indicates that the measure is representative of the content it is intended to measure (Kerlinger, 1986).

Validity for the measurement was also supported in hypotheses two and three. The second hypothesis indicated that the relationship between the LLS scale and affect learning provide criterion-related, concurrent validity. In previous literature, affective learning has been used to measure athletes' attitudes towards a concept or behavior specific to the sport environment such as one's coach, teammates, or the sport. Therefore, it was reasonable to propose that the current measurement would relate to affective learning. Indeed, results indicated that the LLS relates to Andersen's previously established Affective Learning Scale (1979) and furthermore demonstrates an acceptable amount of agreement between the two assessments. Overall, achieving concurrent validity supports that the developed measure relates with a previously established measure of the same or related underlying constructs assessed at the same time.

The third hypothesis demonstrates construct validity as it provides evidence to support the idea that the LLS scale is both similar yet distinctly different from the sport environment. Because the sporting environment examines the extent to which athletes perceive their teammates and them have common goals (i.e., task cohesion) and that they spend time with and enjoy their teammates, it was reasonable to assume that these constructs would relate to one another albeit be distinctly different. Indeed, results indicated that the sport environment and the LLS scale are similar, however it also provides support that the two constructs diverge as well since the relationship between the two did not reach levels often associated with isomorphism (Dembrowski, 2068).

Overall, the results of the scale development provide evidence that the LLS scale is a unidimensional measurement that assesses an individual's perception that they learned lessons. To our knowledge, this study is the first to develop an instrument that can empirically examine if athletes learn lessons in sport. Specifically, the scale demonstrates appropriate psychometric properties to argue for its validity in order to assess athlete's perceptions of learning through sport. By providing a means to be able to measure learning, it moves the notion of learning in sport from simply anecdotal support to a tangible construct.

Furthermore, the development of the LLS scale answers a call put forth by Gould and Carson (2008) who proposed that a valid measure within the field of sport would help improve this line of research. It is important to draw attention to the fact that using measures from disciplines such as instructional communication and organizational communication is warranted and valuable; however, in order to grow the field of sport communication, the importance of measuring phenomenon specific to the sporting environment is imperative. The successful

development of the LLS scale now provides a measure specific to sport and the ability to indicate that athletes learn lessons from playing sports.

#### 6.1.1.2 Model of LLS

The purpose of study three was to provide and test a proposed model that would demonstrate how coaches' communication may significantly affect a set of variables, such as values, orientation, and attitudes, that act on learned lessons in sport via serial mediation.

##### 6.1.1.2.1.1 Hypotheses

Coaches were the appropriate communicative actor for this model as the literature often identifies a coach as the most influential individual in the sport context for athletes (Amorose & Anderson-Butcher, 2007; Chelladurai, 1984; Holt et al., 2018; Raabe & Zakrajsek, 2017). In fact, Larson and Pennington's (2019) assertion that a coach's ability to appropriately confirm (i.e., challenge and accept) their athlete leads to the development of competence, moral, and status values. The significant relationship found in the fourth hypothesis further supports this claim and highlights the importance of coaching communication.

This finding also provides evidence for sport psychology research which often imply the influence communicative actors (e.g., coaches) have on and athlete's development, but fail to empirically test (Lee et al., 2007; Vallerand, 1994). As Danioni and Barni (2019) forwarded, values are inherently taught through the communicative process. From our knowledge, this is the first study to examine and support the relationship between communication from a coach and its significant association with an athlete's values.

When further examining the strength of the relationships between coaching confirmation and values, it is meaningful to note that coaching confirmation has the strongest relationship with competence values ( $\beta = .46, p < 0.001$ ; moral values  $\beta = .42, p < 0.001$ ; status values  $\beta = .29, p <$

0.001). Competence values may have the strongest association with coaching confirmation because this dimension conceptually examines how important it is to an athlete that they improve, set goals, and use what they learn. It is reasonable to assume that when a coach confirms an athlete (e.g., tells them that they are capable of performing up to the coach's expectations, points out mistakes to help them improve and become a better player) that it would significantly predict higher levels of competence.

Next, the results of the two mediation analyses (i.e., hypothesis five and seven) examined the mediating role of orientation on values and attitudes. First, task orientation mediated the relationship between competence and commitment (i.e., hypothesis five). This is in line with Lee et al.'s (2008) work that also found similar results. Therefore, these findings provide further support for the pro-social development of values, orientation, and attitudes in sport and shed light on the notion that athletes who thought it was important to improve in their sport (i.e., possess competence values) and who have felt successful when they were improving (i.e., task orientation) were more likely to be committed to their sport participation.

The other mediation analysis (i.e., hypothesis seven) indicated that ego orientation mediates the relationship between status values and negative attitudes. Similar to Lee et al.'s (2008) literature which examined status to ego, they then explored ego on antisocial attitudes such as cheating and gamesmanship instead of a negative attitude towards sport itself. For this study, this mediating variable highlights that when athletes find meaning (e.g., status values) in demonstrating how good they are, it does not always lead to a negative attitude towards the sport. In fact, this study provides supportive evidence to indicate that an athlete has to establish status values *and* focus on more ego-oriented drives to reach a negative attitude towards sports. This finding is noteworthy as it demonstrates that being competitive (i.e., the desire to win in

interpersonal situations; Gill et al., 1988) does not lead to negative outcomes. Simply put, athletes must believe that it is important to demonstrate this level of competitiveness and also perceive themselves as successful when they accomplish such an orientation.

The sixth hypothesis examined how moral values relates to a committed attitude towards the sport and a negative attitude towards the sport. Interestingly, the path from moral values to commitment, although significant indicates a weak relationship  $\beta = .09$ . However, the path from moral values to negative approach, was significantly stronger ( $\beta = -.36$ ). Although it made theoretical sense, building off of previous literature, to assume the relationship between moral values and commitment, a valid explanation as to why this relationship was not as strong as previous research supports is because Lee et al. (2008) treated commitment as a dimension of a larger operationalization for pro-social attitudes. In this investigation, commitment was isolated from the rest of Lee et al.'s conceptualization which includes a dimension called 'conventions'. The conventions aspect of Lee et al.'s pro-social attitudes concept refers to athletes following social norms such as shaking the oppositions hand after an event and congratulating the other team even after a loss or for playing well. This conventions dimension was removed and commitment was isolated for the current investigation because the model presented here was more interested in the actual attitudes toward sport that are developed through sport rather than one's following of social norms which was believed to be influenced by several other factors extraneous to this discussion.

Hypothesis eight forwarded that a committed attitude would be positively related to learned lessons and that a negative attitude would be negatively associated with learned lessons. Only the path from commitment to learned lessons was statistically significant, indicating that when athletes' attitudes towards sport demonstrate commitment (e.g., not giving up when losing,

going all out) that it will be positively related to perceptions that they learned lessons while playing sports. One reason for this significant relationship may be that participants who are committed to the sport end up playing longer, providing more opportunities for them to learn lessons (Fraser-Thomas et al., 2008). In contrast, the path between negative attitudes and lessons learned was unfortunately not significant. It is possible that the fault lies in the operationalization of negative attitudes, As was discussed in the method section, this measurement was problematic and its psychometric properties could be responsible for the measures inability to perform as predicted. The surprising and disappointing nature of this result is discussed a greater length when discussing the model fit results below.

The results for the tenth hypothesis parallel similar findings in instructional literature. For example, Pitts (2022) identified that confirming communication from academic advisors positively influences perceptions of a supportive and connected climate. The fact that the result of this study are similar to current instructional research is not surprising. As previously mentioned, the sport environment, in many ways, shares like constructs in an environment that parallels one another (Turman & Schrodt, 2004). It is meaningful to find support of this relationship in sport communication research as it illustrates the importance of coaching confirmation and its relationship with the climate it creates.

Last, the eleventh hypothesis forwarded that climate would mediate the relationship between coaching confirmation and both task and ego orientation. The results demonstrated a significant mediation for both. To our knowledge, this is the first study to look at climate as it mediates coaching confirmation to orientation. Notably, the significant findings demonstrate that the climate created from the communicative influence coaches have, influences athletes' orientation towards the sport. This means that if an athlete is being adequately confirmed from

their coach, the athlete is more likely to perceive the environment as open, supportive, and respectful, influencing their orientation.

Overall, it was important to address the findings of the hypotheses as their relationship are foundational to understanding the models proposed. Moving forward, the next section will address the how the models performed, how modification indices produced models that fit the data well, and the meaningfulness behind these results.

#### 6.1.1.2.1.2 Model

Initially, two models were proposed to assess how coaches' communication influences a set of variables that via serial mediation, relate to learned lessons in sport. To address the findings, two main points will be discussed. First, this section will go over both model fits, highlighting that neither provided a good fit for the data. The five modifications that were implemented will be reviewed and discussed. Second, a deeper dive into the revised models will be provided and further reasoning to why the models fit as indicated will be discussed. After discussing the key facets of this section of the study, implications will be provided before addressing limitations and future directions.

Study Three's two proposed models did not produce a good model fit. The first model (i.e., Initial Model; IM – hypothesis 9) looked to assess coaching confirmation on athlete's values, orientation, attitudes, and learned lessons. The second model (i.e., Alternative Model; AM – hypothesis 12) included the same constructs but added both another variable (i.e., climate) and several additional direct paths. For both models, five modification indices were applied before they demonstrated a good fit<sup>3</sup>. Each decision was based on the empirical recommendations from modification indices provided by Stata/SE 17.0, and theoretical support

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<sup>3</sup> Four modification indices for the IM and AM were the same. Notably, the IM and AM each required one original modification.



for the additional paths suggested. In other words, there were additional modifications suggested by the modification indices that would have resulted in greater model improvements that were ignored due to a lack of conceptual or theoretical support. However, it is important to note that even though these model modifications resulted in acceptable model fit statistics, all modifications were added post hoc and therefore do not represent support for either model or the hypotheses presented.

The first modification applied included correlating the error terms between competence and morals as well as competence and status. Although correlated error terms are often not recommended, Brown (2015) supports this modification when there is probable cause for acquiescent response or if correlated items are worded similarly. Examining the items, they all use the same prompt and therefore there may be shared variance of participants response to the prompt. As such, correlating these error terms makes theoretical sense.

Next, the second modification included creating a direct path from coaching confirmation to lessons learned. Previous literature supports this decision as it provides a rationale that a coach's communication significantly influences like constructs (i.e., affective learning) (e.g., power bases and affect learning; Rey et al., 2022; leadership and affect learning; Turman & Schrod, 2004). Therefore, this path is supported both empirically and theoretically. The inclusion of this path indicates that in addition to the effect that coaches can have on lessons learned through values, orientation, and attitudes, coaches can also have a direct effect on lessons learned. This assertion is consistent with literature found in instructional and organizational communication that indicates that teachers and supervisors can have direct and indirect effects on students and subordinates outcomes (Kassing, 2000; Kim et al., 2019; McCroskey et al., 2006; Myers et al., 2014; Sollitto et al., 2016).

The third modification proposed a direct path between competence and lessons learned. Once again, instructional research supports this relationship. For example, Houser and Frymier (2009) forward that learner empowerment (i.e., “meaningfulness, competence, and impact”) is related to affective learning (p. 36). Furthermore, competence has been associated with a sense of meaningfulness (Weber & Patterson, 2000). This latter statement offers both support and explanation to the theoretical relationship found in the model between competence and lessons. It furthermore demonstrates that when athletes want to improve and set goals for themselves within the realm of sport (i.e., competence values) that they are more likely to then when reflecting back on the lessons learned in sport, that the meaningfulness posited by Weber and Patterson (2000) may elucidated feelings of learning.

The fourth modification was only included in the IM as the path was originally included in the AM. Specifically, it consisted of creating a direct line from moral values to task orientation. One reason this makes theoretical sense is because literature forwards that “values underpin achievement orientations, which, by their nature, illustrate personal theories or worldviews about achievement context” (Lee et al., 2008, p. 604). As previously stated, with competence and moral error terms correlated, it demonstrates the similarity between these variables. As such, it is plausible then that similar to competence’s relationship with task, that moral values influence one’s task orientation as well.

Next, both modification indices indicated that attitudes of commitment towards the sport and negative attitudes towards the sport should have a direct path. As such, a path from commitment to negative was applied. As mentioned in chapter one, the reasoning in choosing two opposite variables to represent attitudes—and draw distinction from Lee et al., (2008) model—is because they should be related to one another but also represent two different sides of

a continuum when assessing attitudes towards sports. One should address a prosocial approach (i.e., commitment) where the other should demonstrate an antisocial approach (i.e., negative). Regardless however, these two measures are similar in that they measure one's attitudes towards sport. Therefore, it is logical to assume that if an individual demonstrates commitment to the sport, they are unable to simultaneously demonstrate a negative attitude.

Last, a direct path from climate to learning was recommended by modification indices for the AM. A significant relationship between these two constructs reveals that the climate created for athletes significantly influences their perceptions of learning. A viable explanation for this may be that when athletes feel support, cooperation, and connectedness (Johnson, 2008) in the sport environment, they will be more likely to perceive those moments as ones that taught them lessons. For example, if an athlete plays poorly and their teammate is able to support them in such a way that they feel a bond with them, later in life they may believe they learned a lesson in perseverance and social support. This also implies that there might be additional communicative actors that influence the climate other than coaches such as parents and teammates.

Overall, by adding these additional paths to the two models, each reached a good level of fit. One major difference between the revised IM and AM however, is that the revised AM includes all of the modifications suggested for the original model, plus direct and indirect effects of climate on lessons, as well as all of the original hypotheses forwarded such as additional direct effects between coach confirmation, and orientation and values to the orientations. Although modification indices were able to alter the models in order to fit the data, these revised models should not be seen as a validated theoretical explanation of this phenomena at this time. While the paths added and discussed here make theoretical sense and find support in pre-existing research, these structures need to be tested on unique datasets before any conclusions can be asserted as to

their validity. As such, the results of study three did indeed fail to provide data that represents a good fit for the model.

One possible explanation as to why the current data failed to provide an acceptable fit to either of the two proposed models is that the negative attitude variable did not work as it was intended. When examining the mean ( $M = 2.36$ ) and standard deviation ( $SD = 1.04$ ) for this construct, it is apparent that participants responses were skewed towards strongly disagree. For the entire scale, 78% of participants failed to even slightly agree that they might have had a negative attitude (mean of the negative scale above 3). Moreover, literature contradicts these findings as it forwards that athletes often discuss the issues they have about their coaches and address and assign blame on the coach for topics regarding performance in practice or games, feedback, schedules, and performance (Cranmer et al., 2018; Rey & Johnson, 2021, Wachsmuth et al., 2018). Therefore, in regard to previous literature, the variability—or lack thereof—of the measure is surprising. Social desirability bias may help explain why this occurred. Participants who completed the survey may have not wanted to admit that they had a negative attitude when playing sports. As both models demonstrate, the path from negative to learning is not significant and may be largely influencing the poor model fit.

A second possible explanation of the poor model fit of the original models is that the results indicate that moral values have a significantly low association with commitment, and that modification indices indicate that instead, moral values should relate to commitment through task. This is surprising given results presented by Lee et al. (2008). However, this apparent conflicting result seems to make more sense when we examine the different measurements used between the two studies. Specifically, Lee et al., (2008) combines prosocial attitudes to include *both* commitment and conventions. When theoretically examining the items for conventions, it is

worth addressing the similarities between moral values and conventions. Conceptually, moral values examine the extent to which athletes believe it is important to demonstrate fairness, honesty, and kindness to oppositions. Similarly, conventions also examine kindness towards the opposition. The lack of support for the relationship between moral values and commitment in the current study as opposed to Lee et al.'s (2008) model may be because morals related more toward the commitment side of prosocial attitudes than conventions. Because the current study desired to look specifically at attitudes towards the sport and not obligations to sport (e.g., shaking the other team's hand, congratulating others when they succeed) it did not use conventions and therefore, morals may have no longer had a similar construct to relate with. Simply put, removing conventions altered the influence that moral values had on the model.

Lastly, another possible explanation for the lack of fit for both models is that coaches may not be the only influence these relationships. Indeed, parents, teammates, and an individual's own personality characteristics may also prove to be significant predictors of these relationships. For instance, within sport, athletes may have several communicative actors who heavily impact their experience. A communicative agent is an individual who interacts and communicates with the athlete within the sporting environment (Chu & Zhang, 2019). For athletes, their parents, coaches, and teammates all play significant roles in shaping their experience due to the amount of time spent with one another (Backman, 1985; Beets et al., 2006; Bruner et al., 2021; Sheridan et al., 2014; Vallerand et al., 1997). As such, it is warranted to assume that an athlete's values towards sport will reflect their relationship with these communicative actors.

The effect a parent can have on a child's sporting experience is due to the unique opportunity of being able to engage in conversations and interactions with their children

(Tamminen et al., 2017). Parents can have many different types of conversations that will influence an athlete's perception of their experience in sport. These include performance-based discussions (Dorsch et al., 2015; Gould et al., 2006), health-related conversations (Boneau et al., 2020; Tallapragada & Cranmer, 2020; Knight et al., 2020), and sport-based participation (Brustad, 2011; Turman, 2007). Furthermore, teammates are often discussed in the literature as influential as well and could help further support the proposed model. Grounded in social interaction, sports provide athletes an opportunity to engage and interact with peers, often with the ability to claim membership with such groups (Benson & Bruner, 2018). In particular, teammates often have one of the most meaningful impacts on an athlete's development (Holt et al., 2009). Additional findings highlight that teammate interactions significantly influence an athlete's motivation, well-being, interpersonal development, emotional display, and ability (Evans et al., 2013; Raabe & Zakrajsek, 2017).

In addition to these other communication actors, the individual's pre-existing personality characteristics may also assist in being able to explain and predict the relationships forwarded in the model. As forwarded by Holland et al. (2010), one characteristic an athlete has is their personal desire to succeed. Personal characteristics such as such as motivation, conscientiousness, and need to learn are positively related to athletic performance and satisfaction and may help explain an athlete's personal drive (Amorose & Horn, 2000; Durand-Bush & Salmela, 2002; Orlick & Partington, 1988). Indeed, due to the nature of sport, personal characteristics as well as communicative actors (Buning & Thompson, 2015; Côté et al., 1995; Côté & Hay, 2002) may influence the relationship between values, orientation, attitude, and learning.

## 6.2 Implications

One significant result of the data presented in this manuscript is that it provides a measurement that can be used in sport communication research to assess athletes' perceptions of the life lessons learned through participating in sports. This answers the call of sport researchers for measures specific to sport (Cranmer, 2019; Cranmer et al., 2022; Wenner, 2021).

Particularly, this study answers Wenner's (2021) call for a more phenomenological and socio-psychological approach to create empirical measurement specific to sport. While this study does not argue for the support of the previous hypotheses related to the proposed model, theoretically, the revised model may provide meaningful support for the development of learned lessons in sport and should be tested via additional data sets to see if the results are an artifact of the data collected or if there is indeed, a theoretical argument and sense for these relationships. Moreover, as this study suggests, communicative actors such as parents and teammates may influence these relationships and may provide theoretical reasoning either individually in the model or all together as part of a larger model.

Heuristically, researchers can use this measurement to further their understanding of concepts influenced by lessons learned in sport. For example, research can include this instrument to evaluate the importance of sport participations in childhood development. Future research can look at how lessons learned through sport relate to outcomes in other aspects of the athlete's life such as the work environment (e.g., organizational assimilation; Benson et al., 2014; Sollitto & Cranmer, 2019; Waldeck et al., 2004) or the educational environment (e.g., persistence [Chittum & Jones, 2017] and instructional dissent [Goodboy, 2011]). Investigations such as this, using the newly developed LLS scale allows sport researchers to add empirical support to the anecdotal assertions that athlete's learn life lessons through sport. Practically, this

study provides evidence that when sporting environments provide confirming communication and supportive environments, athletes will learn lessons that transcend the sport environment. Addressing the sport environment further demonstrates the value in not just winning, losing, skill development for success, but focuses on the development of the individual and the environments that should be created by communicative actors. These findings prove meaningful for stakeholders invested in creating meaningful environment for athletes as it highlights the influence communicative agents have on the environment and athlete's overall development.

### **6.3 Limitations and Future Directions**

A significant issue that arose in the model testing portion of this research relates to the performance of the negative attitude measure. From a psychometric standpoint, the original 4-item measure was unable to achieve a satisfactory alpha as a measure of its internal reliability (.68). A review of the reliability analysis revealed that the measure was significantly influence by one problematic item. A review of the actual item led to the determination that it was measuring something conceptually different from the rest of the scale and it was deleted. However, while the deletion of this item led to an acceptable internal reliability, the 3-item scale still performed questionably. Specifically, the overwhelming majority of the sample failed to report on their own possible negative attitudes while participating in sport. Regardless of the reasoning for this result, the lack of variability in this measurement represents a significant empirical hurdle for either of the proposed models to overcome. Future research that looks to assess athlete's negative attitudes might need to provide or propose different ways to operationalize this variable. Possibly, to overcome the potential social desirability bias found here, future research should consider asking athletes to reflect on how others may interpret their attitude or the attitudes they have encountered in their teammates. Athletes may be more willing to discuss the negative



attitudes of their teammates more so than their own, providing a more meaningful insight into athlete's negative attitudes towards sport.

Another limitation is the amount of time participants have been removed from the sport. For example, for the third study, participants on average, had been away from their sport for 15.23 years ( $SD = 9.86$ ) and may demonstrate a recall bias. Future investigators should conduct studies at differing periods of time in relation to exiting the sport as recognizing the lessons learned in sports may not always be readily apparent to the current athlete (Bronfenbrenner, 1999). Meaningful results and conclusions may be drawn from being able to indicate when the lessons one learns in sport become recognizable.

Furthermore, this study failed to collect data regarding when the participant had the coach they reported on. For example, a participant may have stopped playing their sport in their twenties, and yet reported on an influential coach they had when they were 12. Data collected moving forward should ask participants when they had the coach, if they continued playing after their experience with that specific coach, and moreover, further information regarding why they chose to report on that coach. Qualitative data regarding why participants choose a specific coach may be valuable in that it will provide further information as to how coaches communicatively influence athletes in both positive and negative manners.

Another limitation is that this study did not identify if participants had engaged in a workshop designed to teach lessons via the sporting environment (e.g., Holt et al., 2017). Future research should include this in their data collect and possibly analyze differences between groups who go through workshops and those who learn lessons by simply participating in sports. These results would also inform researchers if they should focus on supporting explicit or implicit lessons taught by communicative agents.

Moving forward in this line of research, it would be meaningful to parallel this measure and model with specific learned lessons or enactment of lessons outside of sport. By examining how lessons learned in sport may be related to more detailed and specific lessons often discussed by athletes (e.g., group work, resilience, argumentativeness, etc.), results may be able to measure how lessons learned in sport are viable and used in different contexts. The model should be further examined in another dataset. Upon analysis, if it adequately reflects the phenomenon of learning lessons in sport, it should then expand to include differing communicative actors, scenarios, and contexts. Implementation of the model to examine the sport environment and learned lessons would provide meaningful results that can assist in improving the sport environment for athletes. Specifically, this could be creating workshops for communicative actors to learn how to properly confirm, support, and create environments that encourage learning. Overall, despite the limitations, this study provides meaningful results that can be further incorporated into studies moving forward.

## **6.4 Conclusion**

The field of sport communication is still in its infancy with the room and ability to continue growing (Wenner, 2021). The results of this study contribute to aforementioned growing field as they provide a valid instrument for measuring perceptions of learning and a preliminary model that highlights the importance of communicative agents influence in athlete's learning. It is the hope of this dissertation that sport communication researchers will draw meaning and inspiration from these findings and continue to conduct research pertaining to sport communication and the athlete. Ultimately, without the athlete, sports would be nonexistent, and as such, the importance of understanding and supporting athletes should be a priority of sport communication researchers.

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## Appendices

### Appendix A.

#### Learned Lessons in Sport – Initial Items

Please take your time as you answer the following questions. As a reminder, there are no right or wrong answers, we are simply interested in learning more about your experience. Please keep in mind your experiences as an athlete and what you learned from participating in sports and answer the following questions to the best of your ability. You will be asked a series of questions about your experiences playing sports. Base your responses on your overall sport experience.

Moving forward, you will be asked a series of questions about your experiences playing sports.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Base your responses on your sport experience and your perceptions of it today unless otherwise indicated.

1. I see the connections between what I learned playing sports with what I go through in life.
2. I often hear from others who played organized sports how they ***do not*** believe they learned anything from being a part of sports
3. I see the relationship of what I learned from playing sports from one day to the next in my life now
4. I often ask others who played sports the lessons they learned as an athlete
5. I actively participated in discussions with teammates about strategies and how to be better as a team
6. I ***don't*** see any value in playing sports when it comes to personal development
7. I like to talk about my sport experiences with friends and family
8. I explain the value of sport to others
9. As an athlete, I ***rarely*** discussed with teammates strategy and training methods to help become better as a team
10. I volunteer my opinion about the value of being an athlete with others
11. I see/saw improvement in my understanding of sport throughout my athletic career
12. I often think about the lessons I learned while playing sports
13. I ***don't*** believe that my time playing sports has taught me valuable life lessons
14. I often apply the lessons I learned as an athlete to other contexts of my life
15. I often have conversations with others about the lessons I learned while playing sports
16. I believe that because I played sports, I can more effectively problem solve in other contexts of my life
17. I believe that because I played sports, I can more effectively control my emotions in other contexts of my life
18. I believe that because I played sports, I communicate honestly with others
19. As a result of playing sports, I often set goals for myself in non-sport settings

20. I don't apply the lessons I learned in sports to non-sport settings.

## Appendix B.

### Study One and Study Two Questionnaire.

Please take your time as you answer the following questions. As a reminder, there are no right or wrong answers, we are simply interested in learning more about your experience. Please keep in mind your experiences as an athlete and what you learned from participating in sports and answer the following questions to the best of your ability. You will be asked a series of questions about your experiences playing sports. Base your responses on your overall sport experience.

Moving forward, you will be asked a series of questions about your experiences playing sports. Base your responses on your sport experience and your perceptions of it today unless otherwise indicated.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I see the connections between what I learned playing sports with what I go through in life.
2. I often hear from others who played organized sports how they ***do not*** believe they learned anything from being a part of sports
3. I see the relationship of what I learned from playing sports from one day to the next in my life now
4. I often ask others who played sports the lessons they learned as an athlete
5. I actively participated in discussions with teammates about strategies and how to be better as a team
6. I ***don't*** see any value in playing sports when it comes to personal development
7. I like to talk about my sport experiences with friends and family
8. I explain the value of sport to others
9. As an athlete, I ***rarely*** discussed with teammates strategy and training methods to help become better as a team
10. I volunteer my opinion about the value of being an athlete with others
11. I see/saw improvement in my understanding of sport throughout my athletic career
12. I often think about the lessons I learned while playing sports
13. I ***don't*** believe that my time playing sports has taught me valuable life lessons
14. I often apply the lessons I learned as an athlete to other contexts of my life
15. I often have conversations with others about the lessons I learned while playing sports
16. I believe that because I played sports, I can more effectively problem solve in other contexts of my life
17. I believe that because I played sports, I can more effectively control my emotions in other contexts of my life
18. I believe that because I played sports, I communicate honestly with others
19. As a result of playing sports, I often set goals for myself in non-sport settings
20. I ***don't*** apply the lessons I learned in sports to non-sport settings.

Please answer the following questions now reflecting back on your sport experience and how you feel TODAY. Each statement has 4 parts for you to answer, please answer each of them. The closer to the word you pick, the more you agree with that side.

21. I feel my teammates were:
  - a. Bad -- Good
  - b. Valuable -- Worthless
  - c. Unfair -- Fair
  - d. Positive -- Negative
22. I feel my coach was:
  - e. Bad -- Good
  - f. Valuable -- Worthless
  - g. Unfair -- Fair
  - h. Positive -- Negative
23. I feel that playing my sport was overall:
  - i. Bad -- Good
  - j. Valuable -- Worthless
  - k. Unfair -- Fair
  - l. Positive -- Negative
24. The likelihood of me using the skills I've learned from participating in my sport is:
  - m. Unlikely -- Likely
  - n. Possible -- Impossible
  - o. Improbable -- Probable
  - p. Would -- Would not
25. The likelihood of me telling others to participate in sports is:
  - a. Unlikely -- Likely
  - b. Possible -- Impossible
  - c. Improbable -- Probable
  - d. Would -- Would not

Next, we would like to know more about your relationship with your teammates. Please keep in mind one team as you answer the following questions. The team should reflect the one that was the most influential in your sporting experience. As a reminder there is no wrong or right answer, we are only interested in your experience.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

26. Please give your team a nickname and provide it below: \_\_\_\_\_
27. We all share the same commitment to our team's goals
28. I invite my teammates to do things with me
29. As a team, we are all on the same page
30. Some of my best friends are on this team
31. I like the way we work together as a team
32. I do not get along with the members of my team



33. We hang out with one another whenever possible
34. As a team, we are united
35. I contact my teammates often (phone, text message, internet)
36. This team gives me enough opportunities to improve my own performance
37. I spend time with my teammates
38. Our team does not work well together
39. I am going to keep in contact with my teammates after the season ends
40. I am happy with my team's level of desire to win
41. We stick together outside of practice
42. My approach to playing is the same as my teammates
43. We contact each other often (phone, text message, internet)
44. We like the way we work together as a team

Thank you for your patience through this questionnaire. These are our last questions but still vitally important. Please answer them to the best of your ability.

45. Your sex: Male | Female | Non-binary | Prefer to self-describe
46. Your age: \_\_\_\_\_
47. What sport did you play?
48. Baseball | Basketball | Cheer | Cross Country | Dance | Football | Gymnastics | Hockey | Ice Skating | Lacrosse | Soccer | Softball | Tennis | Track and Field | Volleyball (Indoor) | Volleyball (Sand) | Other: \_\_\_\_\_
49. What is your ethnicity?  
Asian | Black/African American | Hispanic/Latina/Latino | Native American | Pacific Islander | White | Prefer to self-describe
50. What state are you currently located in?  
a. Drop down of all 50 states
51. What state were you located in while playing the sport you reported on?  
b. Drop down of all 50 states
52. What is your highest level of education?  
High School Degree | Associates Degree | Bachelors Degree | Masters Degree | PhD | EdD | MD | JD | Other: \_\_\_\_\_
53. What was the highest level you competed at?  
Recreation | Travel | High School | Community College | 4-Year College | Semi-Professional | Professional | Other:|\_\_\_\_\_
54. To the best of your knowledge, how did the coach you reported on identify? Male | Female | Non-binary | Prefer to self-describe
55. When you exited from playing the sport competitively (this pertains to the level you reported above), what was the reason for you leaving?  
Quit | Was Cut | Aged Out | Other: \_\_\_\_\_
56. How many years has it been since you exited the sport (in reference to the question above)? \_\_\_\_\_
57. What was your role on your team? (Check all that apply)  
Starter | Non-starter | Captain

## Appendix C.

### Study Three Questionnaire.

Please answer the following questions with one coach in mind. As a reminder there is no wrong or right answer, we are only interested in your experience. Please keep in mind one coach as you answer the following questions. The coach should reflect the one that was the most influential in your sporting experience (good or bad). Whichever coach you choose, please answer all of the following questions with that one coach in mind.

Not at All	Seldom True	Sometimes True	Often True	Extremely So
1	2	3	4	5

Please provide the initials for your coach below: \_\_\_\_\_

1. My coach told me I was capable of performing up to his or her expectations
2. My coach told me they believed in me
3. My coach continually pushed me to get better
4. My coach spent time trying to help me improve
5. My coach expressed that he or she believed I could improve
6. My coach acknowledged when I performed well
7. My coach told me “good job” I did well
8. My coach praised me when I executed our game plan
9. My coach told me when I was performing up to his or her expectations

Please answer the following questions regarding your experience playing your sport and your relationship with your team overall. Please remember this is you as a youth athlete, not how you feel about sports today.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

10. I had a common ground with my teammates
11. I felt a strong bond with my teammates
12. The players on my team shared stories and experiences with one another
13. The players on my team were friendly with one another
14. I felt included in team discussions on my team
15. The players on my team praised one another
16. The players on my team were concerned about one another
17. The players on my team smiled at one another
18. The players on my team engaged in small talk with one another
19. The players on my team laughed with one another
20. The players on my team were supportive of one another
21. The players on my team cooperated with one another
22. The players on my team felt comfortable with one another

Please answer the following questions regarding your experience playing your sport and how much the following statements were important to you as an athlete. Please remember this is you as a youth athlete, not how you feel about sports today.

The Opposite of what I Believe	Slightly important	Somewhat Important	Moderately Important	Extremely Important to Me
1	2	3	4	5

When I played my sport, it was important to me that...

23. I became a better player
24. I used my skills well
25. I set my own targets
26. I improved my performance
27. I did what I am told
28. I showed good sportsmanship
29. I helped other people when they need it
30. I always played properly
31. I tried to be fair
32. I showed that I am better than others
33. I was a leader in the group
34. I won or beat others
35. I looked good

Next, the following questions are in regard to what made you feel successful as an athlete. Please remember this is you as a youth athlete, not how you feel about sports today.

Please answer the following questions regarding how strongly you disagree or agree with the following statements:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

In my sport I felt successful when...

36. I reached a target I set for myself
37. I overcame difficulties
38. I succeed at something I could not do before
39. I tried hard
40. I really improved
41. I performed to the best of my ability
42. I learned something new to me
43. I beat other people
44. I was clearly better
45. I was the best

- 46. I did better than others
- 47. I accomplished something others cannot do
- 48. I showed other people I was the best
- 49. I did things more easily than others

Please answer the following questions to the best of your ability.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Reflecting back, I realize that while playing

- 50. In competition, I went all out even if I was sure to lose
- 51. I didn't give up even after making many mistakes
- 52. I thought about ways to improve my weaknesses
- 53. It was important to me to be present at all practices
- 54. During practice I went all out
- 55. I competed for personal honors, trophies, and medals.
- 56. I criticized what the coach made me do
- 57. After a competition, I used excuses for a bad performance
- 58. When my coach pointed out my mistakes after a competition, I often refused to admit that I made that mistake

Please answer the following questions to the best of your ability. You will be asked a series of questions about your experiences playing sport. base your responses on your sport experience and your perceptions of it today unless otherwise indicated.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

- 59. I like to talk about my sport experience(s) with friends and family
- 60. I don't see any value in playing sports when it comes to personal development
- 61. I explain the value of sports to others
- 62. I volunteer my opinion about the value of being an athlete with others
- 63. I often think about the lessons I learned while playing sports
- 64. I don't believe that my time playing sports has taught me valuable life lessons
- 65. In the past as an athlete, I actively participated in discussions with teammates about strategies and how to be better as a team
- 66. I often have conversations with others about the lessons I learned while playing sports
- 67. I believe that because I played sports, I communicate honestly with others
- 68. I don't apply the lessons I learned in sports to non-sport settings

Thank you for your patience through this questionnaire. These are our last questions but still vitally important. Please answer them to the best of your ability.

69. Your sex: Male | Female | Non-binary | Prefer to self-describe
70. Your age: \_\_\_\_\_
71. What sport did you play?
72. Baseball | Basketball | Cheer | Cross Country | Dance | Football | Gymnastics | Hockey | Ice Skating | Lacrosse | Soccer | Softball | Tennis | Track and Field | Volleyball (Indoor) | Volleyball (Sand) | Other: \_\_\_\_\_
73. What is your ethnicity?  
Asian | Black/African American | Hispanic/Latina/Latino | Native American | Pacific Islander | White | Prefer to self-describe
74. What state are you currently located in?  
a. Drop down of all 50 states
75. What state were you located in while playing the sport you reported on?  
b. Drop down of all 50 states
76. What is your highest level of education?  
High School Degree | Associates Degree | Bachelors Degree | Masters Degree | PhD | EdD | MD | JD | Other: \_\_\_\_\_
77. What was the highest level you competed at?  
Recreation | Travel | High School | Community College | 4-Year College | Semi-Professional | Professional | Other:|\_\_\_\_\_
78. To the best of your knowledge, how did the coach you reported on identify? Male | Female | Non-binary | Prefer to self-describe
79. When you exited from playing the sport competitively (this pertains to the level you reported above), what was the reason for you leaving?  
Quit | Was Cut | Aged Out | Other: \_\_\_\_\_
80. How many years has it been since you exited the sport (in reference to the question above)?  
\_\_\_\_\_
81. What was your role on your team? (Check all that apply)  
Starter | Non-starter | Captain

## Appendix D.

### Syntax.

Hypothesis 5: scc install medsem; sem (Commitment<-Task Competence) (Task<-Competence), nocapslatent; medsem, indep(Competence) med(Task) dep(Commitment) mcreps(500) rit rid zlc

Hypothesis 7: sem (Negative<-Ego Status) (Ego<-Status), nocapslatent; medsem, indep(Status) med(Ego) dep(Negative) mcreps(500) rit rid zlc

Hypothesis 11: a) sem (Task<-Coach Climate) (Climate<-Coach), nocapslatent; medsem, indep(Coach) med(Climate) dep(Task) mcreps(500) rit rid zlc.

b) sem (Ego<-Coach Climate) (Climate<-Coach), nocapslatent; medsem, indep(Coach) med(Climate) dep(Ego) mcreps(500) rit rid zlc.