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Abstract

Self-efficacy beliefs related to the performance of a task have been identified as strong predictors of performance success. Research has hypothesized that the most influential contextual factor in athlete self-efficacy development is the athlete-coach relationship, yet there is little research on this relationship. The purpose of this study was to examine collegiate athletes' perceptions of the prevalence of transformative and destructive coaches, the teaching methods athletes perceive to be transformative (strengthening self-efficacy belief), and the influence of coaching methods on sport self-efficacy belief. Just more than two-thirds of the athletes expressed having transformative coaches, while the remaining one-third experienced coaches they defined as destructive, with many of these coaches utilizing overtly abusive tactics. This positive and negative exposure was significantly related to athlete self-efficacy belief. Transformative coaching methods were highlighted, which adds to the body of sport management research by highlighting how coaches influence performance beliefs of their athletes.

Keywords: coach influence; pedagogy; performance; performance psychology; self-efficacy

Self-efficacy is one's ability to organize, coordinate, and execute actions necessary to produce given attainments (Bandura, 1997). Self-efficacy beliefs, related to the performance of a particular task, dictate how people think, feel, and behave (Bandura, 1997) and have been identified as strong predictors of performance success (Lardon, 2008; Nicholls et al., 2010; Schunk, 1995; Weinberg & Gould, 2018). Athletic ability and a belief in that ability are requisite for athletic success (Nicholls et al., 2010). Feltz and Lirgg (2001) examined 18 studies exploring athletes' self-efficacy beliefs, and results demonstrated a strong correlation between athletes' self-efficacy beliefs and athletic performance. Self-efficacy belief was the most accurate predictor of success above any other independent variable (Feltz & Lirgg, 2001). Convictions related to task competence are malleable (Hendricks, 2013; Lewis, 2018) and are influenced by four primary sources: *enactive mastery experience* (successful performance), *verbal/social persuasion* (words and actions of significant others), *vicarious*

experience (role and peer modeling), and *physiological and affective states* (physical sensations, thoughts, and emotions) (Bandura, 1997).

Athletes' beliefs in their performance abilities may also be influenced by individual and contextual factors (i.e., identity development, attitude and paradigm, communication, coaching strategy, and coach action) (Chase et al., 2005; Feltz et al., 1999; Gill et al., 2017; Jolly, 2008).

Several scholars have hypothesized that the most influential contextual factor in self-efficacy development is the athlete-coach relationship (Hampson & Jowett, 2014; Jackson & Beauchamp, 2010). Coaches may influence athletes' self-efficacy beliefs through coaching method and style (Gould et al., 1989; Saville et al., 2014; Turnnidge & Côté, 2018; Weinberg et al., 1992). For example, much literature addresses positive coaching leadership models (Chelladurai, 2007; Cummins & Spencer, 2015), including the transformational model of leadership (Armstrong, 2001; Bass, 1999; Smith et al., 2013),

the servant leadership model (Rieke et al., 2008), the authentic leadership model (Luthans & Avolio, 2003), and the altruistic leadership model (Miller & Carpenter, 2009). Yet, many coaches are not cognizant of the connection between leadership style and self-efficacy development.

Most relevant to the building of athletic self-efficacy belief is the transformational coaching leadership model. Armstrong (2001) defined transformational coaching as leadership that aims to develop the athlete holistically through vision, ethics, and modeling. It is likely that coaches engaging in this form of leadership are charismatic, inspirational, and offer individualized attention and intellectual stimulation (Burns, 1978; Peachey et al., 2014). Bass (1999) described transformational leadership as providing motivation, idealized influence, mental stimulation, and individual consideration. Elements of transformational leadership were validated through a qualitative study of expert coaches wherein Vallée and Bloom (2005) found four emergent categories: coaches' attributes, individual growth, organizational skills, and vision.

Research by Gould and colleagues (1989) highlighted that coaches fostered athletes' self-efficacy beliefs through encouraging positive self-talk, generously offering praise, and modeling self-confidence themselves, thus engaging in transformational coaching. Additionally, research on the athlete-coach dyad showed that athletes are more committed and empowered when coaches' express beliefs in athletes' capabilities (Jackson & Beauchamp, 2010). A meta-analysis by Turnnidge and Côté (2018) revealed that transformational coaches promoted athlete self-efficacy development through Bandura's (1997) sources of self-efficacy including vicarious experiences, verbal persuasion, and enactive mastery experience.

In athletics, transformational leadership is associated with satisfaction, positive affect and outcomes, commitment, and heightened effort (Peachey et al., 2014; Choi et al., 2007). On the other hand, non-transformational or destructive coaching often is viewed as toxic behavior that repeatedly under-

mines the motivation, effort, satisfaction, and ultimate success of individuals or groups (Einarsen et al., 2007; Raakman et al., 2010; Yukhymenko-Lescroart et al., 2015). Raakman et al. (2010) examined 540 comments for signs of abuse, neglect, and violence in the coaching of young hockey and soccer athletes and found that approximately 80% of the coaching transgressions were indirect. The authors suggested that abusive coaching behaviors may cause harm in ways that we do not yet entirely comprehend. Common characteristics of destructive coaching include pettiness, bullying, and health endangerment (Einarsen et al., 2007). Because coaches assume a prominent role in the lives of their athletes (Bjornsen & Dinkel, 2017; Cosh & Tully, 2015; Weight et al., 2015) and because coaches can influence the self-efficacy beliefs of their athletes (Hampson & Jowett, 2014; Jackson & Beauchamp, 2010), it is pertinent to examine how collegiate athletes may interpret a coach's influence on self-belief.

There is scant research on the self-efficacy perceptions of college athletes, and many of the previous self-efficacy studies involved youth participants or Olympians (Feltz & Lirgg, 2001; Harwood, 2008; Jowett & Cockerill, 2003; Saville et al., 2014; Weinberg & Gould, 2018). Although the results of these studies may be applicable to collegiate athletes, college athletes are a distinct population (Jolly, 2008). In addition, few scholars have examined the role of coaches in advancing or hindering the self-efficacy beliefs of athletes (Feltz & Lirgg, 2001). Considering that interactions between athletes and coaches affect the probability of athlete success or failure (Daniel, 2001; Gould et al., 1989; Jowett, 2007; Jowett & Cockerill, 2003; Turnnidge & Coté, 2018), more research is necessary to discover how certain types of instructions may bolster self-efficacy beliefs. Furthermore, few researchers have examined the influence of destructive coaching on athlete experience. This study fills a literature gap by focusing specifically on perceptions of college athletes and the influence of coaches on the formation of self-efficacy beliefs.

The purpose of this study was to investigate

coaching methods athletes perceived to be transformative in their development of self-efficacy belief. Toward this purpose, the following research questions were pursued:

1. What is the prevalence of transformative (strengthening performance self-efficacy belief) or destructive (weakening performance self-efficacy belief) coaches?
2. How are athletes' performance self-efficacy beliefs influenced through training with a transformative/destructive coach?
3. What methods are employed by transformative coaches?

Literature Review

Bandura is credited with the genesis of self-efficacy theory and is considered the leading scholar on self-efficacy by researchers in the field of sport psychology and performance (Feltz & Lirgg, 2001; Weinberg & Gould, 2018). Although Bandura did not focus his research specifically on athletics, self-efficacy theory has been used widely throughout sports scholarship to further understand motivation and performance (Chelladurai, 2007; Gill et al., 2017; Hampson & Jowett, 2014; Weinberg & Gould, 2018). Bandura (1997) postulated that individuals possessing strong self-efficacy beliefs, related to a specific task, are more likely to persevere in difficult situations, engage in complex cognitive processes, and utilize independent learning strategies. Because expert sport performance requires many years of dedicated practice and intricate functioning of numerous cognitive and physical elements, it is important to understand how coaches may facilitate sport self-efficacy development. In the following review of literature, we describe the four types of information that influence self-efficacy beliefs and illustrate how the sources of self-efficacy may affect athletes' performance.

Sources of Self-Efficacy

When individuals possess the skills necessary to perform a given task, yet do not believe they can perform successfully, their performance is negatively affected (Bandura, 1997). Conversely, individuals possessing high ability belief can overcome obstacles and persist despite setbacks or rejection (Bandura, 1997; Miller, 2011). Four primary sources provide information requisite for assessing personal ability: enactive mastery experience, verbal/social persuasion, vicarious experience, and physiological/affective states. As individuals interpret information from these sources and other personal and contextual factors, self-efficacy perception may be influenced, which in turn may facilitate the development of sport ability and confidence (Feltz, 1992; Moritz et al., 2000; Shwedeh et al., 2016; Wright et al., 2016).

Enactive Mastery Experience

Enactive mastery experience, or the successful performance of a task, is the strongest influencer of performance belief because it provides "authentic evidence" (Bandura, 1997, p. 80) that successful execution is possible. Yet, it is important to note that it is not the performance itself that influences self-efficacy belief, but rather, the cognitive processing of the performance event. Gill and colleagues (2017) remarked that the extent to which performance alters individuals' self-efficacy beliefs depends on a myriad of factors including:

> (a) their preconceptions of their capabilities, (b) the perceived difficulty of the tasks, (c) the amount of effort they expend, (d) the amount of external aid they receive, (e) the circumstances under which they perform, (f) the temporal pattern of their successes and failures, and (g) the way enactive experiences are cognitively organized and reconstructed in memory.

Positive sport experiences have been found to increase self-efficacy as well as athletes' perceptions

of their self-efficacy (Baretta et al., 2017; Saville et al., 2014; Wise & Trunnell, 2001). For example, Saville and colleagues (2014) conducted interviews and focus groups with youth participating in summer sport camps and city recreational leagues. The athletes overwhelmingly conveyed that prior sport experiences strengthened their sport performance confidence. In a study measuring the weightlifting performance of collegiate females, bench press ability was measured after individuals received one of three sources of information (performance accomplishment, verbal message, observing a model). Results showed that a performance accomplishment led to significantly stronger bench-press efficacy (Wise & Trunnell, 2001). Similarly, Shwedeh et al. (2016) designed a multidimensional research model based on self-efficacy theory in order to discern how accurately the sources of self-efficacy could predict athletes' performances in a Kobudo Martial Arts competition. Mastery experience was a significant factor in influencing self-efficacy belief, which subsequently influenced performance and achievement.

People choose how to relive and remember past success and failure, (Bandura, 1997) yet coaches can help athletes exercise control over their experiences by emphasizing positive experiences and limiting the influence of negative experiences. Although failure is generally perceived negatively, failure can be beneficial to learning. Failure offers "direct, experiential feedback to learners in the form of 'reality shock,' which reduces ambiguity regarding one's capabilities across a broad range of performance demands" (Hardy III, 2014, p. 157). Athletes who understand that failure is an integral part of the learning process, and who utilize the experience of failure as a springboard for growth may not experience a decrease in self-belief as a result. Additionally, research demonstrates that coaches can manage failure as a means of constructing athlete or team efficacy: high efficacy athletes and teams are more likely to increase effort in the face of failure than low efficacy athletes and teams (Feltz & Lirgg, 2001; Hodges & Carron,

1992). Thus, central to developing performance self-efficacy is becoming master of self in learning to be resilient despite setbacks.

Verbal/Social Persuasion

Verbal/social persuasion is most effective in building self-efficacy belief when coupled with mastery experience (Saville et al., 2014; Wise & Trunnell, 2001). For example, as coaches assist athletes through training and instruction, athletes understand that the coach has expectations, which in turn influence athletes' self-efficacy beliefs and performance (Sari & Bayazit, 2017). Bandura (1997) remarked that people trust the communicated evaluations of another when the person evaluating: (a) is skilled at the task; (b) is able to objectively measure performance capability, and (c) has experience observing many people perform the activity and their later accomplishment (p. 105). Positive feedback from coaches has been shown to foster sport self-efficacy beliefs of athletes competing at varying sport levels (DeBoer, 2009; Saville et al., 2014; Vargas-Tonsing et al., 2004).

An athlete's perception of ability may be influenced through the communications of a coach (Chase, 1995; Saville et al., 2014; Wright et al., 2016), yet feedback must always be given with care (Dweck, 2007; Kohn, 2001) because messages are interpreted by the receiver and may be construed as a performance gain or shortfall. Furthermore, an over-reliance on teacher/coach assessments can hinder a person's ability to become independent and self-assess (Daniel, 2001; Davis & Pulman, 2001). In a study of collegiate swimmers, Marsden (1997) found that swimming performance decreased in high and low self-efficacy participants following both negative and accurate feedback suggesting the enormity of influence coach communication may wield. Additionally, Stirling and Kerr (2013) interviewed 14 retired elite athletes regarding the perceived psychological and performance effects of interactions with their former coaches. Twelve of the athletes reported experiences

with destructive coaches, including five who stated that verbal feedback often felt demeaning and caused them to feel incapable of succeeding in their sport. The participants shared that demeaning feedback precipitated hindered athletic performances (Stirling & Kerr, 2013).

Judgements from significant others may build ability belief when feedback is immediate, clear, and constructive (Buning & Thompson, 2015; Ericsson et al., 1993; Gill et al., 2017). Interviewing 41 collegiate softball athletes, Buning and Thompson (2015) examined how participants' perspectives of coach behavior and communication influenced motivation and perceived performance competence. Seventy percent of the athletes in the study noted that their coach was the most influential source for their self-efficacy beliefs. Additionally, athletes reported feeling increased motivation and feelings of competence when the coach was clear and encouraging in communication. In contrast, athlete participants in the Gearity (2012) study suggested that poor coaches did not provide useful instruction, did not communicate clearly, nor did they individualize instruction to fit specific individual's needs.

Vicarious Experience

Although vicarious experience is generally not as strong a source as mastery experience or verbal/social persuasion (Wright et al., 2016), in some cases, information from vicarious experience can override experience. Bandura (1997) taught that much learning is acquired through an informal process called *observational learning* (p. 93). When there is a model to imitate, a given behavior may be encoded. Individuals are then able to develop new behaviors and may combine behaviors to develop more complex actions. When behavior is rewarded or reinforced, people likely will continue the behavior. As individuals engage in observational learning, *attention* and *retention* determine whether the behavior is acquired (Bandura, 1997).

For example, if a model demonstrates optimism and persistence, the observer may be influenced to adopt the same attitudes despite previous experience (Hendricks, 2016). This theory was supported by Law and Hall (2009) in a study of novice adult sport participants. They found that utilizing observational learning while developing skills in independent sports increased participants' self-efficacy beliefs related to learning the new sport. Additionally, sport participants who engaged in observational learning, while acquiring skills in interactive/group sports, showed higher self-efficacy to regulate thoughts during the learning of the sport.

It is imperative to note that vicarious experiences are not always beneficial to developing self-efficacy belief and must be utilized with vigilance. For example, multiple studies on self-efficacy and music performance have highlighted that social comparison in competitive environments may be damaging to performance belief when individuals perceive their ability as lesser than others (Clark et al., 2014; Gavin, 2016; Hoffman, 2012). Confirming the damaging aspects of comparison, Sari (2015) found that ego-oriented goals (goals set by athletes who measure their success by doing better than their opponents and who value winning more than skill development) negatively affected collegiate badminton players' performance beliefs. Additionally, the softball players in Buning and Thompson's (2015) study reported higher self-efficacy when the coach emphasized individualized instruction and personal bests, rather than comparative instruction. It is essential, therefore, to be cognizant of the self-efficacy beliefs of individual athletes prior to utilizing vicarious experience as a means of developing sport performance belief. Athletes with high self-efficacy belief may benefit from observing others' successful performances (master modeling) (Bandura, 1997). Yet, individuals with low sport performance belief may benefit from observing coping models, or peers who have overcome difficulty (Bandura, 1997). Coping modeling may foster belief when the model provides encouragement, hope, and an example of

challenges overcome.

In addition to peer-modeling experiences, self-efficacy beliefs may be influenced as coaches model positive behaviors. For example, Huber (2013) described how vicarious experiences may facilitate engaging and teaching athletes. Huber advised that coaches model four behaviors as a means of improving athletic performance: (a) social behavior (the measurable influence one has on others); (b) learning behavior (attending to coach directions); (c) motor behavior (proper technique and skill development); and (d) champion behavior (work ethic, dedication, and persistence).

Physiological and Affective States

How a person thinks and feels during the performance of a task influences how the individual perceives one's ability (Feltz & Oncu, 2014). For example, in a study involving female collegiate tennis players, physical self-beliefs were positively correlated with tennis performance (Doody, 1999). Bandura (1997) asserted that physiological states are particularly influential in physical tasks. Yet, it is not the presence of physical and/or emotional indicators that influence performance quality and self-belief, but rather, an individual's perceptions and responses to such indicators. A heightened physical state may be interpreted as the level of vulnerability to failure or may be understood as a requisite preparatory condition to engaged performance (Feltz & Oncu, 2014). In a study investigating high-risk diving, sensation seeking and self-efficacy belief predicted performance (Baretta et al., 2017). The participants reported channeling their stress sensations toward expert performance. According to Bandura (1997), knowledge related to physiological and affective states is acquired through social labeling and experienced events; therefore, coaches may influence how athletes respond to such indicators.

Anxiety, stress, and heightened activation of the sympathetic nervous system are common realities for collegiate athletes. Coaches may exacerbate athletes' stress and anxieties or guide them in recognizing and overcoming the potentially limiting outcomes of performance anxiety. Fostering optimism and self-efficacy belief may reduce performance anxiety (Vargas-Tonsing, 2004). Rife and colleagues (2000) stated that one such strategy for managing thoughts during performance is cognitive flexibility. Cognitive flexibility is the ability to "screen out irrelevant information, and to attend and process information in unrehearsed ways" (Rife et al., 2000, p. 162). Cognitive flexibility allows individuals to selectively focus on the various demands associated with live performance.

Building upon what we know about the adaptability of performance belief (Bandura, 1997; Hendricks, 2009), it is critical to investigate how collegiate athletes receive, interpret, and organize information conveyed by their coaches in order to understand the influence of athlete/coach interactions on performance belief. By utilizing Bandura's (1997) four sources of self-efficacy as a theoretical framework and by examining the perceptions of collegiate athletes related to the teaching techniques of coaches, this study may: (a) highlight how athletes perceive their coaches in cultivating or hindering mastery experiences; (b) contribute to the body of sport pedagogy research by exploring how a coach's communication influences the performance beliefs of athletes; (c) expand the literature on athletes' perceptions of vicarious experiences and observational learning; (d) provide coaches and athletes with tools to identify physiological and affective states that may foster or hinder performance belief; (e) promote open dialogue among coaches and athletes about how coaching practices affect self-efficacy belief; and, (f) empower athletes to recognize the control they may have over their environment, performance beliefs, abilities, and behaviors.

Method

Inasmuch as a coach's influence affects the

probability of an athlete's success (Daniel, 2001; Gould et al., 1989; Jowett, 2007; Jowett & Cockerill, 2003; Turnnidge & Coté, 2018), we desired to understand how collegiate athletes perceive coach behavior in relation to personal growth. The purpose of this study was to investigate coaching methods athletes perceived to be transformative or destructive in their development of self-efficacy belief. Toward this end, we utilized survey approach to gather quantitative self-efficacy belief scores in addition to qualitative insights relative to coaching methods from a broad population of collegiate athletes.

Survey Design

Due to the exploratory nature of the study, an instrument was developed by the authors and reviewed by a panel of experts ($n = 5$) representing uniquely relevant contributions. The panel included an expert in survey design from the Odum Institute of Social Science Research, two researchers with expertise in self-efficacy, higher education, and student development, and two students who were involved in collegiate athletics. Each member of the panel reviewed the survey over two rounds of development that focused on content validity. Upon panel and Institutional Review Board approval, pilot testing with a sample of athletes ($n = 11$) yielded test-retest reliability with alpha levels above .80 on all quantitative items within the study (Lavrakas, 2008). The survey was utilized as a part of a larger study, thus not all survey elements are included within the current paper.

Participants

Given that high-stakes performance situations can intensify the interactions of self-efficacy sources, we targeted a population of athletes who were attending highly competitive programs. Furthermore, only upper-class (junior and senior) respondents were included in the sample because we wanted the participants to have several years of collegiate experience to reflect upon in order to gather rich qualitative data.

Participants were, therefore, selected through criterion sampling based on the following criteria: (a) current varsity athlete within an NCAA Power-Five program, and (b) junior or senior in academic standing.

The survey was distributed online via Qualtrics software to a stratified-random sample of athletes whose names were garnered from athletic department rosters and email addresses from institutional email directories. Two weeks after the initial email invitation was distributed, a reminder email was sent to the athletes. The survey was completed by $n = 184/628$ athletes (yielding a 29.3% response rate). A complete listing of athlete demographic information is included in Table 1. Athlete respondents primarily were female (68%, $n = 126$), white (80%, $n = 147$), with educated parents holding a bachelors (32%, $n = 58$), or masters/professional degree (40%, $n = 73$). The mean age athletes began participation in their sport was 9.8 years old ($SD = 4.24$). These demographics are representative of the sports most highly represented in the sample, which include swimming & diving (13%, $n = 23$), cross country (12%, $n = 22$), track & field (11%, $n = 21$), and rowing (10%, $n = 18$). The sample is not representative of athletes in "revenue" sports who are underrepresented in the sample including football (4%, $n = 8$), and basketball (3%, $n = 6$). As such, results should be interpreted primarily as an insight into experiences of athletes who participate within subsidized sports. A full listing of athlete-sports represented in the sample is included in Table 2.

Data Collection

Data exploring the prevalence of transformative/destructive coaches were gathered from two yes/no questions: "Have you trained under a transformative coach who challenged and influenced you to become greater than you imagined possible?" and "Have you trained under a destructive coach who tore you down and influenced you to become a weaker performer?" (see Table 3). Athletes who selected "yes" to having trained under a transformative coach were prompted to provide the training and educational

methods their coach utilized. Athletic performance self-efficacy belief was then measured utilizing four questions adapted from Zelenak's (2010) Music Performance Self-Efficacy Scale. Given the performance, training, and educational similarities between athletics and music (e.g., Brand, 2006; Weight et al., 2020), the researchers felt the questions were appropriate for measuring sport performance self-efficacy. The four-question scale yielded a moderate level of internal consistency (α = .721). Questions were:

1. I have had positive experiences competing in athletics in the past.
2. I have overcome athletics-related challenges through hard work and practice.
3. I have met or exceeded other people's expectations of being a good athlete for someone of my age.
4. I enjoy participating in intercollegiate athletics.

Data Analysis

Qualitative data from the open-ended portion of the survey were organized and coded independently by two researchers utilizing the four sources of self-efficacy (Bandura, 1997) as themes. Themes were compared and linked together through axial coding and the researchers then re-reviewed each response. Inter-coder agreement of all analyzed data was 91.4%, yielding a Krippendorff's Alpha of α = 0.892, with n = 331 agreements, n = 31 disagreements, and 362 codes analyzed (see Tables 3 and 4). Additionally, analysis of variance was conducted to test whether there were mean differences in performance self-efficacy belief between utilizing an independent variable of the presence or absence of a transformative or destructive coach.

Results

Because of the immense influence a coach may have on the growth of an athlete (Cosh & Tully,

2015; Hampson & Jowett, 2014; Jackson & Beauchamp, 2010; Weight et al., 2015), and because individuals' attitudes related to capability play an integral role in the execution of given tasks (Bandura, 1997; Ericsson et al., 1993), we explored athletes' perceptions of the teaching methods their coaches utilized. Specifically, we examined the prevalence of transformative and destructive coaches, the teaching methods athletes perceived to be transformative (strengthening self-efficacy belief), and the influence of these coaching methods on performance belief.

Prevalence of Transformative and Destructive Coaches

In order to measure the prevalence of transformative coaches, athletes were asked, "Have you studied under a transformative coach who challenged and influenced you to become greater than you imagined possible?" Just more than two thirds of respondents (69%, n = 124) indicated "yes," they had been trained by a transformative coach, and 31% (n = 56) responded "no." For those who indicated experience with transformative coaching, a follow-up question prompted respondents to share the transformative methods the coach utilized. These findings are detailed below in the "transformative teaching methods" section, and within Table 4. Throughout the 126 narratives of transformative methods, the majority (65%, n = 92) described verbal/social persuasion techniques, while mastery experiences, physiological and affective states, and vicarious experiences were mentioned by 14% (n = 19), 11% (n = 16), and 10% (n = 15), respectively.

Athletes were also asked, "Have you studied under a destructive coach who tore you down and influenced you to become a weaker performer?" More than one in three participants (37%, n = 67) indicated training under destructive coaches (see Table 3). Of the 67 respondents, nearly all (91%, n = 61) reported experiencing negative methods of verbal/social persuasion, including abusive language (senseless screaming, shame tactics, jokes, demoralization, neg-

ativity, deception, threats to destroy career, and comments about body/weight). Athletes also mentioned the harmful physiological and affective tactics utilized by the destructive coaches (19%, $n = 13$), including physical/mental intimidation and abuse, and training incompetence that led to injury. Damaging vicarious experiences (6%, $n = 4$) emerged in the data related to comparisons with teammates or other athletes in the form of put-downs.

Influence of Coaching Methods on Athletic Performance Self-Efficacy Belief

Investigating the relationship between transformative or destructive coaches and athletic performance self-efficacy belief, mean scores from the adapted Zelenak (2010) scale were compared through analysis of variance with the independent variable being the student's indication of having or not having trained under a transformative or destructive coach (see Table 4). Athletes who had trained under a transformative coach reported significantly higher levels of performance self-efficacy belief than those who did not $F(1, 183) = 16.225$, $p < .001$; and athletes who trained under a destructive coach had significantly lower levels of athletic performance self-efficacy belief than those who did not $F(1, 183) = 5.39$, $p = .021$.

Transformative Coaching Methods

Most of the athletes who indicated they had studied with a transformative coach described methods the coach employed that had positively influenced their athletic performance, and in many cases, their lives beyond athletics. A summary of themes, as categorized by the four sources of self-efficacy (Bandura, 1997), are listed in Table 4.

Verbal/Social Persuasion Methods

Transformative verbal/social persuasion teaching methods were mentioned by 65% ($n = 92$%) of the athletes who trained under a transformative coach. Within this category, 26% ($n = 24$) mentioned their coach's consistent belief in their ability and potential. Track and Field Athlete 50 stated, "He believes in me more than I believe in myself and pushes me to live up to his expectations." Similarly, Gymnast 23 reflected, "She always believed in me and my ability and pushed me to do the same. She expected the type of performance she knew I could do even when I wasn't sure if I could." These sentiments were iterated repeatedly by athletes who were encouraged through the belief their coaches expressly had in them: "His confidence in my abilities as a person made me confident in what I could accomplish as a pitcher and in life" (Baseball, 115).

The verbal/social persuasion coaching method mentioned second most frequently was high expectations/relentless pushing beyond the athlete's conceived limits (17%, $n = 16$). This method was expressed by Basketball Athlete 59: "He pushed me to limits I did not know I had. He was always hard on me but offered praise when deserved." High expectations as a coaching method were further delineated by Track & Field Athlete 64: "Coach challenges me to achieve the same degree of success on and off the track, consistently pushing me and challenging me to be better and to go beyond my normal limits." Similarly, Football Athlete 72 stated, "My coach inspired me through teaching me the value of hard work. As a younger athlete I relied on natural ability and that only gets you so far. He pushed me beyond what I thought was my limit." Many statements highlighting "pushing athletes beyond their limits" were paired with statements of trust, positivity, encouragement, and motivation, which emerged as the third most mentioned theme expressed by 14% ($n = 13$) of the athletes. For example, Rower Athlete 94 mentioned, "My coach never coddled us. We were continually being challenged, and she had the ability to know when to ask for more from us and when not to, and it was all couched in kindness, positivity, and trust." Similarly, Cross Country Athlete 2 mentioned, "He has been

very encouraging and positive. Even if a competition or practice does not go well, he always looks at the positive side of things. He seems to truly believe in me as an athlete, which pushes me in everyday tasks. He encourages us to look at every little thing we do in practice or a big workout, as an opportunity to become a better runner, and even a better person."

Personalization in communication and training methods were mentioned including "specific challenging goals and accountability" (8%, $n = 7$), "personalized, clear, logical communication/instruction" (7%, $n = 6$), and "care for athletes lives beyond the field/track/pool/court/mat" (7%, $n = 6$). For example, Field Hockey Athlete 7 said, "She is honest and sets realistic goals *for me*. She keeps the program individualized and personal and there is never a 'one-size-fits all' mentality." Similarly, Football Athlete 81 remarked, "Coach encourages us individually. We get personal attention and encouragement, and he appreciates our personal differences as a part of the team." Another athlete expressed the care and dedication of the coach: "She took the time to talk with me individually about my training plan, inspired me to set ambitious goals on and off the court, taught me to fully believe and trust in myself, and then held me accountable to work as hard as I could to achieve those goals and to never give up" (Basketball 61). For a complete listing of transformative verbal/social persuasion coaching methods, see Table 4.

Mastery Experience

Fourteen percent ($n = 19$) of athlete respondents mentioned coaches facilitating mastery experiences in their training. Responses indicated feelings of personal accomplishment facilitated through realistic, achievable goal setting (53%, $n = 10$): "Goal setting was all about achieving little confidence boosters. We kept my athletic progress simple and improved finitely" (Swimming Athlete 11). Several athletes highlighted a focus on breaking personal bests and not comparing oneself

to others (21%, $n = 4$) as described by Swimming Athlete 8: "He had me focus on beating my personal best, making sure I was improving without comparing myself to others." Providing opportunities to compete often (16%, $n = 3$), and providing resources to facilitate self-analysis (11%, $n = 2$) were additional strategies that emerged within the mastery experience theme.

Physiological and Affective States

Eleven percent ($n = 16$) of the respondents conveyed interactions with coaches who facilitated positive physiological and affective states. Athletes recounted feelings about the training environment, emotional experiences that transcended sport, and opportunities coaches provided to merge the physical and mental aspects of training through hands-on technique adjustments, visualization, and meditation. Experiencing an uplifting/fun/safe training environment (38%; $n = 6$) or an environment that was conducive to athletic-academic balance and well-being (19%, $n = 3$) were expressed as primary factors in a few athlete's transformative experiences: "He made practice enjoyable by making bets with us to make us better. We would either end practice with some form of punishment or a game depending on how we did, so we were always hyped and mentally engaged and there were direct consequences to our performance" (Basketball Athlete 104). Describing techniques of visualization and meditation (19%, $n = 3$), two athletes mentioned how their coaches directly connected the feelings of athletic failures/trials/successes to life outside of athletics. An example of inspiration was shared by Rower Athlete 32: "She always made us feel like what we were doing was bigger than just rowing. She had us remember the people that sacrificed for us to have this opportunity and encouraged us to be passionate about everything we do in order to live a championship lifestyle."

Vicarious Experience

Ten percent of the athletes (n = 15) shared examples of vicarious experience where either coaches were role models, or where observation of peers reinforced athlete belief that success was achievable. Team culture was mentioned in one-third of the vicarious experience responses. Several athletes mentioned cultures of holding each other accountable and growing from examples of upper-classmen within the culture of achievement within the team: "He put the responsibility in our hands, and I worked hard, not because he told me to, but because he made me and my teammates hold each other accountable for our actions. We made a great team bond this way because we never wanted to let one another down and we understood each other" (Lacrosse Athlete 122). Other athletes expressed growth through direct example from coaches: "His previous success as an Olympian leads our team to trust in his coaching methods/techniques" (Wrestler Athlete 15). Another athlete stated, "She related to us and she showed us how to balance life with sports. She didn't expect us to shut down the rest of our life but rather encouraged being dedicated but balanced in terms of running, school, friends, and family" (Track and Field Athlete 31). Similarly, Lacrosse Athlete 62 mentioned, "He has led us by example. He is a great role model and motivator."

Discussion

Research has demonstrated self-efficacy belief to be positively correlated with successful performance (Lardon, 2008; Nicholls et al., 2010; Schunk, 1995; Weinberg & Gould, 2018). Building upon the scholarship of Bandura (1997), this study highlights how coaches may influence athletes' performance beliefs through the four sources of self-efficacy. Furthermore, we know these impactful perceptions of performance are malleable (Hendricks, 2009) and can be influenced by teachers and coaches (Daniel, 2001; Gehlbach et al., 2012; Lewis, 2016). In this study, we

examined (a) the prevalence of transformative and destructive coaches, (b) how athlete's performance self-efficacy beliefs are related to training under a transformative/destructive coach, and (c) the methods employed by transformative coaches.

Prevalence and Influence of Transformative and Destructive Coaches

Given the sample of elite-level collegiate varsity athletes, most of whom had been training in their sport since childhood, one would hypothesize exposure to several different transformative coaches throughout their athletic careers. Although a handful of participants recalled experiencing both or neither transformative/destructive coaching styles, approximately two-thirds of the athletes expressed having transformative coaches, while approximately one-third reported experiences with coaches defined as destructive. Previous literature has detailed abusive coaching behaviors within youth and competitive sport (Raakman et al., 2010; Roxas & Ridinger, 2016), however there is little information relative to the pervasiveness of abusive coaching behaviors in collegiate sport. These findings provide a meaningful addition to the literature, detailing the prevalence of transformative and abusive coaching behaviors in this sample of intercollegiate athletes.

Positive and negative coaching exposure was significantly related to athlete self-efficacy belief, supporting previous literature documenting the powerful influence of a coach related to athlete self-efficacy (Hampson & Jowett, 2014; Jackson & Beauchamp, 2010). Athletes who trained under coaches who challenged and influenced them to become greater than they imagined possible generally reported higher levels of self-efficacy belief than their peers who had not trained under transformative coaches. Conversely, participants with exposure to destructive coaches, who tore them down and influenced them to become a weaker athlete, reported significantly lower levels of self-efficacy belief than their peers who had not

trained under destructive coaches. Although there are no causational findings in this study, the significant differences based on transformative/destructive exposure offer compelling metrics supporting foundational literature on the powerful and pervasive influence of a coach and provide a distinct glimpse into the collegiate population of elite athletes.

Transformative Coaching Methods

Building upon what we know about the adaptability of performance belief (Bandura, 1997; Hendricks, 2009), we explored methods athletes perceived as transformative through the lens of Bandura's (1997) four sources of self-efficacy. The transformative methods highlighted in this study add rich additions to the body of sport pedagogy and psychology research by highlighting how coaches influence performance beliefs of their athletes. Furthermore, this data may provide coaches and athletes with tools to identify coaching practices that build athletic skill and performance belief. What follows are coaching methods that participants highlighted as transformative to their athletic development.

Verbal/Social Persuasion

The most prevalent source of transformative coaching methods relayed through athlete responses were those founded in verbal/social persuasion (65%; $n = 92$). This does not necessarily mean that verbal/social persuasion methods are the most influential drivers of self-efficacy belief among the athletes, but rather, they are the methods that were most memorable/visible. Athletes who reported working with a transformative coach relayed the consistent confidence their coaches had in them, demonstrated through high expectations, relentless pushing, positivity, encouragement, motivation, care, and personalized communication and instruction. The athletes expressed feeling deeply cared for, both in sport performance and in their lives beyond sport. They

documented feeling trust in their coaches as dedicated and competent stewards of their skill and feeling trusted and respected by their coaches. These findings corroborate with the work of Bandura (1997) and others in the sport psychology and performance fields (Buning & Thompson, 2015; Gearity, 2012; Wright et al., 2016) in that people trust the communicated evaluations offered by another when the evaluator is skilled at the task, able to objectively measure performance capability, and has experience in observing many people perform the activity.

Data from the present study support previous literature on the influence of clear and constructive feedback (Buning & Thompson, 2015; Ericsson et al., 1993). The overwhelmingly positive slant of the narratives related to supportive communications from coaches adds depth to the literature on the importance of encouragement, tangentially supporting the inverse findings of Marsden (1997) who found athletic performance to decrease following negative accurate feedback. This study adds to the college athletics literature by highlighting the important role of high coach expectations, verbalized belief, care, and trust. The athletes in this study were motivated and inspired to believe in themselves because their coaches verbalized individualized belief in their potential.

Enactive Mastery Experience

Although enactive mastery experience has been highlighted as the strongest influencer of performance belief because it provides "authentic evidence" (Bandura, 1997, p.80) of successful task execution, it was expressed as a primary transformative coaching method within only 14% ($n = 19$) of the responses. We believe this is because mastery experience may have been an assumption for the collegiate athletes who were investigated, and therefore, was not mentioned as a transformative coaching method. As was highlighted by Saville et al. (2014) and Wise & Trunnell (2001), verbal/social persuasion is most impactful when coupled with enactive mastery experiences.

Athletes recalled coaches providing additional opportunities to test and refine their skills and expressly framing the competitions as positive skill-building experiences. Several participants remarked that coaches helped them set realistic achievable goals to facilitate feelings of accomplishment as they focused on personal bests rather than comparison with others. As these findings are interpreted and applied, it is imperative to emphasize that it is not the performance itself that influences self-efficacy belief, but rather, the cognitive processing of the performance event (Bandura, 1997; Gill et al., 2017). Coaches may help athletes exercise control over their experiences by emphasizing positive experiences and limiting the influences of negative experiences. Thus, framing all successes and failures as beneficial learning experiences is critical because positive remembrances of past performances increase sport self-efficacy and confidence (Baretta et al., 2017; Doody, 1999; Saville et al., 2014; Wise & Trunnell, 2001).

Physiological and Affective States

Transformative learning through physiological and affective states was described in 11% (n =16) of athlete responses. Athletes described training in an uplifting/fun/safe environment where they were able to (a) balance their athletic and academic demands, (b) connect feelings of failure or triumph to life outside of athletics, and (c) feel with their whole mind and body proper technique and successful implementation through demonstration, visualization, and meditation. These findings align with Bandura's (1997) and Feltz and Oncu's (2014) assertions of the influence of physiological states in tasks that are physical. Coaches may fuel athletes' worries or assist them in managing and abating stress and anxiety. In sum, coaches have the ability to assist athletes in channeling the physiological intensities of sport into superior performance, however, more research is needed to further examine how transformative coaches may assist athletes in utilizing physiological and affective states.

Vicarious Experience

Vicarious experience was the source mentioned least frequently by athlete respondents (10%; n = 15). Nevertheless, these athletes contributed valuable insights related to utilizing vicarious experience as they described (a) leadership by example, (b) demonstrations of skill/technique, (c) opportunities to learn from outside experts, and (d) a culture where athletes learn from, respect, and hold each other accountable. Given the inherently hyper-competitive culture of intercollegiate athletics and the comparison-based focus of the industry, with organizational limits in roster sizes, scholarships, playing-time, wins, rankings, and championships, master modeling and vicarious experience framing may be less visible to the athletes as fundamental to their growth, yet distinctly important. Because social comparison in competitive environments can be damaging to performance belief (Clark et al., 2014; Gavin, 2016; Hendricks, 2009; Hoffman, 2012), constructing safe learning environments where shared learning can occur is paramount. In order for athletes to embrace an abundance mentality and focus on observational learning and modeling of positive behaviors of teammates and peers (Law & Hall, 2009), it is important for coaches to foster a culture that nurtures these behaviors.

Limitations and Recommendations for Future Research

A few limitations exist within this study. First, participant demographics do not represent college athletes or participation rates. Sixty-eight percent of respondents in this study identified as female, yet females across the NCAA only represent approximately 44% of collegiate athletes (NCAA demographics database, 2019). Similarly, 80% of the participants in this study identified as white, yet 64% of NCAA

athletes identify as white (NCAA demographics database, 2019). Next, this study is not representative of athletes from the revenue-generating sports of men's basketball and football. Furthermore, findings may not be generalizable across various groups. Despite these limitations, this study remains useful for practitioners in athletics and higher education.

The present study was limited to a sample of collegiate athletes, at a given moment in time, who had persisted to a point of notable skill. Future research could explore how athletes in other competitive environments (i.e., Divisions II and III) respond to transformative or destructive methods of coaching. It would also be beneficial to learn what additional personal and contextual factors influence sport self-efficacy belief. Because self-efficacy beliefs may evolve over time, a longitudinal study, exploring the self-beliefs of athletes throughout the college experience might lend important insights for optimal self-efficacy development.

Conclusions and Practical Implications

Self-efficacy beliefs related to the performance of a task have been identified as strong predictors of performance success. Research has hypothesized that the most influential contextual factor in athlete self-efficacy development is the athlete-coach relationship, yet there is little research on this relationship. This study extended the literature through examining collegiate athletes' perceptions of the prevalence of transformative and destructive coaches, the teaching methods athletes perceive to be transformative (strengthening self-efficacy belief), and the influence of coaching methods on sport self-efficacy belief. Over two-thirds of the athletes expressed having transformative coaches, while approximately one-third reported experiences with destructive coaches who utilized overtly abusive tactics. Data indicate this positive and/or negative exposure being significantly related to athlete self-efficacy belief.

Transformative coaching methods were high-lighted, which add to the body of sport management research by highlighting how coaches influence the self-efficacy beliefs of their athletes. Specifically, transformative coaches utilize methods of verbal/social persuasion including overt expressions of belief in and confidence in the athlete's potential, high expectations, relentless pushing, positivity, encouragement, motivation, trust, and personalized communication/feedback. Transformative coaches also facilitate mastery experiences through setting realistic, achievable goals that facilitate feelings of individual accomplishment. Finally, transformative coaches create an uplifting/fun/safe training environment wherein there is a culture of respect and accountability.

Practitioners can utilize the data and experiences of athletes in this study to cultivate stronger coach-athlete relationships that foster self-efficacy development. This study may serve as a foundation for coaching seminars, symposiums, and trainings to assist coaches in utilizing the four sources of self-efficacy to build athletes' confidence and performance skills. Additionally, athletes may be empowered to exercise agency as they filter the information and experiences associated with collegiate athletics in order to support a personal mindset of self-belief.

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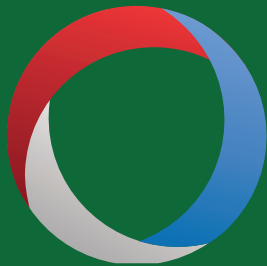
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