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## **Transformational Leadership and Athlete Satisfaction: The Mediating Role of Coaching Competency**

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Drawing on social cognitive theory, we examine the relationship between coaches' transformational leadership and athletes' evaluations of coaches' coaching competency. We also investigate how coaching competency can mediate the positive effect of coaches' transformational leadership on athletes' satisfaction. Using path analysis with bootstrapping techniques, we analyzed 397 competitive volleyball players to test our research model. Our results revealed that (a) coaches' transformational leadership has a positive effect on coaching competency, and (b) coaching competency mediates the positive effect of coaches' transformational leadership on athletes' satisfaction. Implications for coach education and sport psychology in terms of theory and research are discussed.

### **INTRODUCTION**

For two decades, transformational leadership theory has been one of the most influential leadership theories of business settings (Antonakis, 2012; Bass, 1990, 2008; Hernandez, Eberly, Avolio, & Johnson, 2011; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996) and has been applied to understanding leadership behaviors in sport and physical education settings (e.g., Beauchamp, Barling, & Morton, 2011; Callow, Smith, Hardy, Arthur, & Hardy, 2009; Charbonneau, Barling, & Kelloway, 2001; Horn, 2008; Rowold, 2006). Transformational leaders are proactive, increase follower awareness and support of group interests, and help followers to achieve their own and organizational goals (Bass, 1985; Bass & Avolio, 1997; Bass & Riggio, 2006). Empirical findings have documented the positive effects of transformational leadership on numerous athletes' outcomes, including performance (Charbonneau et al., 2001), team cohesion (Callow et al., 2009; Cronin, Arthur, Hardy, & Callow, 2015; Smith, Arthur, Hardy, Callow, & Williams, 2013), and well-being (Stenling & Tafvelin, 2014).

One growing research stream in regard to sport settings concerns the mediating mechanisms of transformational leadership on athletes' performance-related outcomes. For instance, Charbonneau et al. (2001) identified the mediating role of intrinsic motivation in the relationship between transformational leadership and sport performance. Less attention, however, has been

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paid to the mediating mechanisms of transformational leadership in regard to athletes' psychological health outcomes (e.g., well-being, satisfaction; see Judge & Klinger, 2008; Saari & Judge, 2004), which are critical to athletes' long-term health outcomes (Brustad, 1988; Stenling & Tafvelin, 2014). In the current research, we choose athlete satisfaction as our measured construct in regard to psychological health outcomes.

Our reasons for choosing athlete satisfaction are based on its importance in sport psychology (Burns, Jasinski, Dunn, & Fletcher, 2012) and its positive effects on athletes' well-being (Reinboth & Duda, 2006). Notably, because leadership is socially constructed within the coach-athlete relationship (Jackson, Knapp, & Beauchamp, 2009; Jowett & Cockerill, 2003; Lord & Dinh, 2014), how athletes perceive their coaches' leadership behaviors and attribute coaches' abilities (i.e., coaching competency) may have an impact on their mutual interactions. The importance of the efficacy of the leader's role has been highlighted in leadership studies as well (Eden, 2013). Therefore, in the present research, we examine the relationship between coaches' transformational leadership and athlete satisfaction and highlight the mediating role of coaching competency.

Coaching competency can be understood as athletes' evaluations and attributions of their head coach's ability to affect their learning and performance (Myers, Feltz, Maier, Wolfe, & Reckase, 2006). Coaching competency comprises four dimensions: motivation competency, game-strategy competency, technique competency, and character-building competency (Myers, Beauchamp, & Chase, 2011; Myers, Chase, Beauchamp, & Jackson, 2010), which are discussed in detail next. We draw on social cognitive theory (Bandura, 1997, 2000, 2001) to propose that coaches' transformational leadership may positively enhance coaching competency as perceived by athletes. Moreover, we examine the indirect effect of coaches' transformational leadership on athlete satisfaction via coaching competency.

Therefore, the purpose of the present study is twofold. First, we draw on social cognitive theory (Bandura, 1997, 2000, 2001) to theoretically bridge the positive relationship between coaches' transformational leadership and coaching competency as evaluated by athletes. Second, we examine the mediating role of coaching competency in the relationship between coaches' transformational leadership and athlete satisfaction. Our work on the mediating role of coaching competency between coaches' transformational leadership and athlete satisfaction may shed light on the transformational leadership process and its mediating mechanism in the sport coaching literature.

### **Transformational Leadership and Coaching Competency**

Transformational leadership theory focuses on the leader-follower relationship, emphasizing the aspects of motivation and emotion (Bass, 1985; Bass & Riggio, 2006). According to Bass (1985), the four dimensions of transformational leadership are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence, or charisma, refers to a leader's behaving in admirable ways that cause followers to identify with the leader. Charismatic leaders exhibit confidence and appeal to followers on an emotional level. Inspirational motivation refers to the leader's articulating a vision that inspires followers. Transformational leaders with inspirational motivation challenge followers with high standards, communicate optimism about future goal attainment, and present meaning for the work at hand. Intellectual stimulation refers to the leader's challenging assumptions, taking risks, and soliciting followers' ideas. Such leaders encourage creativity in their followers and approach old situations in new ways. Individualized consideration refers to the leader's listening to followers' concerns, attending to followers' needs, and acting as a mentor to followers (Bass, 1990; Judge & Piccolo, 2004). In the present study, we aim to show

the relationship between coaches' transformational leadership and coaching competency as evaluated by athletes.

Coaching competency is understood through athletes' evaluations of their coach's capacity to influence their perceptions, beliefs, and attitudes (Myers et al., 2011; Myers, Feltz et al., 2006; Myers, Wolfe, Maier, Feltz, & Reckase, 2006). As noted, four types of coaching competency were proposed: motivation competency, game-strategy competency, technique competency, and character-building competency. According to Myers and colleagues, motivation competency refers to athletes' evaluations of their head coach's ability to affect athletes' psychological mood and skill. Game-strategy competency refers to athletes' evaluations of their head coach's ability in competition. Technique competency is athletes' evaluations of their head coach's instructions and diagnostic abilities in practice. Character-building competency refers to athletes' evaluations of their head coach's ability to influence their personal development and positive attitude. In the present research, we apply these four dimensions to measure coaching competency.

Drawing on social cognitive theory (Bandura, 1997, 2000, 2001), we propose that proxy agency can bridge the positive relationship between coaches' transformational leadership and coaching competency. Proxy agency is one mode of human agency and is critical to a person's accomplishing his or her goals. According to Bandura (2000), proxy agency rests heavily on the competence, power, and favors of others. Because individuals (e.g., athletes) do not have direct control over social conditions or institutional practices, they tend to seek others with higher level expertise or who wield influence and power (e.g., leader, head coach) to act on their behalf to protect their well-being and security (Bandura, 2000). Research indicates that expert coaches develop each athlete's athletic abilities and invest a significant amount of time in building self-confidence, enhancing maturity, and creating a sense of ownership in their athletes (e.g., Hodge, Henry, & Smith, 2014; Vallée & Bloom, 2005). In this manner, expert coaches may serve as an effective proxy agency to help athletes to develop skills and achieve their goals.

Following Bandura (2000) and Bray and colleagues (Bray & Cowan, 2004; Bray, Csik, Culos-Reed, Dawson, & Martin, 2001; Bray, Gyuresik, Ginis, & Culos-Reed, 2004), we used proxy efficacy to describe levels of effectiveness of proxy agency. Proxy efficacy is defined as "one's confidence in the skills and abilities of a third party or parties to function effectively on one's behalf" (Bray et al., 2004, p. 426). In the present research, we propose that coaching competency can be conceptualized as a form of proxy efficacy within the coach-athlete relationship because coaching competency is theoretically defined as athletes' attributions of their coach's capacity and competence. Building on this, the positive relationship between coaches' transformational leadership and coaching competency—motivation competency, game-strategy competency, technique competency, and character-building competency—may be developed in several ways.

Motivation competency may be positively influenced by transformational coaches' use of inspirational motivation. Transformational coaches with inspirational motivation use verbal persuasion and team symbols (see Hodge et al., 2014) to develop meanings, to highlight a compelling vision of the future, and to encourage athletes to achieve their goals. In response to coaches' transformational leadership behaviors, athletes identify with the vision and feel confident about tackling the upcoming challenge and accomplishing the performance requirement (Bass, 1985; Bass & Riggio, 2006). In addition, transformational coaches use idealized influence to communicate high-performance expectations, emphasize self-sacrifice for the good of the group, and instill pride, which contribute to athletes' sense of self-efficacy (Pillai & Williams, 2004) as well as to their sense of the coach's motivation competency.

Transformational coaches also contribute to athletes' sense of motivation competency through intellectual stimulation. For example, by including athletes in the problem-solving process, athletes become motivated to achieve the goal at hand (Antonakis, 2012). Further, transformational coaches use individualized consideration to provide personalized support to athletes and are concerned with developing athletes by enabling them to reach their highest level of empowerment and to self-actualize, which also contributes to their sense of the coach's motivation competency (Bass, 1985; Bass & Riggio, 2006).

Athletes' attribution of coaches' game-strategy competency is also fulfilled by transformational coaches' use of intellectual stimulation. By encouraging athletes to actively engage in problem-solving processes, with a focus on analyzing the opponent's perspective, transformational coaches effectively help athletes to generate new solutions under different competition contexts. That is, transformational coaches may positively enhance athletes' cognitive complexity and prepare them to have better game strategies in regard to their opponents and to efficiently solve their immediate problems. This, in turn, may positively influence athletes' attribution of coaches' game-strategy competency.

Both technique competency and game-strategy competency concern coach competency related to athletes' skill and performance development (Bosselut, Heuzé, Eys, Fontayne, & Sarrazin, 2012; Myers, Feltz, et al., 2006). Therefore, similar to what is seen in the relationship between game-strategy competency and transformational leadership, we propose that technique competency also may be fulfilled when transformational coaches use intellectual stimulation, which enables athletes to identify their old patterns and to encourage new and creative means of accomplishment (Bass, 1985; Bass & Riggio, 2006). Transformational coaches emphasize the importance of transferring responsibility to athletes and expect more ownership and accountability from athletes (Hodge et al., 2014). In turn, athletes may gain confidence through these processes, which influences their sense of the coach's technique competency.

Character-building competency is developed when transformational coaches use idealized influence. That is, transformational coaches model behaviors that display high moral and ethical standards and that go beyond self-interest for the good of the group and society (Bass & Steidlmeier, 1999). Transformational coaches also may use inspirational motivation by which they tend to focus on the best in people and on sportsmanship, fair play, and appropriate manners. This inspires athletes with vision and meaning for engaging in shared goals and undertakings (Bass & Steidlmeier, 1999).

Further, transformational coaches use intellectual stimulation by establishing an open environment for the process of situation evaluation, vision formulation, and patterns of implementation. This environment may increase athletes' imagination and generate creative solutions to problems (Bass & Steidlmeier, 1999). Transformational coaches treat each athlete as a unique individual and provide individualized coaching, mentoring, and growth opportunities. These individualized considerations from transformational coaches may help to move athletes into leadership roles and to be more competent in terms of a successful leadership succession each year (Bass & Steidlmeier, 1999). In brief, through congruent values and behavior based in altruism (Price, 2003), transformational coaches may positively influence athletes' sense of their character-building competency.

From a theoretical perspective, a link between transformational leadership and coaching competency has been noted in the sport psychology and leadership study literatures. Vealey and Chase (2008) called for an exploration of coaches' leadership and athletes' confidence in their coaches (confidence in leadership, i.e., coaching competency). Further, in a recent review of leadership studies, Hannah, Avolio, Luthans, and Harms (2008) proposed that, through efficacious behavior, followers and leaders will, over time, reinforce the efficacy of one another. Despite the presence of these links in the literature, no empirical investigation has been

conducted on the relationship between leadership behavior and coaching competency. Thus, in the present study, we propose and empirically test the relationship between transformational leadership and coaching competency.

### **The Mediating Role of Coaching Competency**

Empirical studies have indicated that coaching competency has a positive impact on athletes' satisfaction. Myers, Wolfe, et al. (2006) found that motivation competency positively predicted intercollegiate athletes' satisfaction with their coaches. Myers et al. (2011) showed that, for high school athletes, technique competency and motivational competency are positively related to athletes' satisfaction with their coaches. Thus, we propose that athletes' perceptions of high coaching competency positively predict athletes' satisfaction.

#### ***The mediating role of coaching competency between transformational leadership and athlete satisfaction***

The positive relationship between transformational leadership and coaching competency can be understood by the alignment between transformational leaders and competent proxy agency (i.e., high proxy efficacy). According to Bass (1985), transformational leaders display conviction and act as role models for their followers, which increases the degree to which their followers trust and identify with their leaders (Jung & Avolio, 2000). Transformational leaders articulate a vision and fulfill followers' needs to achieve their common vision as well as motivate athletes to achieve records of excellence (Hodge et al., 2014). The psychological and emotional connections between transformational leaders and their followers may yield a higher probability of followers' attributing high proxy efficacy to transformational leaders, which yields higher leader coaching competency. As such, we expect a positive relationship between transformational leadership and coaching competency.

As posited, the high proxy efficacy of transformational leaders, coupled with their idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, has a positive effect on athletes' evaluations of coaching competency and, in turn, increases athletes' satisfaction. We thus expect a mediating role for coaching competency between transformational leadership and athlete satisfaction.

## **THE PRESENT STUDY**

The present study aimed to extend previous research in two ways. First, we examine the positive effect of coaches' transformational leadership on coaching competency as evaluated by athletes. Second, we specify the mediating role of coaching competency between coaches' transformational leadership and athlete satisfaction. Our findings have the potential to contribute to the current coaching and sport literature in a number of ways. First, to our knowledge, no previous research has examined the relationship between transformational leadership and coaching competency. Drawing on social cognitive theory (Bandura, 2000, 2001), we propose that the positive experience of confidence and performance level promoted by transformational coaches may directly enhance athletes' attribution of their coaches' abilities and, in turn, enhance athlete satisfaction. Our theoretical arguments may advance the understanding of the reciprocal leadership making within the coach-athlete relationship. Meanwhile, our investigation of the mediating role of coaching competency responds to the research call of Stenling and Tafvelin (2014) to examine the effects of transformational leadership on athlete psychological health outcomes. Thus, we hypothesized that coaches' transformational leadership has a positive

effect on coaching competency (Hypothesis 1) and that coaching competency mediates the effect of coaches' transformational leadership on athlete satisfaction (Hypothesis 2).

## METHOD

### Participants

The study participants were 397 competitive volleyball players (216 male, 181 female) who took part in Division I and II men's and women's college volleyball in Taiwan. The participants' mean age was 20.58 years old ( $SD = 1.73$ ); they played competitive volleyball for a mean of 8.64 years ( $SD = 2.90$ ) and played for the present coach for a mean of 2.79 years ( $SD = 1.75$ ).

### Measures

#### *Transformational leadership*

Transformational leadership was measured by using the Multifactor Leadership Questionnaire (MLQ-5X; Bass & Avolio, 2004). The MLQ-5X is the most commonly used instrument for the assessment of transformational leadership (Bass & Riggio, 2006; Rowold, 2006). Based on the purpose of this study, we assessed only four subscales of transformational leadership in the MLQ-5X: Idealized Influence (eight items; e.g., "Instills pride in me for being associated with him/her"), Inspirational Motivation (four items; e.g., "Articulates a compelling vision of the future"), Intellectual Stimulation (four items; e.g., "Gets me to look at problems from many different angles"), and Individualized Consideration (four items; e.g., "Helps me to develop my strengths"). Athletes identified how often their respective coach displayed the identified behavior. A 5-point Likert-type scale, ranging from 1 (*not at all*) to 5 (*frequently*), was utilized. For the purpose of the study, we decided to use an overall measure of transformational leadership. Our measurement of transformational leadership is in line with that of previous research that has documented that the four subscales are highly correlated (e.g., Stenling & Tafvelin, 2014). The coefficient alpha for this overall measure, which included 20 items, was .95.

#### *Coaching competency*

We assessed coaching competency with the Coaching Competency Scale (Myers, Wolfe, et al., 2006). The Coaching Competency Scale consists of 24 items, each of which was preceded by the stem "How competent is your head coach in his or her ability to . . . ?" The motivation competency subscale consists of seven items (e.g., "Help athletes maintain confidence in themselves"), the Game-Strategy Competency subscale includes seven items (e.g., "Recognize opposing team's strengths during competition"), the Technique-Competency subscale consists of six items (e.g., "Demonstrate the skills of his/her sport"), and the Character-Building Competency subscale includes four items (e.g., "Instill an attitude of good moral character"). Athletes identified how competent they perceive their coach at exhibiting the identified ability. A 5-point Likert-type scale, ranging from 1 (*complete incompetence*) to 5 (*complete competence*), was utilized. Previous analysis has shown that the four subscales of coaching competency are highly correlated (Myers, Wolfe, et al., 2006). Therefore, an overall measure of coaching competency was used in the present study. The coefficient alpha for this overall measure of 24 items was .98.

#### *Athlete satisfaction*

Research suggests that athlete satisfaction can be affected by the pursuit of pleasure (Amorose & Anderson-Butcher, 2007; Amorose & Horn, 2001) and the pursuit of excellence

(Chelladurai, 2007). The pursuit of pleasure concerns athletes' evaluations of motivation and personal growth, whereas the pursuit of excellence focuses on athletes' evaluations of performance and progress attainment of excellence (Chelladurai, 2012). To fully assess the entire domain of athlete satisfaction, we used a participation satisfaction questionnaire (Walling, Duda, & Chi, 1993) to measure pursuit of pleasure (i.e., satisfaction with participation) and adopted the Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998) to measure pursuit of excellence (i.e., satisfaction with performance, treatment, and training). The participation satisfaction questionnaire comprises three items that measure an athlete's satisfaction with the experience of playing on his or her team (e.g., "I am very glad that I have played on this team this year"). Participation satisfaction was scored on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The coefficient alpha for this measure of participation satisfaction was .92.

The ASQ was used to measure athlete satisfaction with performance, treatment, and training. Three items assess athlete satisfaction with his or her task performance (e.g., "I am satisfied with the improvement in my skill level thus far"). Four items assess athlete satisfaction with those coaching behaviors that directly affect him or her (e.g., "I am satisfied with the level of appreciation my coach shows when I do well"). Three items assess athlete satisfaction with the training and instruction provided by the coach (e.g., "I am satisfied with the training I receive from the coach during the season"). The ASQ is answered on a 10-point Likert scale, ranging from 1 (*not at all satisfied*) to 10 (*extremely satisfied*). The coefficient alphas for satisfaction with performance, treatment, and training were .89, .95, and .93, respectively.

### Procedure

Prior to questionnaire dissemination, we gave each team's head coach an invitational phone call or e-mail to solicit his or her help. In addition, we sent invitation letters to each athlete through his or her coach. Participants were informed that their involvement in this study was voluntary and that their responses would remain confidential, and they were informed of their right to choose not to participate or to stop participation at any time without penalty. Questionnaires were distributed and collected before or after practices in the absence of the coaches during the postseason to ensure adequate time for the players to have interacted with the coaches during the season. The questionnaire took approximately 10 min to complete.

## RESULTS

### Descriptive Statistics

We report means, standard deviations, and the intercorrelations among variables in Table 1. Our results demonstrate that transformational leadership is positively related to coaching competency ( $r = .76, p \leq .01$ ) and the four athlete satisfactions ( $r_s = .28-.60, p \leq .01$ ). Moreover, coaching competency is positively related to the four athlete satisfactions ( $r_s = .33-.66, p \leq .01$ ).

### Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to examine the construct distinctiveness of the six main variables used in the present study. Transformational leadership, coaching competency, and the four types of athlete satisfaction were included in the CFA. The indicators



**Table 1**  
**Means, Standard Deviations, and Correlations Between the Study Variables**

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Age	20.58	1.70	—							
2. Gender	1.46	0.50	-.05	—						
3. Transformational leadership	3.72	0.64	.01	-.25**	—					
4. Coaching competency	4.05	0.69	-.04	-.30**	.76**	—				
5. Participation satisfaction	4.18	0.72	.00	-.24**	.46**	.53**	—			
6. Performance satisfaction	6.32	1.78	.17**	-.15**	.28**	.33**	.28**	—		
7. Treatment satisfaction	6.97	1.83	.12*	-.27**	.58**	.59**	.38**	.65**	—	
8. Training satisfaction	5.99	1.36	.10*	-.30**	.60**	.66**	.55**	.66**	.89**	—

Note.  $N = 397$ . Gender: male = 1, female = 2.

\* $p \leq .05$ . \*\* $p \leq .01$

comparative fit index (CFI) and root mean square error of approximation (RMSEA) were reported based on the recommendation of Williams, Vandenberg, and Edwards (2009). The results indicate that the baseline six-factor model fits the data well,  $\chi^2(1524) = 4448.59$ , CFI = .99, RMSEA = .07. We also tested two alternative models: a three-factor model that combines the four types of athlete satisfactions into one factor,  $\chi^2(1536) = 5964.85$ , CFI = .98, RMSEA = .09, and a two-factor model that combines transformational leadership and coaching competency into one factor as well as the four types of athletes satisfactions into one factor,  $\chi^2(1538) = 10098.13$ , CFI = .97, RMSEA = .12. The results show that the baseline model fits the data significantly better than do the two alternative models ( $\Delta\chi^2 = 1516.26$  and  $5649.54$ , respectively;  $p \leq .01$ ), supporting the construct distinctiveness of these variables.

### Hypothesis Testing

We applied path analysis to test our two hypotheses: (a) the effect of coaches' transformational leadership on coaching competency and (b) the mediation role of coaching competency between coaches' transformational leadership and athlete satisfaction (i.e., participation, performance, treatment, and training satisfaction). We used R program (R Core Team, 2014) and the lavaan package (Rosseel, 2012) to run our analyses. Following prior research (e.g., Rowold, 2006), we controlled athletes' gender and age in our path model. To test our hypotheses, first the effect of transformational leadership on coaching competency was examined by the standardized path coefficient between transformational leadership and coaching competency (Hypothesis 1).

Second, the indirect effect of transformational leadership on athlete satisfaction via coaching competency was calculated as a product of the coefficient of transformational leadership on coaching competency and the coefficient of coaching competency's predicting athlete satisfaction when the direct effect of transformational leadership is included in the regression (Hypothesis 2). We assessed the indirect effects via products of path coefficients by using bias-corrected confidence intervals (CIs) from estimates based on 10,000 bootstrap samples (Efron & Tibshirani, 1993). The bias-corrected bootstrap provided the accurate confidence limits and greatest statistical power and is the method of choice when it is feasible to resample methods (MacKinnon, Lockwood, & Williams, 2004).

We present the conceptual model and estimated coefficients in Figure 1. Hypothesis 1 posits a positive relationship between coaches' transformational leadership and coaching competency

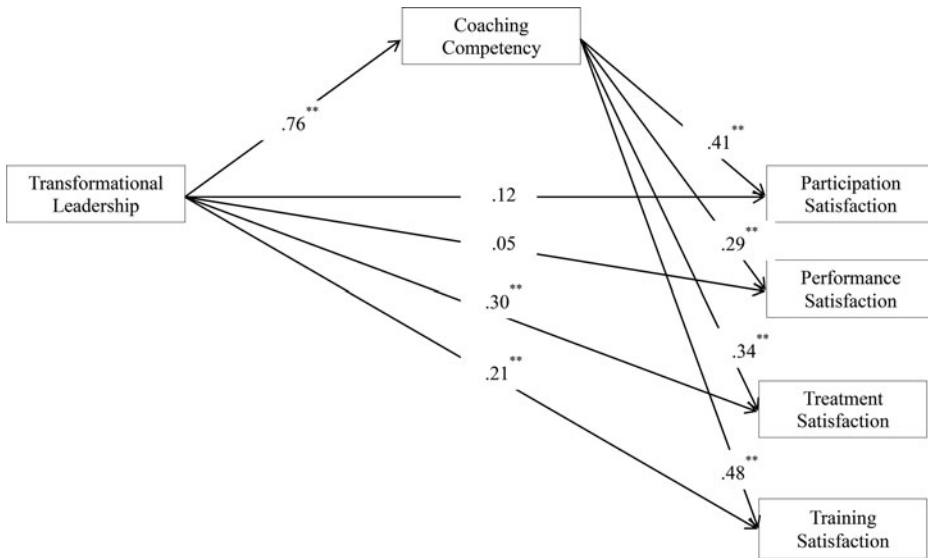


Figure 1. Summary of results for the hypothesized model and estimated standardized coefficients.

\*\* $p < .01$ .

as perceived by athletes. Our results indicate that the effect of transformational leadership on coaching competency was significantly positive ( $\beta = .76, p \leq .01$ ), which supports Hypothesis 1.

Hypothesis 2 posits an indirect effect, specifically, that the effect of transformational leadership on satisfaction is mediated by coaching competency. As shown in Figure 1, the direct effect of transformational leadership was nonsignificant on participation satisfaction and performance satisfaction ( $\beta = .12$  and  $.05$ , respectively;  $p > .05$ ), whereas the direct effect of transformational leadership was significant on treatment satisfaction and training satisfaction ( $\beta = .30$  and  $.20$ , respectively,  $p \leq .01$ ). The indirect effect of transformational leadership via coaching competency was significant on participation satisfaction ( $.32, p \leq .01$ ), 95% CI [.8, .45]; performance satisfaction ( $.22, p \leq .01$ ), 95% CI [.11, .33]; treatment satisfaction ( $.26, p \leq .01$ ), 95% CI [.16, .36]; and training satisfaction ( $.37, p \leq .01$ ), 95% CI [.28, .46]. Taking both the direct and indirect effects into consideration, these results indicate that coaching competency fully mediated the effect of transformational leadership on participation satisfaction and performance satisfaction and partially mediated the effect of transformational leadership on treatment satisfaction and training satisfaction. These results provide support for Hypothesis 2.

## DISCUSSION

Despite prior research on transformational leadership that demonstrates the importance of followers' efficacy in perceived performance, transformational leadership research has yet to specify the relationship between transformational leadership and followers' evaluations of their leader competence or examine the mediating effects of followers' evaluations of their leader competence between leader and follower. Using coaching competency to specify followers'

evaluations of their leader competence in the present study, we extend theory and research on transformational leadership by aligning coaching competency's content with leaders' and followers' reciprocal efficacy influence processes and addressing the mediating role of coaching competency as related to transformational leadership and athlete satisfaction. The path analysis demonstrated that transformational leadership had a positive effect on coaching competency and that coaching competency mediated the relationship between transformational leadership and athlete satisfaction.

These results extend the findings of previous studies and further our understanding of the many ways that transformational leadership affects satisfaction. First, the study extends previous research by demonstrating that transformational leadership influences coaching competency. Leadership studies have focused mainly on leaders' self-perceived efficacy from leaders' perspectives (leader self and means efficacy; e.g., Eden, 2013). Our study, however, focuses on followers' perspectives and suggests that athletes' evaluations of their coaches' competency also are important to the coach-athlete relationship.

Second, we establish coaching competency as a mediator between transformational leadership and athlete satisfaction. This result extends our understanding of the mediating mechanism of followers' self-efficacy in regard to transformational leadership and effectiveness in a work setting and provides evidence of Horn's (2008) working model of coaching effectiveness in sports. In brief, coaching competency is an important mechanism in the transformational leadership process.

Finally, the mediating results demonstrate that coaching competency has the potential to fully mediate the impact of transformational leadership on participation and performance satisfaction but only partly mediate the effects of transformational leadership on treatment and training satisfaction. These results may each reflect a different psychological mechanism of athlete satisfaction. Participation and performance satisfaction refer to how an athlete perceives the internal meanings of the task and might not be affected by external stimuli (e.g., coaching behaviors). Therefore, transformational leadership may not be able to directly affect athlete participation and performance satisfaction. In contrast, treatment and training satisfaction are related to athlete satisfaction with coaching behaviors (Riemer & Chelladurai, 1998). Thus, transformational leadership could have a direct impact on athlete treatment and training satisfaction.

This study answers the calls for research on how leaders and followers reciprocally reinforce each other's sense of efficacy over time through their display of efficacious behaviors (Hannah et al., 2008). Using reciprocal reinforcement as an explanatory framework, the present study contributes to our understanding of the relationship between coaches' leadership and athletes' confidence in their coaches (Vealey & Chase, 2008). The present study also supports Bass's (1985) statement regarding the fulfillment of confidence in the leadership processes and indicates that part of the positive effects found from transformational leadership can be traced to the confidence of these leaders as perceived by their followers.

The present study also contributes to the consolidation of transformational leadership theory into the sport coaching literature. Previous studies have shown that transformational leadership is effective in increasing athlete motivation, team cohesion, performance, collective efficacy, well-being, and intrateam communication (Arthur, Woodman, Ong, Hardy, & Ntoumanis, 2011; Callow et al., 2009; Charbonneau et al., 2001; Price & Weiss, 2013; Rowold, 2006; Smith et al., 2013; Stenling & Tafvelin, 2014). The findings in the present study provide further evidence that transformational leadership is also helpful in athletes' evaluations of coaching competency. This is important, as our results show that coaches' transformational

leadership behaviors encourage not only athletes' personal effectiveness outcomes but also athletes' perceptions of their coach's confidence in terms of coaching competency.

### **Applications, Limitations, and Directions for Future Research**

The results of the present study have implications for coach education. Given the impact of transformational leadership on coaching competency, utilization of transformational leadership behaviors may help to improve athletes' confidence in their coach. By emphasizing the importance of having a collective sense of mission, articulating a compelling vision of the future, getting athletes to look at problems from different angles, and caring about the individual needs of the athletes, coaches may enhance athletes' confidence in them. Dvir, Eden, Avolio, and Shamir (2002) demonstrated that transformational leadership can be taught and that increases in such behaviors enhanced followers' development and performance. In addition, a transformational teaching intervention can result in positive effects on students' self-efficacy and intentions to be physically active (Beauchamp et al., 2011). A recent case study also revealed the role of world champion team coaches' transformational leadership behaviors in enhancing expectations of excellence by creating an inspirational vision and providing the challenge and support to achieve the vision (Hodge et al., 2014). In keeping with the results of the present study and with the research presented, coach educators are encouraged to consider using transformational leadership theory as a framework that can enable coaches to increase their effectiveness.

Our findings suggest that, when athletes perceive more transformational leadership behaviors from their coaches, athletes tend to have better evaluations of their coaches' competency and eventually enhance their satisfaction. We thus encourage educational practitioners to implement transformational leadership training into the coaching education. For instance, coaches can inspire athletes to achieve team goals, encourage athletes to seek ways to improve their skills, and treat each athlete as an individual to maximize his or her potential. We hope that, as a result, athletes will increase their evaluations of their coaches' coaching competency and generate greater athlete satisfaction.

Several limitations are associated with the present study. First, the results of the present study may not be generalized to individual sports. Second, the cross-sectional design has inherent limitations that need to be addressed. Future research may consider the application of a longitudinal design to explore the development of coaching competency between leaders and followers. Specifically, researchers should examine the relationships between leader behaviors and coaching competency development over time. Third, all data were accessed through self-report measures by athletes, and the observed relationships might have been inflated by common-source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future research could apply different sources of measurement, such as leaders' reports of transformational leadership (Bass & Avolio, 2004), or use cross-rater surveys to minimize concerns about single-source bias. Fourth, the nature of the sample employed was a limitation. The sample in the present study consisted only of competitive volleyball players. To increase the generalizability of our current model, future research should explore whether similar relationships can be found among younger and recreational players as well as among athletes in other sports. Fifth, due to the high intercorrelations and in consistence with previous research (e.g., Charbonneau et al., 2001; Price & Weiss, 2013), we believe that the instrument (MLQ-5X) that we used to assess the overall score of transformational leadership did not allow us to probe the effects of each subcomponent of transformational leadership on coaching competency. Future research

should thus utilize the other instruments (e.g., Differentiated Transformational Leadership Inventory; Callow, et al., 2009) to test our research model.

## REFERENCES

- Amorose, A. J., & Anderson-Butcher, D. (2007). Autonomy-supportive coaching and self-determined motivation in high school and college athletes: A test of self-determination theory. *Psychology of Sport and Exercise, 8*, 645–670. doi:10.1016/j.psychsport.2006.11.003
- Amorose, A. J., & Horn, T. S. (2001). Pre- to post-season changes in the intrinsic motivation of first year college athletes: Relationships with coaching behavior and scholarship status. *Journal of Applied Sport Psychology, 13*, 355–373.
- Antonakis, J. (2012). Transformational and charismatic leadership. In D. V. Day & J. Antonakis (Eds.), *The nature of leadership* (2nd ed., pp. 256–288). Los Angeles, CA: Sage.
- Arthur, C. A., Woodman, T., Ong, C. W., Hardy, L., & Ntoumanis, N. (2011). The role of athlete narcissism in moderating the relationship between coaches' transformational leader behaviors and athlete motivation. *Journal of Sport & Exercise Psychology, 33*, 3–19.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*, 75–78. doi:10.1111/1467-8721.00064
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26. doi:10.1146/annurev.psych.52.1.1
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics, 18*(3), 19–32. doi:10.1016/0090-2616(90)90061-S
- Bass, B. M. (2008). *The Bass handbook of leadership: Theory, research and managerial applications* (4th ed.). New York, NY: Free Press.
- Bass, B. M., & Avolio, B. J. (1997). *Full range of leadership: Manual for the multi-factor leadership questionnaire*. Palto Alto, CA: Mind Garden.
- Bass, B. M., & Avolio, B. J. (2004). *Manual for the multifactor leadership questionnaire (MLQ-Form 5X)*. Redwood City, CA: Mind Garden.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Mahwah, NJ: Erlbaum.
- Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *The Leadership Quarterly, 10*, 181–217.
- Beauchamp, M. R., Barling, J., & Morton, K. L. (2011). Transformational teaching and adolescent self-determined motivation, self-efficacy, and intentions to engage in leisure time physical activity: A randomised controlled pilot trial. *Applied Psychology: Health and Well-Being, 3*, 127–150. doi:10.1111/j.1758-0854.2011.01048.x
- Bosselut, G., Heuzé, J.-P., Eys, M. A., Fontayne, P., & Sarrazin, P. (2012). Athletes' perceptions of role ambiguity and coaching competency in sport teams: A multilevel analysis. *Journal of Sport & Exercise Psychology, 34*, 345–364. doi:10.1177/0013164409344520
- Bray, S. R., & Cowan, H. (2004). Proxy efficacy: Implications for self-efficacy and exercise intentions in cardiac rehabilitation. *Rehabilitation Psychology, 49*, 71–75. doi:10.1037/0090-5550.49.1.71
- Bray, S. R., Csik, N. C. G., Culos-Reed, S. N., Dawson, K. A., & Martin, K. A. (2001). An exploratory investigation of the relationship between proxy efficacy, self-efficacy and exercise attendance. *Journal of Health Psychology, 6*, 425–434. doi:10.1177/135910530100600405
- Bray, S. R., Gyurcsik, N. C., Gimis, K. A. M., & Culos-Reed, S. N. (2004). The proxy efficacy exercise questionnaire: Development of an instrument to assess female exercisers' proxy efficacy beliefs in structured group exercise classes. *Journal of Sport & Exercise Psychology, 26*, 442–456.
- Brustad, R. J. (1988). Affective outcomes in competitive youth sport: The influence of intrapersonal and socialization factors. *Journal of Sport & Exercise Psychology, 10*, 307–321.

- Burns, G. N., Jasinski, D., Dunn, S. C., & Fletcher, D. (2012). Athlete identity and athlete satisfaction: The nonconformity of exclusivity. *Personality and Individual Differences*, *52*, 280–284. doi:10.1016/j.paid.2011.10.020
- Callow, N., Smith, M. J., Hardy, L., Arthur, C. A., & Hardy, J. (2009). Measurement of transformational leadership and its relationship with team cohesion and performance level. *Journal of Applied Sport Psychology*, *21*, 395–412. doi:10.1080/10413200903204754
- Charbonneau, D., Barling, J., & Kelloway, E. K. (2001). Transformational leadership and sports performance: The mediating role of intrinsic motivation. *Journal of Applied Social Psychology*, *31*, 1521–1534.
- Chelladurai, P. (2007). Leadership in sports. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 113–135). Hoboken, NJ: Wiley.
- Chelladurai, P. (2012). Models and measurement of leadership in sports. In G. Tenenbaum, R. Eklund, & A. Kamata (Eds.), *Measurement in sport and exercise psychology* (pp. 433–442). Champaign, IL: Human Kinetics.
- Cronin, L. D., Arthur, C. A., Hardy, J., & Callow, N. (2015). Transformational leadership and task cohesion in sport: The mediating role of inside sacrifice. *Journal of Sport & Exercise Psychology*, *37*, 23–36. doi:10.1123/jsep.2014-0116
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, *45*, 735–744. doi:10.2307/3069307
- Eden, D. (2013). Addendum: Means efficacy—the following of a novel construct. *Monographs in Leadership and Management*, *5*, 359–363. doi:10.1108/S1479-3571(2013)000005026
- Efron, B., & Tibshirani, R. (1993). *An introduction to the bootstrap*. Boca Raton, FL: Chapman and Hall/CRC.
- Hannah, S. T., Avolio, B. J., Luthans, F., & Harms, P. D. (2008). Leadership efficacy: Review and future directions. *The Leadership Quarterly*, *19*, 669–692. doi:10.1016/j.leaqua.2008.09.007
- Hernandez, M., Eberly, M. B., Avolio, B. J., & Johnson, M. D. (2011). The loci and mechanisms of leadership: Exploring a more comprehensive view of leadership theory. *The Leadership Quarterly*, *22*, 1165–1185. doi:10.1016/j.leaqua.2011.09.009
- Hodge, K., Henry, G., & Smith, W. (2014). A case study of excellence in elite sport: Motivational climate in a world champion team. *The Sport Psychologist*, *28*, 60–74. doi:10.1123/tsp.2013-0037
- Horn, T. S. (2008). Coaching effectiveness in the sport domain. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 239–267). Champaign, IL: Human Kinetics.
- Jackson, B., Knapp, P., & Beauchamp, M. R. (2009). The coach-athlete relationship: A tripartite efficacy perspective. *Sport Psychologist*, *23*, 203–232.
- Jowett, S., & Cockerill, I. M. (2003). Olympic medalists' perspective of the athlete-coach relationship. *Psychology of Sport and Exercise*, *4*, 313–331. doi:10.1016/s1469-0292(02)00011-0
- Judge, T. A., & Klinger, R. (2008). Job satisfaction: Subjective well-being at work. In M. Eid & R. Larsen (Eds.), *The science of subjective well-being* (pp. 393–413). New York, NY: Guilford.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, *89*, 755–768. doi:10.1037/0021-9010.89.5.755
- Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of Organizational Behavior*, *21*, 949–964. doi:10.1002/1099-1379(200012)21:8<949::AID-JOB64>3.0.CO;2-F
- Lord, R. G., & Dinh, J. E. (2014). What have we learned that is critical in understanding leadership perceptions and leader-performance relations? *Industrial and Organizational Psychology*, *7*, 158–177. doi:10.1111/iops.12127
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly*, *7*, 385–425. doi:10.1016/S1048-9843(96)90027-2

- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 99–128. doi:10.1207/s15327906mbr3901\_4
- Myers, N. D., Beauchamp, M. R., & Chase, M. A. (2011). Coaching competency and satisfaction with the coach: a multi-level structural equation model. *Journal of Sports Sciences, 29*, 411–422. doi:10.1080/02640414.2010.538710
- Myers, N. D., Chase, M. A., Beauchamp, M. R., & Jackson, B. (2010). Athletes' perceptions of coaching competency scale II-high school teams. *Educational and Psychological Measurement, 70*, 477–494. doi:10.1177/0013164409344520
- Myers, N. D., Feltz, D. L., Maier, K. S., Wolfe, E. W., & Reckase, M. D. (2006). Athletes' evaluations of their head coach's coaching competency. *Research Quarterly for Exercise and Sport, 77*, 111–121. doi:10.5641/027013606X13080769704082
- Myers, N. D., Wolfe, E. W., Maier, K. S., Feltz, D. L., & Reckase, M. D. (2006). Extending validity evidence for multidimensional measures of coaching competency. *Research Quarterly for Exercise and Sport, 77*, 451–463. doi:10.5641/027013606X13080770015247
- Pillai, R., & Williams, E. A. (2004). Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *Journal of Organizational Change Management, 17*, 144–159. doi:10.1108/09534810410530584
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903. doi:10.1037/0021-9010.88.5.879
- Price, T. L. (2003). The ethics of authentic transformational leadership. *The Leadership Quarterly, 14*, 67–81.
- Price, M. S., & Weiss, M. R. (2013). Relationships among coach leadership, peer leadership, and adolescent athletes' psychosocial and team outcomes: A test of transformational leadership theory. *Journal of Applied Sport Psychology, 25*, 265–279. doi:10.1080/10413200.2012.725703
- R Core Team. (2014). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <http://www.r-project.org/>
- Reinboth, M., & Duda, J. L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise, 7*, 269–286. doi:10.1016/j.psychsport.2005.06.002
- Riemer, H. A., & Chelladurai, P. (1998). Development of the athlete satisfaction questionnaire (ASQ). *Journal of Sport & Exercise Psychology, 20*, 127–156.
- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*(2), 1–36.
- Rowold, J. (2006). Transformational and transactional leadership in martial arts. *Journal of Applied Sport Psychology, 18*, 312–325. doi:10.1080/10413200600944082
- Saari, L. M., & Judge, T. A. (2004). Employee attitudes and job satisfaction. *Human Resource Management, 43*, 395–407. doi:10.1002/hrm.20032
- Smith, M. J., Arthur, C. A., Hardy, J., Callow, N., & Williams, D. (2013). Transformational leadership and task cohesion in sport: The mediating role of intrateam communication. *Psychology of Sport and Exercise, 14*, 249–257. doi:10.1016/j.psychsport.2012.10.002
- Stenling, A., & Tafvelin, S. (2014). Transformational leadership and well-being in sports: The mediating role of need satisfaction. *Journal of Applied Sport Psychology, 26*, 182–196. doi:10.1080/10413200.2013.819392
- Vallée, C. N., & Bloom, G. A. (2005). Building a successful university program: Key and common elements of expert coaches. *Journal of Applied Sport Psychology, 17*, 179–196.
- Vealey, R. S., & Chase, M. A. (2008). Self-confidence in sport. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 65–97). Champaign, IL: Human Kinetics.
- Walling, M. D., Duda, J. L., & Chi, L. (1993). The perceived motivational climate in sport questionnaire: Construct and predictive validity. *Journal of Sport & Exercise Psychology, 15*, 172–183.
- Williams, L. J., Vandenberg, R. J., & Edwards, J. R. (2009). Structural equation modeling in management research: A guide for improved analysis. *Academy of Management Annals, 3*, 543–604. doi:10.1080/19416520903065683