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# Examining the Relationships Between Trust in Athlete Leadership and Cohesion

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Examining the Relationships between Trust in Athlete Leadership and Cohesion

By

Geoffrey M. A. Hackett

A Thesis  
Submitted to the Faculty of Graduate Studies  
Through the Department of Kinesiology  
in Partial Fulfillment of the Requirements for  
the Degree of Master in Human Kinetics  
at the University of Windsor

Windsor, Ontario, Canada

2014

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May 14, 2014

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## ABSTRACT

The current study examined trust in athlete leadership. The study examined whether an athlete's propensity to trust others moderated the relationship between the antecedents of trust and trust in athlete leadership. In addition, the study examined whether the consequences of trust mediated the relationship between trust in athlete leadership and outcomes of trust. The sample comprised of 125 varsity athletes. Results showed Ability and Benevolence were significant predictors of Trust in the Athlete Leader, while Propensity to Trust did moderate the relationship between Benevolence and Trust in the Athlete Leader. As well, results indicated that Closeness fully mediated the relationship between Trust in Athlete Leader and GI-T, GI-S, ATG-T, ATG-S; Complimentarity partially mediated the relationship between Trust in the Athlete Leader and ATG-T and GI-S, while fully mediating the relationship between Trust in the Athlete Leader GI-T; Commitment fully mediated the relationship between Trust in the Athlete Leader and ATG-S.

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## RESEARCH ARTICLE

### **Introduction**

The importance of leadership in sport has been well documented (e.g., Bucci, Bloom, Loughead, & Caron, 2012). The coach is often viewed as an important source of leadership, however, another crucial source within sport teams emanates from the athletes who can assume a formal or informal leadership role (Loughead & Hardy, 2005). Formal athlete leaders are those who are assigned to their leadership role by the coach or through team selection (i.e., captain, assistant captain), whereas informal athlete leaders emerge through their interactions with other teammates. Research has shown that athlete leaders, in general, are widespread on teams. For instance, Loughead, Hardy, and Eys (2006) found that over 65% of rosters consist of both formal and informal athlete leaders. Given this high percentage, it is not surprising that the presence of athlete leaders has been found to have a positive impact on many group dynamic constructs. Specifically, when the ideal number of athlete leaders is present within the team environment, these individuals enhance the number of resources available to teammates, enhance the team's structure (e.g., enhanced role clarity), facilitate cohesion amongst teammates, and aid team processes (e.g., increased communication between team members) (Crozier, Loughead, & Munroe-Chandler, 2013).

While the results from the Crozier et al. (2013) study served to highlight the many group dynamic variables that athlete leaders are perceived to influence, research has yet to examine any of the interpersonal factors that may be impacted by athlete leaders. One such variable is trust. It has been suggested that trust in leadership is an essential component for the optimal functioning of a team (Dirks, 2000). Sport teams are social

entities, thus, the interpersonal relationships amongst teammates and team leaders has a strong influence in the outcomes achieved by the team. Without trust in the leadership, the motivation for the group to succeed would not exist. As a result, players may not invest the time and effort into a group that is not perceived valuable or instrumental to success.

To better understand the relationship between trust and leadership in sport, an examination of the characteristics of leadership is necessary. In particular, Chelladurai (2001) outlined three features of leadership: (a) leadership is a behavioral process; (b) leadership is interpersonal in nature; and (c) leadership is aimed at influencing and motivating team members toward goals defined by the group. According to Zhang (2004) these three features of leadership highlight the importance of trust. That is, if team leaders (e.g., athlete leaders) can instill trust in their teammates, it can foster strong interpersonal relations with team members and motivate them towards the team's goals and objectives. Not surprising, it has been suggested that trust is the underpinning for all interpersonal relationships (Michalos, 1990).

While the literature is clear that trust is important for effective team functioning, there is no consensus on the meaning of trust (Bhattacharya, Devinney, & Pillutla, 1998). In fact, varied definitions of trust have been advanced by researchers over the last four decades. Some researchers have defined trust as an interpersonal characteristic. For instance, Rotter (1967) noted that trust is an "expectancy held by an individual or group that the word, promise, verbal or written statement of another individual or group can be relied upon" (p. 651). Similarly, Zucker (1986) viewed trust as having confidence or

predictability in one's expectations. As well, Fox (1974) described trust as "having faith and confidence in a person or thing" (p. 66).

Trust has also been defined as a social exchange process. Gambetta (1988) viewed trust as "the probability that a person with whom we are in contact will perform an action that is beneficial or at least not detrimental, that is high enough for us to consider engaging some form of cooperation with him" (p. 217). In other words, if the exchange is seen as predictable and beneficial, individuals are likely to build and maintain relationships (Rusbult & Van Lange, 1996). Therefore, if athletes trust their athlete leaders, they are likely to comply with the requests of their athlete leaders, and accept the decisions that athlete leaders make concerning the team.

A widely used definition of trust was advanced by Rousseau, Sitkin, and Burt (1998) that encompassed elements of earlier definitions. These authors defined trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (p. 395). This definition of trust will be used in the present thesis as it is the most relevant to team sports (i.e., soccer, hockey, basketball). Dirks (2000) noted that because sport teams are interdependent, vulnerability is likely to maximize the effects of trust. Players are vulnerable to one another because a collective effort is required to achieve common team goals. There is a perceived risk in trusting another teammate considering the individual relies on another person in order to reach the team's goals.

Although trust in leadership has been viewed as an important construct for decades in applied psychology and related disciplines (e.g., Mayer, Davis & Schoorman, 1995; Podsakoff, Mackenzie, & Moorman, 1990), very little research has examined trust

in leadership in sport. This is somewhat unfortunate given trust in leadership in sport is important; it allows team members to accept their leader's activities, goals, and decisions which is demonstrated through hard work and continued effort (Dirks, 2000). In the case of athlete leaders, it may permit a number of activities related to team performance to occur including, but not limited to, role acceptance, motivation, and working towards team goals. In contrast, it could be argued that when team members perceive a lack of trust with their athlete leaders, these individuals will likely not fulfill role responsibilities and thus not work towards the performance objectives of the team. As a result, trust in athlete leaders may be critical in getting team members to work together as a cohesive unit.

In one of the few sport studies examining trust in leadership, Dirks (2000) investigated the relationship between trust in the coach, trust in the players, and past and future team performance. Specifically, the author examined two objectives: (a) empirically examine the assumption that a team's trust in its leader was significantly related to team performance, and (b) to explore whether trust mediated the relationship between past team performance and future team performance. A total of 355 players from 30 teams at the NCAA Division 1 level participated in the study. Results from the study showed that trust in the coach had a significant effect on winning percentage ( $\beta = .44$ ,  $p < .05$ ). As well, trust in the leader (i.e., coach) was found to mediate past and future performance. This study provided initial evidence to suggest that trust in the coach is critical to team effectiveness. Furthermore, past performance of the coach was shown to have an influence over the amount of trust athletes put in their coach.

More recently, Zhang (2004) and Zhang and Chelladurai (2013) also examined trust in leadership in sport by investigating (a) the factors influencing an athlete's trust in the coach, and (b) the consequences of trust in the coach. In both documents, the authors advanced a linear model of trust in leadership in sport composed of antecedents of trust, trust in leadership, consequences of trust, and outcomes of trust. However in the Zhang document, the model also contained a moderator labeled propensity to trust (see Figure 1 for a description of the model). Specifically, the model hypothesized that players (i.e., the trustors) perceive certain attributes about their leaders (i.e., the trustee). The model contains four types of antecedents: benevolence, competence, justice, and integrity. These four antecedents impact the trust an athlete has in their leader. The antecedents, which are moderated by the athlete's propensity to trust, influence the trust an athlete has in his/her leader. This trust in leadership impacts the consequences of the athlete-leader relationship, which in turn affects team outcomes such as cohesion. For this study, a total of 230 college students registered in recreational sport clubs at a large Midwestern university participated in the study. Structural equation modeling was used to examine the pathways contained within the model. The results of the study showed that the antecedents of trust explained 52% of the variance in the athletes' trust in the coach (Zhang, 2004). In Zhang and Chelladurai, the antecedents of trust accounted for 61% of the variance. As well, the propensity to trust moderated the antecedents of benevolence, fairness, and ability on the athlete's trust in the coach (Zhang, 2004). In addition, the consequences of trust model provided a viable explanation of how an athlete's trust in the coach affected performance. Specifically, 77% of the variance in the athletes' commitment to the coach and 67% of the variance of the athletes' willingness to

cooperate with the coach was explained by the athletes' trust in the coach. The athletes' commitment to the coach and willingness to cooperate with the coach explained 54% of the variance in perceived performance. In the Zhang and Chelladurai article, the athlete's trust explained 60% of the variance in the athlete's commitment to their coach, and 63% of the variance in their willingness to cooperate with their coach. Additionally, commitment to the coach and willingness to cooperate were not related to the outcome measure of athlete satisfaction.

The purpose of the current study was to examine the model of trust in leadership (Zhang, 2004; Zhang & Chelladurai, 2013) within the context of athlete leadership. Given the lack of research examining the athlete-athlete leader relationship, a deeper insight within this area can benefit the sport psychology literature. Furthermore, the relationship between athlete leadership and an interpersonal variable such as trust has never been examined. Therefore, a further evaluation of trust in athlete leadership is warranted. Specifically, the study had two objectives. The first was to examine whether the propensity to trust influenced the relationship between the antecedents of trust (i.e., benevolence, integrity, justice, and competence) and trust in athlete leadership. It was hypothesized that Propensity to Trust would moderate the relationship between all four antecedents of trust and Trust in the Athlete Leader. The second purpose was to examine if the consequences of trust (i.e., commitment to athlete leader, closeness to athlete leader, and complimentarity to athlete leader) explained the relationship between trust and cohesion. It was hypothesized that Closeness, Commitment, and Complimentarity would mediate trust in athlete leadership and the outcomes of trust (i.e., cohesion).



## Method

### Participants

A total of 846 athletes were invited to participate in the study. From these 846 invitations, 168 athletes consented to participate in the study, providing a response rate of 20%. A further inspection of the responses indicated that 43 of the participants had incomplete responses (entire sections of the questionnaire not completed) to the questionnaire package, and were therefore deleted from further analyses. This resulted in a sample of 125 participants.

Demographic information on each participant was collected, which included information on age and gender (see Appendix A). Additional information was gathered on the current sport played by the participants, along with the number of years playing on their current team, and the number of years playing that particular sport. From the 125 participants, 90 were female and 35 were male who played on interdependent sport teams including soccer ( $n = 31$ ), hockey ( $n = 21$ ), rugby ( $n = 20$ ), volleyball ( $n = 18$ ), basketball ( $n = 10$ ), curling ( $n = 9$ ), field hockey ( $n = 8$ ), lacrosse ( $n = 6$ ), and field lacrosse ( $n = 2$ ). All of the participants competed in the Canadian Interuniversity Sport (CIS), which is the most competitive level of sport at the university level in Canada. The mean age of the athletes was 20.60 years ( $SD = 2.11$ ) and they had participated in their sport for an average duration of 11.23 years ( $SD = 4.68$ ).

### Measures

**Antecedents of trust in leadership.** Within Zhang and Chelladurai's (2013) model, there are four antecedents of trust in leadership: ability, benevolence, justice, and integrity. All of the items used to measure these four antecedents were slightly modified

(from coach-athlete relationship to athlete leader-athlete relationship) to assess athlete leadership. Modifications included minor wording changes such as changing the word “coach” to “athlete leader”, as well as changing the subject of the sentence to refer to the team on which the athlete plays (e.g., “I can talk freely... about difficulties I am having on the team” to “I can talk freely... about difficulties I am having on *this* team”).

The antecedent of perceived ability refers to the perceptions of competency, skill, and characteristics that the leader possesses. These antecedents of trust are part of the questionnaire (see Appendix B). This construct measures the perceptions that the trustor has about the trustee’s ability. There are five items that assess ability with an example item being: “My athlete leaders have special abilities that increase our performance”. The antecedent of perceived benevolence examines the extent to which the athlete believes the athlete leader will do good to him/her, aside from the athlete leader’s personal benefits. There are five items used to assess this with a sample item being: “My athlete leaders are willing to go out of their way to help me”. The perceived fairness construct refers to the leader’s sense of decency and civility towards his/her followers. It outlines that in order for the leader to gain trust from members, the leader must be viewed as being fair in dealing with people. There are five items used to assess justice. An example of an item is “My athlete leaders are able to suppress personal biases”. The antecedent of perceived integrity refers to the moral principles a leader upholds in their leadership role. Team members are likely to have trust in their leader if they feel this individual has a strong sense of right and wrong. There are five items used to assess integrity with a sample item reading: “Sound principles seem to guide my athlete leaders’ behavior”.

All of the items assessing these four antecedent are assessed on a seven point Likert scale, ranging from 1= *strongly disagree* to 7 = *strongly agree*. To test the factorial validity of these four antecedents, Zhang (2004) carried out a Confirmatory Factor Analyses (CFA) of the items that showed a reasonably good fitting model (Hu & Bentler, 1999); CFI = .96, TLI = .96, and RMSEA = .07. In addition, Zhang (2004) also reported internal consistency values for perceived ability ( $\alpha = .89$ ), perceived benevolence ( $\alpha = .82$ ), perceived justice ( $\alpha = .87$ ), and perceived integrity ( $\alpha = .87$ ) in a sample of 230 college sport athletes.

The propensity to trust refers to the personal disposition that contributes towards whether an individual trusts another person. In the context of the current study, propensity to trust reflects the athlete's internal predispositions of trusting another individual when no other information is present. This construct reflects how a trustor perceives the behaviors of other people. An athlete's propensity to trust is viewed on a continuum, not as a dichotomous construct. Athlete's can vary in how much they trust, or do not trust, their leaders. As a result, if an athlete has a high propensity to trust, they will be more likely to perceive their athlete leader as behaving in a trustworthy manner. Conversely, if an athlete has a low propensity to trust, they will be more likely to perceive their athlete leaders as behaving in an untrustworthy behavior. There are five items that measure propensity to trust, measured on a seven point Likert scale, ranging from 1= *strongly disagree* to 7 = *strongly agree*. An example of an item is "Most people can be counted on to do what they say they will do". The results of a CFA showed excellent model fit based on guidelines from Hu and Bentler (1999). In particular, the

results showed a CFI = .99, TLI = .98, and RMSEA = .03. Further, Zhang (2004) reported a reliability estimate of .82.

The propensity to trust construct is part of the trust in athlete leadership questionnaire. This construct evaluates the extent to which the trustor (i.e., the athlete) trusts the trustee (i.e., the athlete leaders) (see Appendix B). If team members trust their leader, they are more likely to follow their instruction and be open to cooperate with them. There are five items used to assess trust in leadership, which is measured on a seven point Likert identical to the previous scales. An example of an item is “I would be comfortable sharing a problem that was critical to me with my athlete leaders”. Trust in leadership showed good model fit through a CFA (CFI = .99, TLI = .98, RMSEA = .07) based on the guidelines of Hu and Bentler (1999). Internal consistency for this construct was reported as .80 (Zhang, 2004).

**Consequences of trust.** The athlete leader-athlete relationship was used to assess the consequences in trust in leadership for this study. In order to measure the athlete-athlete leader relationship a modified version of the Coach-Athlete Relationship Questionnaire (CART-Q; Jowett & Ntoumanis, 2004) was used (see Appendix C). The original version of the CART-Q was developed to assess the coach-athlete relationship. In the current study, item wording was modified to reflect the athlete-athlete leader relationship. The modified CART-Q is a 23 item inventory that examines the interpersonal relationship between an athlete and athlete-leaders. All items are measured on a seven point Likert scale from (1) *not at all* to (7) *extremely*. The CART-Q contains three dimensions: (a) *closeness*, which refers to feeling emotionally close with one another in the athlete-athlete leader relationship (e.g., “I am committed to my athlete

leaders”), (b) *complementarity* reflects athlete and athlete leader cooperative interactions (e.g., “When my athlete leaders lead, I am responsive to their efforts”), and (c) *commitment* refers to the athletes and athlete leaders intention to maintain their relationship (e.g., “I think that my sport career is promising with the guidance of my athlete leaders”). The CART-Q was found to have adequate model fit: CFI = .94, RMSEA = .08 (Jowett & Ntoumanis, 2004). Previous studies have reported internal consistency values ranging from  $\alpha = .82$  to  $\alpha = .90$  for commitment,  $\alpha = .82$  to  $\alpha = .87$  for closeness, and  $\alpha = .88$  to  $\alpha = .92$  for complimentarity with a sample of 60 British coach and athlete dyads (Jowett, 2006; Jowett & Ntoumanis, 2004).

The CART-Q has been found to have predictive (Jowett & Chaundy, 2004; Jowett & Ntoumanis, 2004; Olympiou et al., 2008), discriminant (Jowett & Ntoumanis, 2004; Jowett & Chaundy, 2004; Olympiou, Jowett, & Duda, 2008), and concurrent (Jowett, 2009; Jowett & Ntoumanis, 2004) validity.

**Outcomes of trust.** The Group Environment Questionnaire (GEQ; Carron, Widmeyer, & Brawley, 1985) was used to examine the outcome of trust in athlete leadership in the present thesis (see Appendix D). The GEQ is an 18 item questionnaire that assesses the four dimensions of cohesion. The first dimension, Group Integration-Task (GI-T), reflects an individual team member’s feelings of closeness and unity of the group as a whole towards their goals and objectives (Carron, Brawley, & Widmeyer, 1998). This dimension consists of five items, with an example being “Our team is united in trying to reach its goal for performance”. The second dimension, Group Integration-Social (GI-S), reflects individual team member’s perceptions of unity and bonding within the group as a whole in social situations (Carron et al., 1998). This dimension consists of

five items; an example is “Members of our team would rather go out on their own than get together as a team”. The third dimension is Individual Attractions to the Group-Task (ATG-T), which reflects an individual team member’s feelings about his/her own contribution to the group’s task, productivity, goals and objectives (Carron et al., 1998). This dimension contains four items, with an example being “I am unhappy with my team’s level of desire to win”. The fourth dimension is Individual Attractions to the Group-Social (ATG-S), which reflects an individual team member’s feelings about his/her personal acceptance, and how socially integrated he/she feels with the group (Carron et al., 1998). This dimension contains five items with an example item being “I do not enjoy being a part of the social activities of this team”.

All of the items of the GEQ are scored on a 9-point Likert scale, ranging from (1) *strongly disagree* to (9), *strongly agree*. The GEQ has been found to demonstrate content (Carron et al., 1985), concurrent (Brawley, Carron, & Widmeyer, 1987; Paskevich, Brawley, Dorsh, & Widmeyer, 2001), predictive (Carron, Widmeyer, & Brawley, 1988), and factorial validity (Li & Harmer, 1996).

### **Procedure**

Clearance from the University of Windsor’s Research Ethics Board was obtained prior to data collection. Athletes whose contact information was publically available from their university’s website were emailed directly by the primary researcher. The email included a description of the study as well as a website link, using FluidSurvey software, to an online survey where participants completed a questionnaire package. Informed consent was implied when the participant completed and submitted the online survey package. The entire survey package took participants approximately 15 minutes to

complete. As a thank you for volunteering to participate in the study, participants had the option to receive a mental skills handbook that outlined mental skills to help improve their sport performance. Fifty one participants opted to receive the handbook as compensation for their participation in the online questionnaire. This was administered via email.

## **Results**

### **Data Analysis**

Hierarchical regression analyses were conducted to test the first hypothesis. In hierarchical regression, predictors are selected and entered into the model under the discretion of the researcher. As a general rule, predictors should first be entered into the model if they are considered to be most important in predicting the outcome (Field, 2009). In the current study, the antecedents of trust were entered first, followed by the interaction between an antecedent of trust and Propensity to Trust (see Figure 2 for a description of the model used to test for moderation and mediation).

For the second hypothesis, regression analyses were conducted to test the mediation model. In order to conduct mediation analyses, Baron and Kenny (1986) state that a relationship must be established between the independent variable and dependent variables ( $c$ ), the independent variable and the mediating variables ( $a$ ), the mediating variables and dependent variables ( $b$ ). If these first three conditions are met, the relationship between the predictor variable (i.e., Trust in Athlete Leader) and the outcomes variables (i.e., ATG-G, ATG-S, GI-T, GI-S) must be reduced ( $c'$ ) when the mediating variables (i.e., Closeness, Commitment, and Complimentarity) are controlled for mediation to be present within the model.

In addition to Baron and Kenny's (1986) guidelines, a bootstrapping procedure was performed to test the significance of the mediated effect (Preacher & Hayes, 2004). Bootstrapping is a non parametric approach to estimating effect size and hypothesis testing that makes no assumptions of the shape of the sampling distribution or the variables involved. Bootstrapping produces the sampling distribution of the mediated effect through re-sampling with replacement and estimating both the paths of the predictor to the mediator, as well as the mediator to the outcome variable. The product of this path coefficient is recorded, and this process is conducted  $k$  times. For the current study,  $k$  was set at a value of 5000, which was recommended by Preacher and Hayes (2008). From this sampling distribution of the product of path coefficients, a confidence interval, set at 95% for the current study, is derived. The mediating effect can be said to be present with 95% confidence if the upper and lower bound values do not include zero. This method was conducted by utilizing a MACRO for SPSS developed by Andrew F. Hayes. Bootstrapping has been noted as being superior in providing the highest power along with the lowest Type 1 error rate when compared to other mediation analyses (Preacher & Hayes, 2008), As well, bootstrapping has been recommended for use with small to moderate samples (Strout & Bolger, 2002).

### **Descriptive Statistics**

Means, standard deviations and internal consistencies for all variables measured are in Table 1. Mean responses for the antecedents of trust were highest for Ability, followed by Benevolence, Integrity and Justice. For consequences of trust, the athlete leader-athlete relationship variables of Closeness had the highest average rating, followed by Complimentarity, and lastly Commitment. For outcomes of trust, the cohesion



dimensions of ATG-S had the highest average rating among participants, followed by ATG-T, GI-S, and GI-T. Skewness and kurtosis values all fell in the acceptable  $\pm 2$  and  $\pm 3$  ranges, respectively, indicating assumptions of normality were not violated. Internal consistency values were generated for all items, and in order to reach a value of  $> .70$  (Nunally & Bernstein, 1994), one item on the GI-T dimension was deleted: “Our team members do not communicate freely about each athlete’s responsibilities during competition and practice”, as well as one item from ATG-T: “I am not happy about the amount of playing time I get”. Internal consistency values for Propensity to Trust were extremely low ( $\alpha = .07$ ). In order to retain the construct as a moderator, only one item was used in subsequent analyses: “Most people can be counted on to do what they say they will do”. Out of the five items that constituted this construct, the primary researcher and his advisor agreed that this item best conceptualized propensity to trust in a sport context.

Before conducting tests of moderation and mediation, correlations analyses were conducted to examine which variables would be included in these two tests. A liberal significance value of  $p \leq .25$  was used to avoid unnecessary deletion of potentially significant independent variables from the regression analyses (Hosmer & Lemshow, 2000). The values of the correlations for all variables are found in Table 2. All bivariate correlations were statistically significant. In particular, the antecedents of trust (i.e., Ability, Benevolence, Integrity, and Justice) were all highly correlated with one another, as well as with Trust in the Athlete Leader. Furthermore, the consequences of trust (i.e., Closeness, Complimentarity, and Commitment) were all highly correlated with one another. In order to determine if multicollinearity was an issue between these constructs,

variance inflation factor (VIF) tests were conducted. Field (2009) noted that VIF scores higher than 10 indicate the presence of multicollinearity. However, no variables mentioned above reached a VIF score higher than 6.5. Therefore, it was assumed that multicollinearity was not an issue in the present study.

A number of assumptions concerning regression analyses were computed prior to conducting tests of moderation and mediation. To detect multivariate outliers, Mahalanobis distance was computed, with no outliers found. To test the assumption of homoscedasticity, scatter plots showing the standardized residuals against the predicted values revealed that there was no specific pattern in the residual. A P-P plot showed that the assumption of linearity was met. In order to test normality, a histogram was created that showed the data fall along a normal curve (Field, 2009).

### **Testing for Moderation**

The first purpose of the present study was to examine the role that an athlete's personal disposition to trust other people influences their perceptions of trust in their athlete leaders. In particular, it was hypothesized that an athlete's propensity to trust would moderate the relationship between the antecedents of trust and an athlete's trust in their athlete leader. Hierarchical regression analyses were conducted to examine the effect that each antecedent of trust (i.e., Ability, Benevolence, Integrity, and Justice) had on Trust in the Athlete Leader. Each antecedent of trust was first entered into the regression, followed by the interaction between each antecedent and the moderator, propensity to trust. The results showed that out of the four antecedents of trust, Ability and Benevolence were the only two that were significantly related to trust in the athlete leader-athlete relationship. Further, the results also showed that the only moderating

relationship to be significant was the interaction of Benevolence and Propensity to Trust. A summary of the results for the tests of moderation are found in Table 3.

### **Testing for Mediation**

The second purpose of the study was to examine if the relationship between the athlete and athlete leader influenced the connection between trust and cohesion. It was hypothesized that the consequences to trust (i.e., Closeness, Commitment, and Complimentarity) would mediate the relationship between Trust in the Athlete Leader and the outcomes of trust operationalized as the four dimensions of cohesion (i.e., ATG-S, ATG-T, GI-S, GI-T). Table 2 outlines all statistically significant bivariate correlations between variables used in the mediation analyses. As in the moderation analyses, a liberal cutoff value of  $p \leq .25$  was used to avoid unnecessary deletion of any potentially significant variables from the regression analyses.

In order to conduct the tests of mediation, Baron and Kenny's (1986) procedures were used. Specifically, a relationship must be established between the independent variable and dependent variables ( $c$ ), the independent variable and the mediating variables ( $a$ ), the mediating variables and dependent variables ( $b$ ). If these first three conditions are met, the relationship between the predictor variable (i.e., Trust in the Athlete Leader) and the outcomes variables (i.e., ATG-G, ATG-S, GI-T, GI-S) must be reduced ( $c'$ ) when the mediating variables (i.e., Closeness, Commitment, and Complimentarity) are controlled for mediation to be present within the model. Multiple regression analyses were conducted to assess each component of the mediation model. Throughout the regression analyses, when the  $a$  and  $b$  paths were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence

estimates (Preacher & Hayes, 2004). In the present study, 95% confidence intervals were obtained with 5000 bootstrap re-samples (Preacher & Hayes, 2008).

A total of eight significant mediating relationships were found within the current study. All three of the mediating variables from the consequences of trust (i.e., Closeness, Complimentarity, and Commitment ) were found to serve as a mediator between trust in the athlete leader and cohesion. Below the results of the mediational analyses are organized by the mediating variable.

**Closeness.** Trust in the Athlete Leader was related to the cohesion dimension of ATG-S ( $\beta = .59, t(123) = 5.19, p = .01$ ). It was found that Trust in the Athlete Leader was related to the athlete leader-athlete relationship variable of Closeness ( $\beta = 0.69, t(123) = 15.87, p < .001$ ). As well, it was found that Closeness was related to ATG-S ( $\beta = .58, t(123) = 2.50, p = .01$ ). Results of the mediation analysis using bootstrapping methods confirmed the mediating role of Closeness in the relationship between Trust in the Athlete Leader and ATG-S ( $\beta = .39; CI = .06 - .74$ ). In addition, results indicated that the direct effect between Trust in the Athlete Leader and ATG-S was non-significant when controlling for Closeness ( $\beta = .19, t(123) = .97, p = .33$ ), thus suggesting full mediation.

Trust in the Athlete Leader was related to ATG-T ( $\beta = .69, t(123) = 5.70, p < .001$ ). It was found that Trust in the Athlete leader was related to Closeness ( $\beta = .69, t(123) = 15.87, p < .001$ ). As well, it was found that Closeness was related to ATG-T ( $\beta = 1.01, t(123) = 4.27, p < .001$ ). Results of the mediation analysis using bootstrapping methods confirmed the mediating role of Closeness in the relationship between Trust in the Athlete Leader and ATG-T ( $\beta = .68; CI = .34 - 1.06$ ). In addition, results indicated that the direct effect between Trust in the Athlete Leader and ATG-T was non-significant

when controlling for Closeness ( $\beta = -.02$ ,  $t(123) = -.01$ ,  $p = .99$ ), thus suggesting full mediation.

Trust in the Athlete Leader was related to GI-S ( $\beta = .60$ ,  $t(123) = 5.33$ ,  $p < .001$ ). It was found that Trust in the Athlete leader was related to Closeness ( $\beta = 0.69$ ,  $t(123) = 15.87$ ,  $p < .001$ ). As well, it was found that Closeness was related to GI-S ( $\beta = .58$ ,  $t(123) = 2.56$ ,  $p = .01$ ). Results of the mediation analysis using bootstrapping methods confirmed the mediating role of Closeness in the relationship between Trust in the Athlete Leader and GI-S ( $\beta = .41$ ; CI = .15 - .74). In addition, results indicated that the direct effect between Trust in the Athlete Leader and GI-S was non-significant when controlling for Closeness ( $\beta = .19$ ,  $t(123) = 1.01$ ,  $p = .31$ ), thus suggesting full mediation.

Trust in the Athlete Leader was related to GI-T ( $\beta = .59$ ,  $t(123) = 5.52$ ,  $p < .001$ ). It was found that Trust in the Athlete leader was related to Closeness ( $\beta = 0.69$ ,  $t(123) = 15.87$ ,  $p < .001$ ). As well, it was found that Closeness was related to GI-T ( $\beta = .75$ ,  $t(123) = 3.49$ ,  $p < .001$ ). Results of the mediation analysis using bootstrapping methods confirmed the mediating role of Closeness in the relationship between Trust in the Athlete Leader and GI-T ( $\beta = .52$ ; CI = .28 - .81). In addition, results indicated that the direct effect between Trust in the Athlete Leader and GI-T was non-significant when controlling for Closeness ( $\beta = .08$ ,  $t(123) = .44$ ,  $p = .66$ ), thus suggesting full mediation.

**Complimentarity.** Trust in the Athlete Leader was related to ATG-S ( $\beta = .59$ ,  $t(123) = 5.17$ ,  $p < .001$ ). Trust in Athlete Leader was related to Complimentarity ( $\beta = .53$ ,  $t(123) = 10.96$ ,  $p < .001$ ). Complimentarity was not related to ATG-S ( $\beta = .09$ ,  $t(123) = .45$ ,  $p = .65$ ). Bootstrapping methods indicated the confidence intervals for this mediation analysis fell between zero (CI = -.18 - .30), indicating that Complimentarity did not

mediate the relationship between Trust in the Athlete Leader and ATG-S. Additionally, the direct effect between Trust in the Athlete Leader and ATG-S was still statistically significant with Complimentarity included in the model ( $\beta = .54$ ,  $t(123) = 3.35$ ,  $p < .001$ ).

Trust in the Athlete Leader was related to ATG-T ( $\beta = .69$ ,  $t(123) = 5.70$ ,  $p < .001$ ). Results showed that Trust in the Athlete Leader was related to Complimentarity ( $\beta = .53$ ,  $t(123) = 10.96$ ,  $p < .001$ ), and that Complimentarity was related to ATG-T ( $\beta = .67$ ,  $t(123) = 3.12$ ,  $p = .002$ ). Results of the mediation analysis using the bootstrap method demonstrated that Complimentarity mediated the relationship between Trust in the Athlete Leader and ATG-T ( $\beta = .36$ ; CI = .11 - .63). Additionally, the relationship between Trust in the Athlete Leader and ATG-T was still significant while controlling for Complimentarity in the model ( $\beta = .32$ ,  $t(123) = 2.00$ ,  $p = .05$ ), indicating partial mediation.

Trust in the Athlete Leader was related to GI-S ( $\beta = .60$ ,  $t(123) = 5.33$ ,  $p < .001$ ). Trust in the Athlete Leader was related to Complimentarity ( $\beta = .53$ ,  $t(123) = 10.96$ ,  $p < .001$ ). As well, Complimentarity was related to GI-S ( $\beta = .51$ ,  $t(123) = 2.51$ ,  $p = .01$ ). Results from the mediation analyses using the bootstrap method indicated that Complimentarity mediated the relationship between Trust in the Athlete Leader and GI-S ( $\beta = .28$ ; CI = .07 - .54). Additionally, the direct effect between Trust in the Athlete Leader and GI-S was still significant when controlling for Complimentarity ( $\beta = .32$ ,  $t(123) = 2.11$ ,  $p = .04$ ), indicating partial mediation.

Trust in the Athlete Leadership was related to GI-T ( $\beta = .59$ ,  $t(123) = 5.52$ ,  $p < .001$ ). Furthermore, Trust in the Athlete Leader was related to Complimentarity ( $\beta = .53$ ,  $t(123) = 10.96$ ,  $p < .001$ ), and Complimentarity was related to GI-T ( $\beta = .68$ ,  $t(123) =$

3.58,  $p < .001$ ). Results from the mediation analyses using bootstrapping methods indicated that Complimentarity mediated the relationship between Trust in the Athlete Leader and GI-T ( $\beta = .37$ ; CI = .17 - .62). Additionally, the direct effect between Trust in the Athlete Leader and GI-T while controlling for Complimentarity was not statistically significant ( $\beta = .23$ ,  $t(123) = 1.59$ ,  $p = .11$ ), suggesting full mediation.

**Commitment.** Trust in the Athlete Leader was related to ATG-S ( $\beta = .59$ ,  $t(123) = 5.17$ ,  $p < .001$ ). As well, Trust in the Athlete Leader was related to Commitment ( $\beta = .69$ ,  $t(123) = 12.15$ ,  $p < .001$ ), and Commitment was related to ATG-S ( $\beta = .78$ ,  $t(123) = 4.66$ ,  $p < .001$ ). Results from the mediation analyses using bootstrapping methods confirmed the mediating role that Commitment has between Trust in the Athlete Leader and ATG-S ( $\beta = .54$ ; CI = .24 - .83). Additionally, the direct effect between Trust in the Athlete Leader and ATG-S controlling for Commitment yielded a non-significant result ( $\beta = .05$ ,  $t(123) = .33$ ,  $p = .74$ ), suggesting full mediation.

Trust in the Athlete Leader was related to ATG-T ( $\beta = .69$ ,  $t(123) = 5.70$ ,  $p < .001$ ). Additionally, Trust in the Athlete Leader was related to Commitment ( $\beta = .69$ ,  $t(123) = 12.14$ ,  $p < .001$ ). Commitment was related to ATG-T ( $\beta = .40$ ,  $t(123) = 2.12$ ,  $p = .04$ ). Results from the bootstrapping methods displayed a confidence interval that fell between zero, indicating no mediation for the model ( $\beta = .27$ , CI = -.04 - .59). As well, the direct effect remained significant with Commitment controlled for in the model ( $\beta = .41$ ,  $t(123) = 2.33$ ,  $p = .02$ ), suggesting no mediation.

Trust in the Athlete Leader was related to GI-S ( $\beta = .60$ ,  $t(123) = 5.33$ ,  $p < .001$ ). Additionally, Trust in the Athlete Leader was related to Commitment ( $\beta = .69$ ,  $t(123) = 12.14$ ,  $p < .001$ ). Commitment was not related to GI-S ( $\beta = .17$ ,  $t(123) = .95$ ,  $p = .35$ ).

Results from the bootstrapping methods displayed a confidence interval that fell between zero, indicating no mediation for the model ( $\beta = .12$ , CI =  $-.15 - .38$ ). As well, the direct effect remained significant with Commitment controlled for in the model ( $\beta = .48$ ,  $t(123) = 2.89$ ,  $p = .05$ ), suggesting no mediation.

Trust in the Athlete Leader was related to GI-T ( $\beta = .59$ ,  $t(123) = 5.52$ ,  $p < .001$ ). Additionally, Trust in the Athlete Leader was related to Commitment ( $\beta = .69$ ,  $t(123) = 12.14$ ,  $p < .001$ ). Commitment was not related to GI-S ( $\beta = .28$ ,  $t(123) = 1.66$ ,  $p = .10$ ). Results from the bootstrapping methods displayed a confidence interval that fell between zero, indicating no mediation for the model ( $\beta = .20$ , CI =  $-.01 - .43$ ). As well, the direct effect remained significant with Commitment controlled for in the model ( $\beta = .40$ ,  $t(123) = 2.52$ ,  $p = .01$ ), suggesting no mediation.

### **Discussion**

The purpose of the current study was two-fold: a) to determine if athletes' propensity to trust moderated their perceptions of their athlete leader's trustworthy characteristics; and b) to determine whether the relationship between the athlete and their athlete leaders acted as a mediator between trust and cohesion. It was hypothesized that an athlete's propensity to trust would moderate the relationship between the antecedents of trust (i.e., Ability, Benevolence, Integrity, and Justice) on Trust in the Athlete Leader. It was also hypothesized that the variables defining consequences of trust (i.e., Closeness, Commitment, and Complimentarity) would mediate the relationship between Trust in the Athlete Leader and the outcomes of trust (i.e., ATG-T, ATG-S, GI-T, GI-S). A series of regression models were estimated to test for moderation in the first hypothesis, and for mediational relationships in the second hypothesis. Taken together the results from the



first hypothesis offered partial support, as the athlete's propensity to trust was found to moderate between one of the four antecedents tested (i.e., Benevolence) and trust in athlete leadership. Further, the second hypothesis was also partially supported, as all three constructs (i.e., Closeness, Complimentarity, and Commitment) of the athlete and athlete leader relationship either fully or partially mediated the relationship between trust in the athlete leader and perceptions of cohesion. Beyond these specific results, a number of aspects related to these findings should be highlighted.

The results of the current study showed that the antecedents of Benevolence and Ability were related to the athlete's trust in their athlete leader. These findings are somewhat in line with past research that has examined the antecedents of trust and their relationship with athletes' trust in the coach (Zhang & Chelladurai, 2013). In particular, the present study found two antecedents of trust to be positively related to trust in the athlete leader. In contrast, Integrity and Justice were not related to an athlete's trust in their leader. That is, participants in this study did not look for their athlete leaders' moral code or sense of right and wrong when determining whether these individuals displayed trustworthy behavior. Past research has stated that certain leadership behaviors of an effective leader will vary depending on the context that the leader is in (Glenn & Horn, 1993). A leader's sense of right and wrong, as well as their capacity to make consistent decisions that are fair for the group may be important in determining the effectiveness of their leadership capability. However, in the context of developing interpersonal relationship to foster trust, it appears as though these characteristics are not as vital to instill trust in teammates. Conversely, Zhang and Chelladurai (2013) found that players' perceptions of all four antecedents of trust (Benevolence, Ability, Integrity, and Justice)

were related to the trust they felt towards their coaches. The different roles that coaches and athlete leaders have within a team may explain why only two variables were significantly related to trust in the current study for athlete leaders. Coaches have been found to display more autocratic leadership behavior (Loughead & Hardy, 2005), indicating that within this leadership style, the coach makes decisions regarding the team without input from the players. As such, characteristics such as the coach's sense of right and wrong, as well as their moral code, would factor towards a player's perceptions of trust within their coach. Athlete leaders do not exercise autocratic behavior to the same extent as their coach, which mitigates the need to evaluate them based on the same characteristics that makes their coach effective. From this perspective, explanations as to why only Benevolence and Ability were significant predictors of trust are more apparent.

In the present study there was the possibility of four moderation relationships. However, only one relationship was found in that the interaction between Benevolence and Propensity to Trust moderated the relationship between Benevolence and Trust in the Athlete Leader. Specifically, an athlete's willingness to trust others influenced their perceptions of their athlete leaders' willingness to provide support for teammates without the need for reciprocating this support. In particular, when the athlete had a high propensity to trust others, and if they felt that their leader displayed benevolent behaviors, they were more likely to trust their athlete leader. Past research from the organizational psychology literature has shown that propensity to trust represents a stable characteristic representing how willing individuals are to trust other people (Mayer et al., 1995). The findings from the current study partially support the results from Zhang (2004), where

Propensity to Trust was found to moderate Ability and Justice, in addition to Benevolence. The differing results between the current study and Zhang could be a result of the different relationships examined between the two studies. In particular, the characteristics that players look for to formulate perceptions of whether they invest their trust towards their leaders may vary depending on the leadership role that is being evaluated (coach vs. athlete leader). As such, coaches and athlete leaders may possess some similar attributes, as well as different characteristics in order to fulfill their leadership roles and instill trust in their players/teammates.

In relation to the moderation analyses, there is a statistical issue that may have influenced the results. As noted in the results section of the thesis, the items measuring athletes' propensity to trust their athlete leaders had a very low Cronbach alpha value. Consequently, it was decided to use one item to represent the construct, and therefore be used as the moderating variable. A reason for the low alpha value may be related to the fact that the five items measuring Propensity to Trust were non-sport specific, yet the population for the study consisted of varsity athletes. While the definition of propensity to trust relates the construct to a personal disposition that influences human behavior, the addition of a sport specific context for propensity to trust may have yielded different results for the current study. Previous theorizing has indicated that propensity to trust is situation specific, affected by both personality characteristics and environmental situations (Sitkin & Pablo, 1992). Incorporating the environmental context into the construct may have provided a more accurate reflection of how athletes perceive propensity to trust in a sport setting. For example, athletes may be more willing to trust an athlete leader based on the track record of that individual. A team captain or veteran

player would have a certain reputation based on that individual's past experience with this athlete leader that would lead a player to determine whether he/she should trust this leader. In this scenario, using a measure that assesses an individual's general propensity to trust would be limiting since it is not context specific. The athlete is in a situation in which they need to decide whether he/she trust this leader. As a result, an athlete's personal disposition of whether they trust others from a general standpoint may not be entirely accurate in this specific environment, as sport teams represent a closed group that is motivated towards a group outcome (Warner, Bowers, & Dixon, 2012). In this case, an athlete's personal disposition to trust the leaders on their team could be influenced by factors, such as their coach, other teammates, team staff members, as well as from their own observations in the sport context. As such, the conceptualization of propensity to trust should not only contain the characteristics of trusting others but also be situated in a specific context. Interestingly, in Zhang's (2004) dissertation Propensity to Trust was viewed as a moderating variable within the model of trust in leadership. However, when the results of the dissertation were published in an empirical journal Zhang and Chelladurai (2013) did not include Propensity to Trust in their model, which may shed some insight towards the lack of understanding of this construct in the sport setting.

The results from the mediation analyses were found to provide partial support for the second hypothesis. There were a total of eight significant mediation relationships regarding the three constructs that represented the athlete leader-athlete relationship, which served as the mediating variable. The first point to discuss is the relationship between trust in the athlete leader and perceptions of cohesion. The results of the present study indicated a positive relationship between these two constructs with  $\beta$  values

ranging between .59 and .69 depending on the dimension of cohesion. These findings are similar to Mach, Dolan, and Tzafrir (2010) who found that trust in a teammate was positively related to perceptions of cohesion in professional sport (i.e., basketball, handball, indoor soccer, and roller hockey). However, Mach et al. found a slightly stronger relation ( $\beta = .80$ ) than the present study. An explanation for the variation in values could be due in part to the difference in how both studies operationalize the two parties in the trust relationship. In Mach et al., trust was defined as an athlete's trust in teammates, whereas the current study defined it as an athlete's trust in athlete leadership. The two vary in the quantity of personnel that qualify for the definition. In Mach et al. study, all teammates are being evaluated in terms of trust, whereas only athlete leaders are evaluated for their trust in the current study. In this case, an athlete may feel more trusting towards teammates who are perceived as friends compared to athlete leaders who may or may not be friends.

Another point worth discussing is the relationship between athlete leader-athlete relationship and perceptions of cohesion. To the researcher's knowledge this is the first study to examine the relationship between athlete leaders and teammates in relation to perception of cohesion. The only previous research examining this type of relationship involved the coach-athlete relationship and its association to cohesion. In particular, Jowett and Chaundy (2004) found one significant relationship between the coach-athlete relationship construct of commitment and task cohesion (this was a composite score that involved aggregating ATG-T and GI-T) with a  $\beta$  of .32. In contrast, the results of the present study found eight (out of a possible 12) significant relationships between the athlete leader-athlete relationship and both task and social cohesion. Specifically, the

current study found positive relationships between Closeness and all four dimensions of cohesion with  $\beta$  values ranging between .59 and 1.01. These findings may provide insight into the different dynamic that athlete-athlete leader relationships and coach-athlete relationships possess. According to Jowett and Ntoumnanis (2004), Closeness encompasses feelings of being cared for, liked, and appreciated. These characteristics display signs of a strong interpersonal relationship between two individuals. It could be that athletes' feel more emotionally close with their athlete leaders than their coaches, which could attributed to the different leadership styles used by coaches and athletes. Past research has noted coaches and athletes provide different types of leadership; coaches provide players with more task-oriented instruction, whereas athlete leaders provide more social support and positive feedback to their teammates (Loughead et al., 2006). The contrast in the type of leadership style could explain a difference in the interpersonal connection between the athlete leader and coach, since athlete leaders are more likely to show behavior that fosters an interpersonal relationship. This difference could explain the varying results between Jowett and Chaundy (2004) and the current study in regards to the link (or lack thereof) between Closeness and cohesion.

The current study found that Complimentarity was related to the cohesion dimensions of ATG-T, GI-S, and GI-T, with  $\beta$  values ranging from .51 to .68. These findings are novel when compared to research that examined these constructs in relation to the coach-athlete relationship, which found no significant relationship between Complimentarity and task or social cohesion (Jowett & Chaundy, 2004). Complimentarity, which refers to the behavioral interactions between an athlete and the leader, may vary when comparing the coach-athlete relationship with the athlete-athlete

leader relationship. Specifically, since the athlete and the athlete leaders are teammates, their interactions contribute towards the team operating as an effective unit on and off the field. This differs from the interactions between a coach and an athlete, in which the athlete responds to the coach's instruction in order to be rewarded with playing time. This significant relationship between Complimentarity and cohesion in the current study may highlight these differences. As such, these specific interactive behaviors that emphasize the athlete-athlete leader relationship seem to provide an explanation for the association between trust and cohesion.

Lastly, Commitment was found to be related to the cohesion dimension of ATG-S in the current study with a  $\beta$  value of .58. These findings support past research using these constructs with the coach-athlete relationship (Jowett & Chaundy, 2004). In the Jowett and Chaundy study, Commitment was found to be related to task cohesion ( $\beta = .32$ ), indicating that the coach and athlete's desire to maintain their relationship influenced the unity around the team achieving its goals and objectives. In the current study, Commitment was related to the individual dimension of social cohesion in the current study. Jowett and Chaundy (2004) stated that based on the results of their study, an athlete's and coach's time is better spent on fostering task cohesion than social cohesion. When interpreting the results from the current study, an importance is placed on the social component of cohesion with athlete leadership.

In terms of the relationship between trust in the athlete leader and the athlete leader-athlete relationship, this is the first study to examine this relationship within the context of sport. The results showed a significant relationship between trust in the athlete leader and variables that represented the relationship between the athlete and athlete

leader. This finding is consistent with past research that has examined the coach and athlete trust relationship (Zhang & Chelladurai, 2013). In that particular study, the researchers operationalized the relationship between the coach and the athlete as the commitment that the player displayed towards the coach (cognitions such as the effort the player shows for their coach), and the willingness to cooperate with the coach (behaviors such as following the coach's instruction). The current study operationalized the athlete-athlete leader relationship using three variables that addressed the cognitions (Commitment) and the behavior (Complimentarity), while expanding upon the relationship by addressing the emotional connection between the both the athlete and athlete leader (Closeness).

Another important point of discussion addresses the viability of the trust in leadership model for athlete leadership research. After analyzing the results of the current study, it appears as though a majority of the hypothesized pathways were present in the sample population. These results are encouraging, as they provide support for the conceptual framework for trust in athlete leadership. In addition to Ability and Benevolence, future research is required to address any additional antecedents of trust that could influence athlete's perceptions. Furthermore, it appears as though the consequences of trust are adequate in explaining the dynamic nature of the athlete-athlete leader relationship. However, the biggest point of contention in model involves the operationalization of an athlete's propensity to trust. In order to fully understand the influence this personal trait can have within the context of sport, a more thorough breakdown of the construct may be required. Specifically, a distinction between an athlete's propensity to trust when evaluating formal and informal leaders may be



necessary. As formal leaders are selected, whereas informal leaders emerge through interactions with teammates, a specific propensity to trust construct may be required for each type of leadership role. Athletes could have different cognitions when evaluating whether they trust different forms of leadership within their team.

While the present study extended the knowledge base concerning trust in athlete leadership, the athlete leader-athlete relationship, and cohesion, the study is not without its limitations. First, the study is cross-sectional in nature, which does not permit causality to be inferred. The data gathered were collected at one point during the season. While this allowed for perceptions of trust, leadership, and cohesion to emerge, it should be noted that these constructs are dynamic in nature, which means they can change over time. Thus, the findings may have been different if the data were collected at another point in the season. Second, the psychometric properties from the five items measuring Propensity to Trust scale were poor, which raises questions concerning the validity of the construct within a sport context. As a result, the present study used only one item to measure this construct. Third, the population of the study consisted of varsity athletes. While the study sampled a variety of sports, all of the participants were young adults playing varsity sport. Consequently, youth sport athletes should be targeted for future studies to determine whether the results would differ in this population. Therefore, the generalizability of the results only pertains to CIS varsity athletes.

Results from the current study hold many practical implications. First, an athlete's propensity to trust their athlete leaders did appear to influence their perceptions of their athlete leaders' trustworthy characteristics. From an applied perspective, coaches should consider the personality characteristics of the athletes that comprise their team. In

particular, building a team of individuals who are willing to trust and to accept the vulnerability of following another person's direction may prove to be advantageous when trying to develop a cohesive, committed team culture. By contrast, if a team was composed of mostly individuals who find it difficult to put their trust in others in order to achieve the goals and objectives of the group, team effectiveness and a close knit, cohesive team culture may prove to be difficult to attain.

In addition, both the benevolent characteristics as well as the ability of the athlete leader were strongly related to whether or not an athlete can trust their athlete leaders. From a leadership development perspective, sport psychology consultants should focus on the development of certain skills in order to foster leadership behavior that creates a trustworthy environment within a team. Specifically, teaching skills in which the leader exhibits behavior that show care, support, and willingness to do good for teammates without expecting similar acts in reciprocity can create an environment in which trust is present amongst group members.

Furthermore, results from the current study indicate that sport psychology consultants should focus on the relationship between the athlete and the athlete leader. Within the context of the current study, it appears as though the interpersonal relationship between the two parties is vital in connecting feelings of trustworthiness among teammates with feelings of cohesiveness amongst team members. Consultants should focus on team building activities to develop these relationships amongst team members, encourage open communication between teammates, create opportunities for teammates to socialize with one another, and stress that the interactions between teammates away

from the sport itself can have a profound impact on how the team performs within the game.

In summary, results from the study provided some support for both hypotheses. With regards to the first purpose, the athlete leaders' willingness to provide support for teammates without the expectancy of reciprocity, as well as their ability to lead their teammates were most strongly associated with teammates' feelings of trust. As well, the athletes' personal disposition to trust their athlete leaders influenced their perceptions of their leaders' benevolent behavior. Furthermore, partial support for the second hypothesis was found; the emotional connection between the athlete and athlete leader was related to all four dimensions of cohesion, while the actions, and to some extent, the cognitions, about the athlete-athlete leader relationship influenced the link between trust in athlete leadership and team cohesion. Practical implications from the study should focus on developing skills that create a sense of trust towards leadership within teammates, as well as developing the relationship between the athlete and athlete leader, as both facets play important roles in connecting the link between trust in leadership and cohesion.

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Table 1

*Descriptive Statistics for Antecedents of Trust, Propensity to Trust, Trust in Athlete Leadership, Consequences of Trust, and Outcomes of Trust*

Variable	<i>M</i>	<i>SD</i>	$\alpha$
Ability <sup>a</sup>	5.56	1.06	.88
Benevolence <sup>a</sup>	5.39	1.11	.88
Integrity <sup>a</sup>	5.34	1.01	.82
Justice <sup>a</sup>	5.02	1.11	.85
Propensity to Trust <sup>a</sup>	4.62	1.21	n/a
Trust in Athlete Leader <sup>a</sup>	5.16	1.19	.81
Closeness <sup>a</sup>	5.85	1.00	.92
Commitment <sup>a</sup>	5.33	1.12	.90
Complimentarity <sup>a</sup>	5.33	0.90	.87
ATG-T <sup>b</sup>	6.95	1.80	.69
ATG-S <sup>b</sup>	7.15	1.67	.74
GI-T <sup>b</sup>	6.42	1.59	.73
GI-S <sup>b</sup>	6.86	1.65	.75

*Note.*

<sup>a</sup>Scores for Antecedents of Trust, Propensity to Trust, Trust in Athlete Leader, and Consequences of Trust range from 1-7.

<sup>b</sup>Scores on Outcomes of Trust range from 1-9.

Table 2

*Bivariate Correlations between Antecedents of Trust, Propensity to Trust, Trust in Athlete Leader, Consequences of Trust, and Outcomes of Trust*

Variable	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Ben	.71*	.83*	.81*	.32*	.76*	.83*	.75*	.78*	.36*	.54*	.55*	.42*
2. Ab	-	.81*	.78*	.29*	.69*	.78*	.64*	.80*	.35*	.45*	.41*	.39*
3. Int		-	.84*	.33*	.70*	.79*	.66*	.78*	.26*	.46*	.45*	.39*
4. Jus			-	.39*	.64*	.79*	.67*	.75*	.31*	.48*	.48*	.43*
5. PTT				-	.16*	.33*	.30*	.34*	.07***	.22*	.35*	.22*
6. TAL					-	.82*	.74*	.70*	.42*	.46*	.45*	.43*
7. Close						-	.88*	.86*	.46*	.56*	.52*	.47*
8. Comm							-	.79*	.55*	.45*	.42*	.37*
9. Comp								-	.33*	.50*	.54*	.47*
10. ATG-S									-	.38*	.30*	.34*
11. ATG-T										-	.69*	.54*
12. GI-S											-	.59*
13. GI-T												-

*Note.* Bivariate correlations represent values obtained subsequent item deletion. Ben = Benevolence; Ab = Ability; Int = Integrity; Jus = Justice; PTT = Propensity to Trust; TAL = Trust in Athlete Leader; Close = Closeness; Comm = Commitment; Comp = Complimentarity; ATG-S = Individual Attractions to the Group – Social; ATG-T = Individual Attractions to the Group – Task; GI-S = Group Integration – Social; GI-T = Group Integration – Task.

\* $p < .01$

\*\*\* $p \leq .25$

Table 3  
*Hierarchical Multiple Regression Analyses for the Antecedents of Trust and Interaction with Propensity To Trust*

Predictor	$\beta$	$t$	$p$
Step 1			
Ability	.31	3.14	.002**
Benevolence	.59	5.40	.001***
Integrity	.07	.55	.58
Justice	-.14	-1.20	.23
Step 2			
AxP	-1.19	-1.94	.06
BxP	1.52	2.14	.03**
IxP	-1.36	-1.32	.19
JxP	.90	1.20	.23

*Note.* AxP = Ability x Propensity to Trust; BxP = Benevolence x Propensity to Trust; IxP = Integrity x Propensity to Trust; JxP = Justice x Propensity to Trust.

\*\* $p < .05$

\*\*\* $p < .001$

Degrees of freedom = 120.

## LITERATURE REVIEW

The purpose of the thesis is to examine the relationship between trust in athlete leadership and cohesion. Therefore, the literature review will consist of three sections that outline sport psychology research in the areas of a) athlete leadership, b) trust in leadership, and c) cohesion.

### **Leadership**

This section of the literature review will begin with a definition of athlete leadership. Subsequently, measurement tools for measuring athlete leadership behaviors will be discussed. Finally, an examination of the literature on athlete leadership behaviors will be provided.

#### **Definition of Athlete Leadership**

One of the common characteristics of a group is the presence of leadership. Whether it is the boss of a company, the CEO of a corporation, or the coach of a sport team, each group has individuals who provide leadership to that group. The ability to successfully lead a group is contingent on a leader's behavior and characteristics.

Past sport leadership research has examined the role of the coach in athletic teams (Chelladurai, 1993; Chelladurai & Reimer, 1998). While coaches are important to their teams from a leadership perspective, these coaches have also noted the importance of their athlete leaders (Gould, Hodge, Peterson, & Petlichkoff, 1987). Athlete leadership has been defined as an athlete who occupies a formal or informal leadership role within the team and influences team members to achieve a common goal (Loughead, Hardy, & Eys, 2006). Emerging from this definition are two types of leadership roles: (a) formal athlete leadership (e.g., captains/assistant captains) who are

assigned their roles and (b) informal leaders (e.g., veterans), whose leadership role emerges through interactions they have with other members of the team.

### **Measuring Athlete Leadership Behaviors**

**Leadership Scale for Sports.** The Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1980) is a 40-item inventory that measures five leadership behaviors and has been used recently to assess athlete leadership. The items are scored on a 5- point Likert scale ranging from (1) *never* to (5) *always*. The five leadership behaviors are: (a) *social support*, which refers to behavior in which the athlete leader is concerned for the welfare and interpersonal needs of their teammates, as well as creating a positive group atmosphere; (b) *training and instruction*, which refers to athlete leader behavior that looks to improve teammates' ability through hard work, as well as instructing them on skills, tactics, and technique of the sport; (c) *democratic behavior*, which refers to leader behavior where the athlete stresses the importance of the group when making decisions in reference to tactics, goals, practice methods, and group activities; (d) *positive feedback*, which refers to athlete leaders reinforcing good performances with their teammates, and; (e) *autocratic behavior*, in which the athlete leader stresses personal authority over the group.

**Multifactor Leadership Questionnaire.** The Multifactor Leadership Questionnaire (MLQ-5X; Bass & Avolio, 1997) contains 36 items that measures nine leadership behaviors. Specifically, this inventory measures transformational and transactional leadership behaviors, and represents the constructs contained in Bass' (1985) transformational leadership theory.

Transformational leadership instills a vision into their followers, provides a sense of inspiration for their followers, challenges their followers in a constructive way, and helps their followers reach extraordinary goals (Bass, 1990). Within the MLQ-5X there are five transformational leadership factors: (a) *idealized influence (attribute)* refers to the confidence and charismatic perception the leader has, and whether or not the leader appears powerful and focused on ideals that are best for the group; (b) *idealized influence (behavior)* refers to the charismatic actions of the leader in regards to the values and beliefs that are associated with the goal of the group; (c) *inspirational motivation* refers to the way the leaders motivate their followers with their sense of optimism, creating an idealized vision for the group, and encouraging their followers that the idealized goals are attainable; (d) *intellectual stimulation* refers to the leaders' ability to stimulate their followers to think creatively and find solutions to challenging problems; and (e) *individual consideration* refers to the leader giving each follower individualized attention by supporting, advising, and paying attention to their interpersonal needs.

Transactional leadership is an exchange process where the leader sets objectives and the follower is rewarded for reaching the objectives, or punished for failing to reach the intended targets set by the leader (Bass, 1990). Transactional leadership is measured by three factors: (a) *contingent reward* refers to leader behaviors focused on clarifying follower roles and task requirements and providing followers with rewards (either material or psychological) that are contingent on the followers reaching the objectives set by the leader; (b) *management by exception-active* refers to active and dedicated behavior by the leader to ensure standards are met by the followers; and (c) *management by exception-passive*, in which leaders only intervene when followers have not complied

with the rules of the group or if mistakes have already happened. *Laissez-faire* leadership, which refers to the absence of any type of leadership behavior, is the final factor. The MLQ-5X expands upon the LSS in that it incorporates different leadership behaviors.

**Differentiated Transformational Leadership Inventory.** The Differentiated Transformational Leadership Inventory (DTLI; Hardy et al., 2010) was developed originally for the military context. The inventory was then adapted to study sport leadership (Callow, Smith, Hardy, Arthur, & Hardy, 2009). The DTLI is a 31 item inventory measured on a 5-point Likert scale from (1) *not at all*, to (5), *all of the time*. The dimensions of the DTLI were developed from two other inventories from organizational psychology. Three dimensions from the MLQ (Bass & Avolio, 1997) are utilized: *individual consideration*, *inspirational motivation*, and *intellectual stimulation* (see above for definitions). As well, the DTLI utilizes three transformational behaviors from the Transformational Leadership Inventory (TLI; Podsakoff, MacKenzie, Moorman & Fetter, 1990): *fostering acceptance of group goals*, where leaders promote cooperation amongst group members to work towards a common goal, *high performance expectations*, where leaders hold high standards for performance to their followers, and *appropriate role modeling*, where leaders provide their group with information that is orientated with their values for the group to follow. As well, the DTLI includes one transactional behavior from the TLI: *contingent reward*, where the leaders provide positive reinforcement for behaviors that meets their expectations.

### **Research in Athlete Leadership Behaviors**

Initial research examining athlete leadership focused on whether coaches and athletes differed in their leadership behaviors (Loughead & Hardy, 2005). Leadership

behaviors were operationalized using the LSS (Chelladurai & Saleh, 1980) to measure athletes' perceptions of their coach's behaviors, as well as perceptions of their athlete leaders. Participants for this study included 238 Canadian athletes (94 females and 144 males). Repeated measures MANOVA was conducted to examine if coach and athlete leaders exhibited leadership behaviors to the same extent. Findings from this study showed that coaches were more likely to exhibit greater amounts of Training and Instruction and Autocratic Behavior than athlete leaders, while athlete leaders were more likely to exhibit greater amounts of Social Support, Positive Feedback and Democratic Behavior than coaches. The results from this study suggest that task orientated leadership within team sports is provided more by the coach, whereas the social leadership within team sports is provided more by athlete leaders. This suggests that athletes should expect their coach to operate in a more performance orientated mindset, where on-field results and effective play are more valued. Conversely, athletes would expect their athlete leaders to provide leadership that relates to the interpersonal dimension of group dynamics, specifically by providing social support and positive feedback.

Research has also examined the leadership role of athlete leaders (formal and informal) along with the type of athlete leader—team and peer leaders (Loughead et al, 2006). Team leaders refer to athletes who occupy a leadership role according to the majority of the team, whereas peer leaders refer to athletes who are viewed as leaders by only some team members. Leadership type (team vs. peer) was examined across three different leadership functions: (1) *task*, functions that relate to the goals and objectives of the group, (2) *social*, functions that relate to the interpersonal relationships between team members, and (3) *external*, functions that relate to the group outside of the sport itself.



Participants for the study included 258 varsity athletes from two Canadian universities representing thirteen teams. Athlete leadership was measured by having the participants rate all the leaders on their team who provided social, external, and task leadership. Results showed the majority of team leaders in the three functions held a formal leadership role, whereas the peer leaders held an informal role across task, social, and external leadership functions. The findings suggest that formal leaders within sport teams have more leadership responsibility across multiple types of leadership. Therefore, athletes who can bear the largest leadership responsibilities across multiple types of leadership should be bestowed with team captaincy. However, informal leaders contribute towards the leadership within the team as well and also should have leadership responsibilities.

In a qualitative research study examining the characteristics and leadership behaviors exhibited by captains of ice hockey teams, Dupuis, Bloom, and Loughhead (2006) interviewed six former ice hockey captains. In their study, research questions focused on the behaviors and characteristics that formal leaders should possess and demonstrate to their team. The results revealed that team leaders were characterized as being effective communicators, having a positive attitude, controlling their emotions, and being respectful to their teammates and coaches. Team captains reported that the most powerful way to show leadership was through their behaviors. Specifically, this included working hard in practice, games, and the off season. Furthermore, team leaders believed it was their responsibility to foster strong cohesion among their group.

Research has also examined the relationship between athlete leadership and cohesion. Using the DTLI, Callow et al. (2009) examined the relationship between

athlete leadership behaviors and cohesion. The findings showed that the leadership behaviors of fostering acceptance of group goals, promoting teamwork, high performance expectations, and individual consideration predicted task cohesion. Furthermore, fostering acceptance of group goals and promoting teamwork predicted social cohesion. In research using the LSS, Vincer and Loughhead (2010) examined the influence of athlete leadership behaviors on cohesion. Results from the study showed that individual perceptions of Training and Instruction and Social Support were related to all four dimensions of cohesion (Group Integration-Task, Group Integration-Social, Individual Attractions to the Group-Task, and Individual Attractions to the Group-Social). As well, Autocratic Behavior was negatively associated with the four dimensions of cohesion. This study provided initial evidence of the importance to foster leadership development to create a healthy group environment.

Most recently, Price and Weiss (2013) examined the relationships of peer and coach leadership behaviors on various athlete outcomes using transformational leadership as a framework. For this study, 412 female soccer players on competitive travel teams (age range from 14-18 years old) completed the MLQ-5X (Bass & Avolio, 1997), a soccer enjoyment scale that was created for the purpose of the study, the Self-Perception Profile for Adolescents (Harter, 1988), the intrinsic motivation component from the Motivational Orientation in Sport scale (Weiss, Bredemeier, & Shewchuk, 1985), the Group Environment Questionnaire (Carron, Brawley, & Widmeyer, 1985), and the Collective Efficacy Questionnaire for Sports (Short, Sullivan, & Feltz, 2005). For individual outcomes, the results showed transformational leadership was positively related to soccer enjoyment and intrinsic motivation. That is, peer leaders who inspired,

motivated, provided solutions, and enhanced creativity were associated with teammates who enjoyed soccer, were motivated to engage in challenging tasks and learn new skills. For team outcomes, the results showed a significant relationship amongst transformational leadership, task cohesion, social cohesion, and collective efficacy. This indicates leaders who exhibited behaviors that provided social support, inspired their teammates, and helped them problem solve had teammates who reported higher levels of group cooperation, group support, and group harmony. It is important to note that this research was cross-sectional in nature, therefore causational relationships between the peer and coach leadership with athlete outcomes cannot be determined.

### **Trust Literature Review**

This section of the literature review will provide an overview of the many definitions of trust, as well as provide reasoning for the definition used in this thesis. Second, an overview for the importance of trust in leadership will be discussed, followed by an examination measuring trust, as well as past research in trust in sport. Lastly, a model outlining trust in sport leadership will be highlighted, which include adaptations to this model for the current study.

#### **Definitions of Trust**

The concept of trust has been examined by researchers in many different fields, from organizational psychology (e.g., Rempel, Holmes & Zanna, 1985), to sociology (Coleman, 1990), to behavioral psychology (Axelrod, 1984). Research within these areas has led to the conclusion that trust is important; however, there is no consensus on the meaning of trust (Lewinki & Bunker, 1995). That is, while there have been some common elements amongst definitions, no universal definition exists.

As a result, numerous definitions of trust have been advanced. There is a cohort of researchers who have defined trust as an interpersonal characteristic. For instance, Rotter (1967) noted trust is an “expectancy held by an individual or group that the word, promise, verbal or written statement of another individual or group can be relied upon” (p. 651). Similarly, Zucker (1986) viewed trust as having confidence or predictability in one’s expectations. Fox (1974) described trust as “having faith and confidence in a person or thing” (p. 66).

Trust has also been explained as a social exchange process. Gambetta (1988) defined trust as “the probability that a person with whom we are in contact will perform an action that is beneficial or at least not detrimental, that is high enough for us to consider engaging some form of cooperation with him” (p. 217). The social exchange perspective is seen as a process where parties negotiate exchanges between one another (Konovsky & Pugh, 1994). If there are reciprocal behaviors between teammates and towards the team as a whole, each teammate will contribute more towards the success of the group (Gouldner, 1960).

Within a professional sport, there are specific rules that an organization will instill that make untrustworthy behaviors costly. For example, there would be a monetary fine if a player was late for practice or a team meeting. Within a social exchange perspective, the consequence of this type of behavior only has an effect if there is an ongoing social interaction with other team members and a stable social network in which it effects the athlete’s reputation (Zhang, 2004). Through this perspective, trust is linked to a social context where there are consequences to engaging in trusting behaviors.

Other definitions of trust have posited it as a vulnerability that one takes on with the idea that the risk will pay off as a benefit. Michalos (1990) defined trust as “a relatively informed attitude or propensity to allow oneself and perhaps others to be vulnerable to harm in the interests of some perceived greater good” (p. 217). Other researchers (e.g., Mayer, Davis, & Schoorman, 1995 ) have adopted this view, defining trust as “the willingness of a party to be vulnerable to the actions of another party based on the expectations that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (p. 712).

In an attempt to advance a comprehensive definition of trust, Rousseau et al. (1998) formulated a definition that encompassed elements of earlier definitions that were presented above. Specifically, these authors defined trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (p. 395). This definition has implications for the present thesis. Specifically, Zhang’s (2004) model of trust in leadership, which provides the conceptual framework for this thesis, is based off this definition.

### **Trust in Leadership**

For the purpose of this thesis, it is important to note that the focus is on trust in leadership. Trust in leadership has long been valued as an important component in leadership research (Mellinger, 1956). Trust is the foundation of interpersonal relationships between leaders and followers (Michalos, 1990). Therefore, its value and relevance to athletic teams is paramount. For instance, trusting a team captain or an athlete leader can have a huge effect on the attainment of goals and objectives of the team.

Trust in leadership is a major component in different leadership theories. The vertical dyad linkage model (Dansereau, Graen, & Haga, 1975), which was later changed to the leader-member exchange theory, posits trust as a core component. The leader-member relationship is based on the interpersonal relationship between the two members. The quality of this relationship is composed of the mutual trust, respect, and support that are between the two members (Chelladurai, 2001). Within transformational leadership, the effects of a charismatic leaders' behavior on the group are mediated by the trust that a group member has in the leader (Podsakoff et al., 1990). With these examples, the role that trust occupies within leadership is significant. However, very little research examining trust in sport, or trust in leadership in sport, has been conducted.

In contrast to research in sport, there is more research examining trust in leadership within an organizational setting. For instance, Gilbert and Tang (1998) examined the antecedents of organizational trust in a sample of 83 managers from a federal government agency. Specifically, managers completed questionnaires that measured workgroup cohesion and organizational trust. The results showed that workgroup cohesion was positively related to organizational trust. This study highlighted the association between trust and cohesion, and outlines how developing trust within an organization can impact the effectiveness of the employee team, which will improve the organization's productivity.

### **Framework for the Study of Trust in Sport**

Zhang (2004) forwarded a conceptual model of trust for coaching leadership, adapted from Mayer et al. (1995). This linear model (see Figure 1) is comprised of antecedents, throughputs, and outputs, with a moderator acting between the antecedents

and throughputs. The model states that an athlete's trust in his/her coach is influenced by the perceived characteristics of the coach. These perceived characteristics are represented as the antecedents of trust. The athlete's propensity to trust his/her coach moderates this relationship. The model also states that the trust an athlete has in his/her coach will have consequences on personal involvement with the team. The model also contains two consequences (throughputs). In particular, the trust an athlete has with his/her coach will influence his/her level of commitment to the coach, as well as a willingness to cooperate with the coach. As a result, these two consequences (outputs) influence outcomes, such as the athlete's satisfaction with their performance.

A detailed overview of each component of the model will be discussed.

**Antecedents.** A trust relationship is between two parties: the trustee (one who is trusted, such as a teammate), and the trustor (one who gives trust, such as an athlete leader). Within Zhang's (2004) model, the antecedents of trust are represented by the perceived characteristics of the trustee. In particular, there are four perceived characteristics that the trustor evaluates: *perceived ability*, which refers to the skills and competencies of the leader, *perceived benevolence*, which refers to the extent that the trustee wants to do good for the trustor, *perceived justice*, which refers to the perception of providing just treatment to team members, and *perceived integrity*, which refers to the perception that the leader adheres to a set of standards and norms that the group is familiar with.

In Zhang's (2004) study examining trust in sport leadership, perceived ability was measured by five items adapted from Mayer and Davis' (1999) ability scale. The items included were: "My coach is very capable of performing the coaching job"; "My coach is

known to be successful at the things he/she tries to do”; “My coach has knowledge about the work that needs to be done”; “I feel very confident about my coach’s skills”; and “My coach has specialized capabilities that can increase our performance”.

Perceived benevolence was measured by five items adapted in Mayer and Davis’ (1999) ability scale. The items included were: “My coach is concerned about my welfare”; “My needs and desires are very important to my coach”; “My coach would not do anything to knowingly hurt me”; “My coach really looks out for what is important to me”; and “My coach is willing to go out of the way to help me”.

Five items were used to measure perceived justice. Three items were adapted from Moorman’s (1991) perceived justice scale. The items included were: “My coach is able to suppress personal biases”; “My coach appreciates the work done by every athlete”; and “My coach rewards athletes based on their contributions”. Two items were adapted from Mayer and Davis’ (1999) integrity scale. The two items were: “My coach has a strong sense of justice”; and “My coach tries to be fair in dealings with athletes”.

Five items were used to measure perceived integrity. Three items were adapted from Mayer and Davis’ (1999) integrity scale. They were: “I never have to wonder whether my coach will stick to his/her words”; “I like my coach’s values”; and “Sound principles seem to guide my coaches behavior”. Two additional items were adapted from Butler’s (1991) integrity scale. They were: “My coach always tells the truth”; and “My coach deals honestly with me”.

Results from a confirmatory factor analysis showed that the antecedents for trust showed reasonably good model fit (Hu & Bentler, 1999); CFI = .96, TLI = .96, and RMSEA = .07. Reliability estimates for the four antecedents were all above acceptable



cut-off points (Nunnally & Bernstein, 1994) for perceived ability ( $\alpha = .89$ ), perceived benevolence ( $\alpha = .82$ ), perceived justice ( $\alpha = .87$ ), and perceived integrity ( $\alpha = .87$ ).

**Propensity to trust.** Propensity to trust refers to the personal disposition in which the trustor has internal tendencies to trust another person without having any information about the trustee. In Zhang's (2004) model, propensity is seen as a moderator to whether or not a trustor will trust the trustee. If propensity is high, the trustor will see the leader as someone who behaves in a trustworthy manner. If propensity is low, the trustor will view the leader as someone who should not be trusted.

There have been three different operationalizations of propensity to trust. First, propensity to trust has been measured as a global component (Scott, 1980). This perspective views propensity to trust as a willingness to trust by the trustor. The second perspective views propensity to trust as a specific component, which relates to how trustworthy the trustee is (Driscoll, 1978; Scott, 1980). The third perspective views it as general trust, which refers to the "default" expectation of how much they can trust another person (Rotter, 1980). Specifically, an individual's general trust is formed by experiences in childhood and adulthood, as well as through their cultural background and personality disposition.

Within Zhang's (2004) study, propensity to trust was measured by five items adapted from Mayer and Davis' (1999) propensity to trust scale, which examines the construct from a global component perspective. The items included: "One should be very cautious with strangers"; "Most experts tell the truth about the limits of their knowledge"; "Most people can be counted on to do what they say they will do"; "These days, you must be alert or someone is going to take advantage of you"; and "Most people answer

public opinion polls honestly”. Propensity showed excellent good model fit through a CFA (CFI = .99, TLI = .98, RMSEA = .03). Reliability estimates for propensity to trust was acceptable ( $\alpha = .82$ ) (Nunally & Bernstein, 1994).

**Trust.** Within Zhang’s (2004) model, the antecedents and propensity to trust influence the amount of trust an athlete will have in the leader. It is believed that the trust an athlete has in the leader will have consequences with regards to their relationship, which in turn will indirectly influence performance (performance was measured as athlete satisfaction in Zhang’s model). Specifically, the trust an athlete has in the leader will influence how willing the athlete is to cooperate with the leader, as well as their commitment to that leader.

In Zhang’s (2004) study, athlete’s trust in the leader (i.e., coach) was measured by five items. Two of the items were adapted from Dirks’ (1999) trust in leadership scale. These items were: “I can talk freely to the coach about difficulties I am having on the team”; and “I can freely share my ideas, feelings, and hopes for my coach”. Two items were adapted from Mayer and Davis’ (1999) trust in management scale. These items were: “If I had a choice, I wouldn’t let the coach have any influence over issues that are important to me”; and “I would be comfortable giving the coach a task or problem that was critical to me, even if I could not monitor his or her actions”. The last item was adapted from Podsakoff et al. (1989) trust in leader scale. The item was: “My coach would not try to gain an advantage by deceiving other athletes”.

**Consequences of trust.** The behaviors that result in the trustor giving trust to the trustee are viewed as the consequences of trust. Specifically, these consequences are the player’s *willingness to cooperate* with the leader, and the player’s *commitment to the*

*leader*. If trust is high within the athlete-leader relationship, the trustor (athlete) is more likely to engage in behavior that exhibits cooperation with their leader, as well as showing commitment to the leader. If trust is low between the player and the coach, the athlete would not show a willingness to cooperate with their leader, as well as showing a lower commitment level towards that leader. These consequences would have an impact on outcomes such as overall performance or athlete satisfaction.

Willingness to cooperate refers to the athlete's feelings regarding communicating with the leader, responding to the feedback they receive from the leader, and accepting the leader's decisions (Zhang, 2004). Willingness to cooperate in Zhang's study was assessed using six items. Four of these items were taken from Scott, Bishop, and Chen's (2003) willingness to cooperate scale. The original items were constructed to measure a willingness to cooperate with other employees, and were modified by Zhang to assess the coach-athlete relationship. The four items were: "I am willing to share information from my coach"; "I am willing to cooperate with my coach to get the work done"; "I am willing to communicate with my coach"; and "Cooperation with my coach is the key to my success". Two additional items were added by Zhang to target an athlete's willingness to cooperate with their coach. These items were added to capture the unique coach-athlete interactions that would only be present in the sport setting. These two items were: "I am willing to follow the coach's instructions", and "I am willing to respond to coach's feedback about my performance".

Commitment to the leader refers to the extent that an athlete identifies and internalizes with their leader (Zhang, 2004). Commitment was measured using an adapted version of Becker, Billings, Eveleth, & Gilbert (1996) commitment to supervisor

scale. This scale reflects the idea that identification and internalization should be used to form the basis for of commitment to a supervisor. Therefore in the Zhang study, the scale measured an athlete's internalization and identification with their coach. The scale included seven items. Four items targeted an athlete's identification with the coach were: "When I talk about my coach, I usually say 'we' rather than 'they'"; "My coach's successes are my successes"; "When someone praises my coach, it feels like a personal compliment"; and "I feel a sense of belonging with my coach". Three items were used to measure internalization with the coach: "I prefer what my coach stands for"; "My attachment to my coach is primarily based on the similarity of my values and those of my coach"; and "Since joining this team, my personal values and those of my coach have become more similar".

A CFA was used to determine the model of fit indices for the outcomes of commitment (TLI = .98, CFI = .99, RMSEA = .05) and willingness to cooperate (TLI = .95, CFI = .97, RMSEA = .07) showed reasonably good model of fit (Hu & Bentler, 1999). Reliability estimates for commitment to the coach ( $\alpha = .75$ ) and willingness to cooperate with the coach ( $\alpha = .74$ ) were acceptable (Nunally & Bernstein, 1994).

**Outcomes.** An athlete's perceived performance was measured by two subscales from the Athlete Satisfaction Questionnaire (Reimer & Chelladurai, 1998). Specifically, perceived performance was assessed using the dimensions of individual performance and team performance. The dimension of individual performance, for example, included the following items: the improvement in my performance over the previous season; the improvement in my skill level thus far; the degree of which I have reached my performance goals during the season. An example of items on the dimension of team

performance included: the extent to which my team has met its goals for the season thus far; my team's victories this season; and the team's overall performance this season.

Overall, perceived performance showed adequate model fit (TLI = .91, CFI = .95, RMSEA = .08) (Hu & Bentler, 1999). Reliability estimate for perceived performance was adequate ( $\alpha = .84$ ) (Nunally & Bernstein, 1994).

### **Cohesion**

This section of the literature review will discuss the construct of cohesion. To begin, the definition and characteristics of cohesion will be described. Next, the conceptual model and measurement of cohesion will be examined. In addition, a framework for the study of cohesion will be highlighted. Finally, a review of research examining the trust-cohesion relationship will be provided.

#### **Definition and Characteristics of Cohesion**

Early definitions stated that cohesion was the “forces holding the individuals within the groupings in which they are” (Moreno & Jennings, 2013, p. 371). Additionally, Festinger, Schachter, and Back (1950) outlined two forces that could have an effect on people to remain within the group: (1) the desire of the individual for interpersonal relations with other members of the group, and (2) means control, which outlines the benefits of being part of the group. Another definition of cohesion was put forward by Gross and Martin (1952), who described cohesion as the group's resistance to disruptive forces.

Carron (1982) argued that previous definitions of cohesion were unidimensional in nature, in that the sole focus behind these past definitions was some form of attraction. Instead of viewing cohesion as a unidimensional construct, Carron (1982) advocated that

a definition of cohesion should reflect its multidimensional nature. As a result, Carron defined cohesion as “a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives” (p. 124). Several years later, the definition was revised to include an affective component. The latest version of the definition is “a dynamic process that is reflected in the tendency for a group to stick together and remain united in pursuit of its instrumental objectives and/or for the satisfaction of member affective needs” (Carron, Brawley, & Widmeyer, 1998, p. 213).

Using their definition as a basis, Carron et al. (1998) also outlined four characteristics of cohesion. First, cohesion is *multidimensional* in nature, which means there are multiple reasons why groups stick together. Second, cohesion is *dynamic*, outlining that cohesion can change over the lifespan of a group. The third characteristic indicates that groups are created for an *instrumental purpose*; goals and objectives of a group is the driving force for it being created. Finally, cohesion involves *affect*. The social interactions that take place within the group create and influence the feelings and emotions group members have.

### **Conceptual Model and Measurement of Cohesion**

Once the definition was advanced by Carron (1982), it was important to develop a model of cohesion that reflected its multidimensional nature. Carron, Brawley, and Widmeyer (1985) argued that an individual’s perceptions of the group could be viewed from two perspectives: the member’s perception of the group as a whole, labeled as Group Integration, as well as their personal attractions to the group, labeled as Individual Attractions to the Group. Additionally, Carron et al. (1985) argued that these two

perspectives could be examined along task and social orientations. A task orientation was defined as “representing a general orientation or motivation towards achieving the group’s objectives” (Carron et al, 1998, p. 217). Whereas a social orientation was defined as “a general orientation or motivation toward developing and maintaining social relationships and activities within the group” (Carron et al., 1998, p. 217). Based on this theorizing, cohesion was viewed as a multidimensional construct composed of four unique dimensions (see Figure 3).

Consequently, Carron et al. (1985) developed an 18-item questionnaire to assess these four dimensions of cohesion, entitled the Group Environment Questionnaire (GEQ). The first dimension, Group Integration-Task (GI-T), reflects an individual team member’s feelings of closeness and unity of the group as a whole towards their goals and objectives (Carron et al., 1998). This dimension consists of five items, with an example being “Our team is united in trying to reach its goal for performance”. The second dimension, Group Integration-Social (GI-S), reflects individual team member’s perceptions of unity and bonding within the group as a whole for social situations (Carron et al., 1998). This dimension consists of five items; an example is “Members of our team would rather go out on their own than get together as a team”. The third dimension is Individual Attractions to the Group-Task (ATG-T), which reflects an individual team member’s feelings about his/her own contribution to the group task, productivity, goals and objectives that the group holds (Carron et al., 1998). ATG-T has four items, with an example being “I am unhappy with my team’s level of desire to win”. The fourth dimension is Individual Attractions to the Group-Social (ATG-S), which reflects an individual team member’s feelings about his/her personal acceptance, and how socially

integrated the individual feels with the group (Carron et al., 1998). This dimension contains five items. An example item being: “I do not enjoy being a part of the social activities of this team”. All of the items of the GEQ are scored on a 9-point Likert scale, ranging from (1) *strongly disagree* to (9), *strongly agree*. It is important to note that 12 of the 18 items are negatively worded, and are therefore reversed scored.

The strength of the GEQ is found within its validity, or the extent in which the instrument measures what it intends to measure. The most basic form of validity is content validity. Content validity is usually established by independent experts who assess the extent to which the items on an inventory represent the construct outlined in the theory. This process is usually conducted in the early parts of developing a questionnaire. This was the process followed for the GEQ (Carron et al., 1985).

Concurrent validity indicates that an instrument is correlated with other similar instruments. In order to show concurrent validity, the instrument needs to correlate moderately well (i.e.,  $r = .35$  to  $.60$ ) with an instrument that measures a similar construct. If the new instrument correlates too highly with previous established instruments, the validity of the new instrument can be questioned. Additionally, if the concurrent validity is too low, the validity of the new instrument is also questioned. Research by Brawley, Carron, and Widmeyer (1987) displayed the GEQ to have concurrent validity with the Sport Cohesiveness Questionnaire (SCQ; Martens, Landers, & Loy, 1972). Specifically, the GI-T scale was correlated with the group perception score of the SCQ for both team and individual sports ( $r = .47, p < .001$ , and  $r = .41, p < .001$ , respectively). This was also the case for the GI-S scale ( $r = .47, p < .001$ , and  $r = .62, p < .001$ , respectively). Partial support was obtained when the ATG- T and ATG-S components for team sports were



correlated with the individual attraction components of the SCQ ( $r = .38, p < .001$ , and  $r = .43, p < .001$ , respectively). However, this correlation was not statistically significant with individual sports (ATG-T:  $r = .23$ ; ATG-S:  $r = .24, p > .05$ ) (Brawley, Carron, & Widmeyer, 1987).

Predictive validity is considered to be present if the construct is empirically tied to a theoretically related variable. For example, a task orientated leadership style would predict a group to have an orientation towards task cohesion, whereas a social orientated leadership style would predict a group to have an orientation towards social cohesion. The GEQ has found to show predictive validity with number of different constructs. Most notably, the GEQ has shown positive predictive validity with the GI-T construct being a predictor for team sport athletes, and the ATG-T construct being a predictor for individual sport athletes (Brawley et al., 1987). Additionally, the GEQ showed positive predictive validity with team building in sport (McClure & Foster, 1991).

Factorial validity is established if the items are determined to provide an accurate measurement of the theoretically based concepts present in the theory. The GEQ has four robust components that comprise its four dimensions. Several authors have examined the factorial validity of the GEQ and found that support for its four-factor structure (e.g., Carron et al., 1985; Leeson & Fletcher, 2005).

In addition to possessing multiple types of validity, research has shown the GEQ to demonstrate adequate reliability. Reliability can be divided into two different subtypes: test-retest reliability and internal consistency. With regards to the GEQ, since cohesion is conceptually defined as dynamic, test-retest reliability statistics would be irrelevant to the inventory as different aspects of cohesion are subject to change throughout the duration

of a group's existence (Carron et al., 1998). Numerous studies have found acceptable internal consistency values (Nunally & Bernstein, 1994) for the GEQ: ATG-T,  $\alpha = .75$ ; ATG-S,  $\alpha = .70$ ; GI-T,  $\alpha = .72$ ; GI-S,  $\alpha = .76$  (Patterson, Carron, & Loughead, 2005).

### **Framework for the Study of Cohesion in Sport**

A linear framework of cohesion was advanced by Carron (1982) to guide research in sport (see Figure 4). This framework is a linear model consisting of antecedents, throughputs, and consequences of cohesion. It should be noted the throughputs of cohesion refer to the operationalization of cohesion (i.e., GI-T, GI-S, ATG-T, ATG-S), which has already been described in the previous section. Therefore, this section will focus on the antecedents and consequences of cohesion.

The antecedents of cohesion are categorized into four components: environmental, personal, team, and leadership factors. Environmental factors are considered the most general factor that contributes toward cohesion. They include variables such as the organizational structure of the group, the responsibilities of group members, and group size. Personal factors consist of individual characteristics such as gender, age, and personality dispositions. Team factors refer to the orientation of the group (e.g., social or task). Leadership factors refer to characteristics of the leader and the interactions the leader has with the group. For example, coach-athlete relationships (Jowett & Chaundy, 2004) and athlete leadership (Loughead et al., 2006) fall under leadership factors.

The consequences of cohesion that have received the most attention in research include athlete satisfaction (Williams & Widmeyer, 1991) and performance (Carron, Brawley, Wheeler, & Stevens, 2002). Specifically, Williams and Widmeyer (1991) found

that all four dimensions of cohesion were related to athlete satisfaction. Additionally, Carron et al. (2002) performed a meta-analysis to examine the relationship between cohesion and sport performance. Results indicated a moderate positive ( $ES = .66$ ) cohesion-performance relationship.

### **Research Examining the Trust-Cohesion Relationship**

Mayer et al. (1995) have noted there are benefits to facilitating trust that can have positive effects on group performance. Specifically, trust can help develop unity between group members and bring the group closer. Grossman, Weinberg, and Woolworth, (2001) indicated that developing trust is a necessary requirement for developing cohesion.

Thau, Crossley, Bennett, and Sczenzy (2007) examined how trust affects antisocial work behaviors. It was hypothesized that employees' cohesion would mediate trust in senior management in the workplace and antisocial behaviors. This study utilized 325 employees from care giving facilities across the mid-western United States. Participants completed a trust in senior management scale, which was adapted from the Job Description Index (Smith, Kendall, & Hullin, 1969), perceptions of workgroup cohesion (Koy & DeCotiis, 1991), and antisocial work behavior inventory (Bennett & Robinson, 2000). The results showed that perceptions of workgroup cohesion mediated the relationship between trust in senior management and antisocial workplace behaviors. Additional results of the study showed that trust relates to antisocial behaviors indirectly; if a person feels cohesive to their organization/workgroup they are less likely to engage in antisocial behaviors compared to individuals who do not feel cohesive with their organization/workgroup.

Mach, Dolan, and Tzafir (2010) examined the relationship between trust and cohesion in team sports. They hypothesized that trust in the coach would be positively related to cohesion, trust from the athletes would be positively related to cohesion, and that trust in top management would be related to cohesion. Further, it was also predicted that team cohesion would be positively related to performance. Finally, it was hypothesized that cohesion would mediate the relationship between trust and performance. The study included 690 athletes from basketball, handball, indoor football, and roller hockey. Results from the study showed that the relationship between trust in the coach, trust in teammates, and trust in top management and team cohesion were not significant. The relationship between team cohesion and team performance was significant. As well, team cohesion was not found to mediate the relationship between multifaceted trust and team performance. Team cohesion and team trust was found to mediate the relationship between trust in top management and team performance. However, this mediational relationship was not hypothesized. The results of this study may explain that the relationship between trust and performance is not as direct as previously thought. The proposed model from Mach et al. (2010) predicted team cohesion as a mediator between trust and performance. Results of this study found that the direction of the relationship between cohesion, trust, and performance was more complex than previously hypothesized. Trust in management, trust in the coach, and trust in the players were all thought to have the same relationship with regards to cohesion and performance. It may be the case that these trust relationships have different dynamics with regards to cohesion. With regards to the measurements of trust, a potential shortcoming was the personal characteristics of the leaders were not included in the

conceptualization of trust. Since the researchers were examining trust from three different sources, it may have been useful to examine the factors that influence trust in management, coaches, and players, as they may differ from one another.

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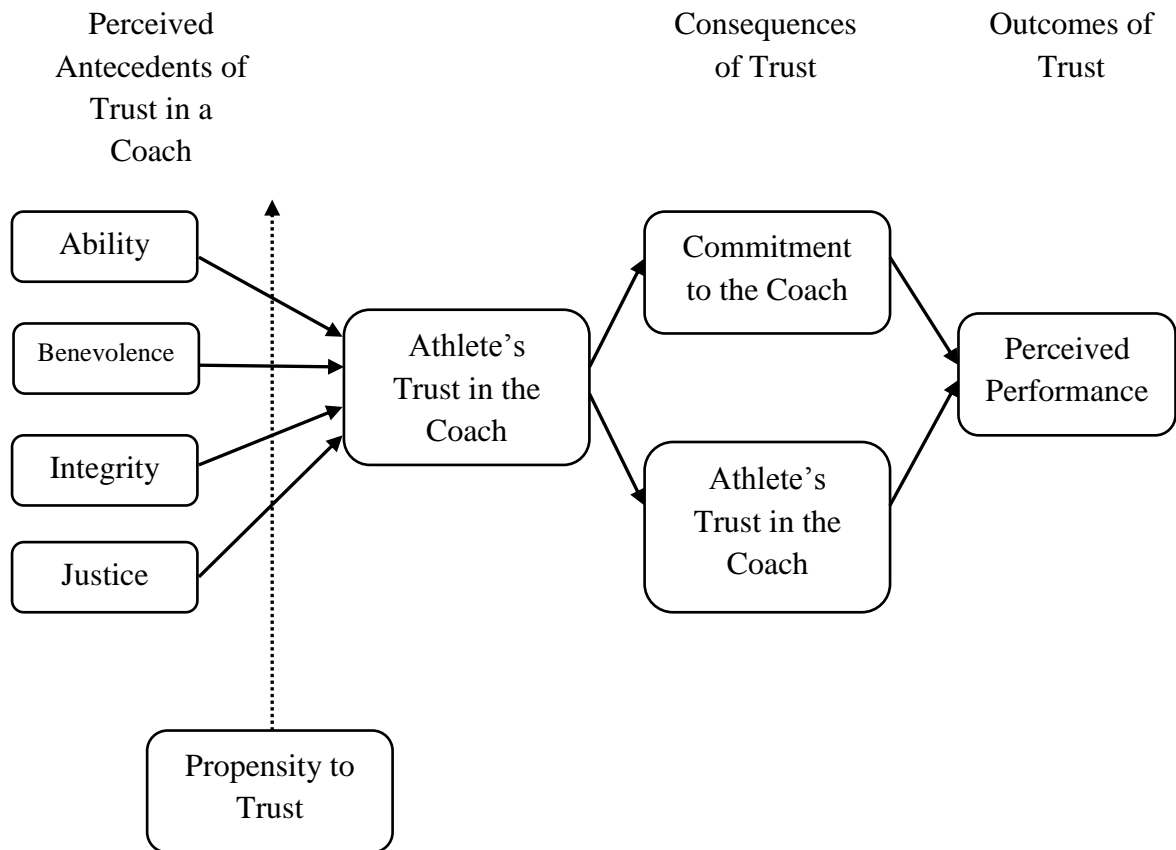
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## FIGURES

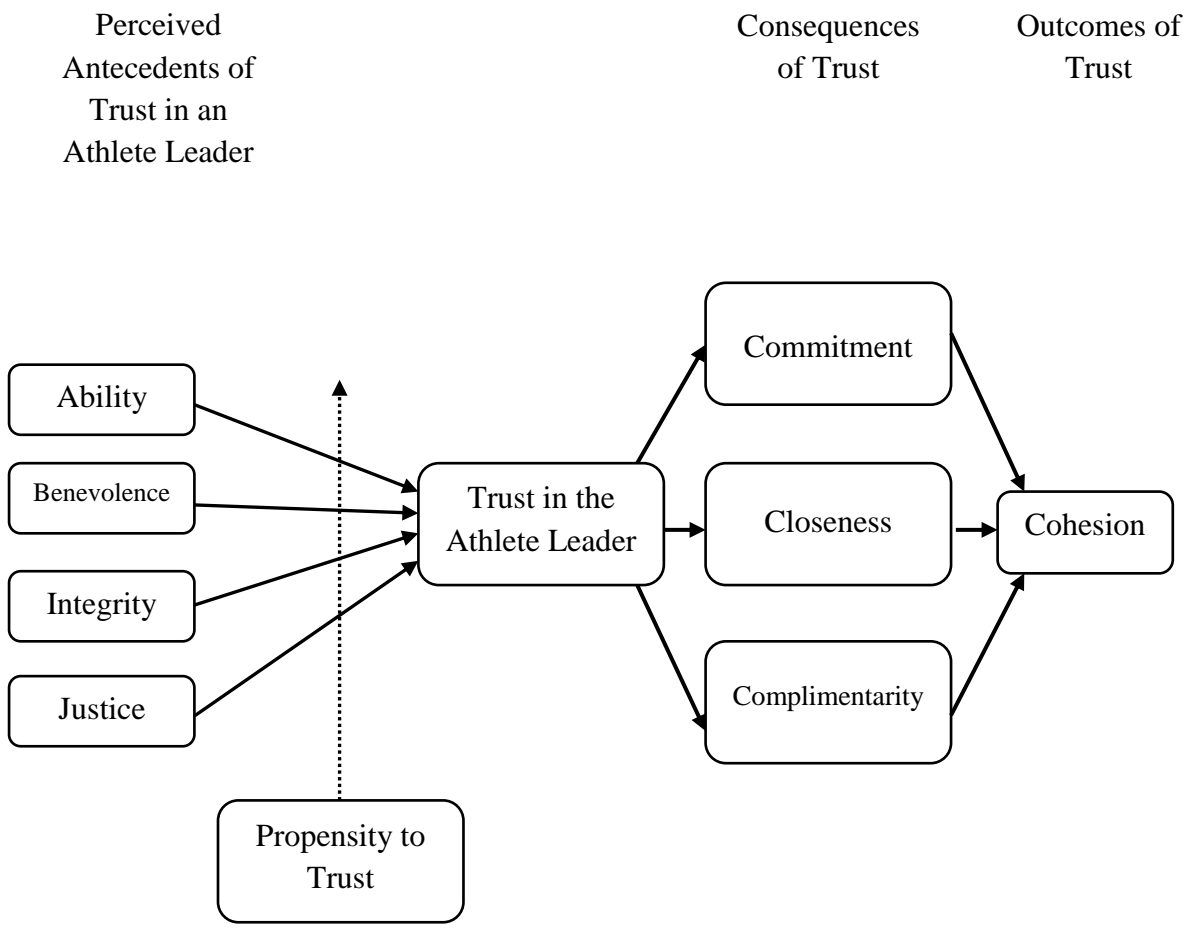
Figure 1



Adapted from:

Zhang, Z. (2004). *Trust in leadership in sport: Its antecedents and its consequences*. Ohio State University.

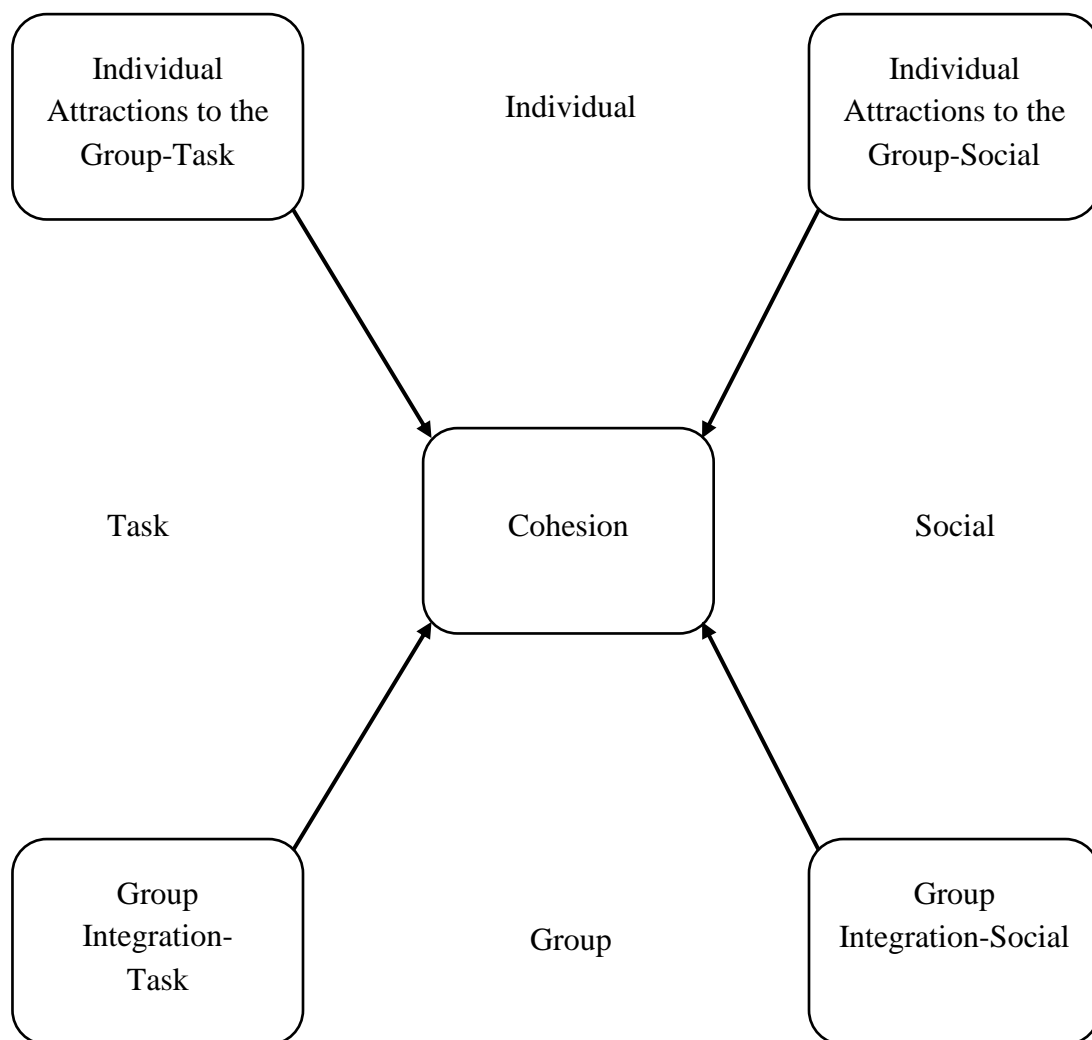
Figure 2



Adaped from:

Zhang, Z. (2004). *Trust in leadership in sport: Its antecedents and its consequences*. Ohio State University.

Figure 3



Adapted from:

Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of Sport Psychology*, 7, 244-266.





## APPENDICES

## APPENDIX A

## Demographic Information

**Your background information:**

Age \_\_\_\_\_ yrs. \_\_\_\_\_

Gender:      Male       Female 

Current sport (e.g., volleyball, soccer): \_\_\_\_\_

Number of years playing the sport: \_\_\_\_\_

Number of years with current team: \_\_\_\_\_

## Appendix B

## Trust in Athlete Leadership

(Zhang, 2004)

Using the following scale, please circle a number from 1-7 to indicate your level of agreement with each of the following statements regarding teammates you view as your ATHLETE LEADER.

1. My athlete leaders are willing to go out of their way to help me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

2. My needs and desires are very important to my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

3. My athlete leaders would not knowingly do anything to hurt me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

4. My athlete leaders really look out for what is important to me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

5. My athlete leaders are concerned about my welfare

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

6. My athlete leaders are very capable of performing their leadership roles

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

7. My athlete leaders have special abilities that can increase our performance

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

8. My athlete leaders have knowledge about the work that needs to be done

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

9. I feel very confident about my athlete leaders' skills

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

10. My athlete leaders are known to be successful at the things they try to do

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

11. My athlete leaders are able to suppress personal biases

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

12. My athlete leaders reward teammates based on their contributions

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

13. My athlete leaders appreciate the work done by each teammate

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

14. My athlete leaders try to be fair in dealings with other teammates

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

15. My athlete leaders have a strong sense of justice

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

16. I never have to wonder whether my athlete leaders will stick to their words

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

17. Sound principles seem to guide my athlete leaders' behavior

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

18. I like my athlete leaders' values

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

19. My athlete leaders deal with me honestly

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

20. My athlete leaders always tell me the truth

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

21. Most experts tell the truth about limits of their knowledge

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

22. You must be alert or someone is likely to take advantage of you

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

23. Most people can be counted on to do what they say they will do

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

24. One should be very cautious with strangers

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

25. Most people answer questionnaires honestly

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

26. I can freely share my feelings, ideas, and hopes with my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

27. I can talk freely with my athlete leaders about difficulties I am having on this team

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

28. If I had a choice, I wouldn't let my athlete leader(s) have any influence over issues that are important to me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

29. I would be comfortable sharing a problem that was critical to me with my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

30. My athlete leaders would not try to gain an advantage by deceiving other teammates

1	2	3	4	5	6	7
Strongly disagree						Strongly agree



## Appendix C

## CART-Q

(Jowett &amp; Ntoumanis, 2004)

This questionnaire is designed to assess **your relationship with your athlete leaders** on your sport team. Please answer each statement from 1 (strongly disagree) to 7 (strongly agree) depending on your level of agreement. There is no right or wrong answers so please give your immediate reaction. Your honest answers are very important to us.

1. I like my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

2. My athlete leaders like me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

3. I trust my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

4. My athlete leaders trust me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

5. I respect my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

6. My athlete leaders respect me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

7. I appreciate the sacrifices my athlete leaders have experienced to improve their performance

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

8. My athlete leaders appreciate the sacrifices I have experienced to improve performance

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

9. I am committed to my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

10. My athlete leaders are committed to me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

11. I think that my sport career is promising with the guidance from my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

12. My athlete leaders believe that his/her career is promising with me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

13. I am close with my athlete leaders

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

14. My athlete leaders are close to me

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

15. When my athlete leaders lead, I am at ease

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

16. When my athlete leaders lead, they are at ease

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

17. When my athlete leaders lead, I am responsive to their efforts

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

18. The athlete leaders on my team are responsive to my efforts

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

19. When my athlete leaders lead, I am ready to do my best

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

20. My athlete leaders are always ready to do their best

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

21. When my athlete leaders lead, I adopt a friendly stance

1	2	3	4	5	6	7
Strongly disagree						Strongly agree

22. When my athlete leaders lead, they adopt a friendly stance

1	2	3	4	5	6	7
Strongly disagree						Strongly agree











## Appendix E

### Recruitment Email

My name is Geoffrey Hackett and I am currently completing my Master's degree in Sport Psychology at the University of Windsor (Windsor, Ontario). Under the supervision of Dr. Todd Loughhead, I am currently conducting an online study examining how teammate trust in athlete leadership affects cohesion.

With the permission of the University of Windsor Research Ethics Board, I am requesting you to complete my online questionnaire. If you choose to participate in this study, you will complete an online survey examining trust in athlete leadership.

There are no anticipated risks or discomfort associated from participation in this study. Results from the study will allow teams, coaches, and athletes to better understand the concept of trust in athlete leadership, where trust in the leaders of a team can unite the group towards achieving a common goal. Athletes will have the opportunity to reflect on their trust they have in the leaders of their team, and how this trust affects their relationship with these leaders, as well as the impact that trust has on team cohesion.

Participation will take approximately 20 minutes. In addition, each participant will have the option to receive an athlete handbook that outlines mental skills athletes can use to improve and maintain athletic performance. Individual comments and information provided by the participants will not be shared.

Participants can access the online survey at a secure website by copying and pasting the following web address into their browser:

Web address: <http://uwindsor.fluidsurveys.com/s/trustinathleteleadership/>

Your assistance and cooperation with this research is greatly appreciated. Please feel free to contact me via email ([hackettg@uwindsor.ca](mailto:hackettg@uwindsor.ca)) or telephone (519-253-3000 ext. 4997) with any questions, comments, and feedback you may have. I look forward to hearing back from you.

Thank you in advance for your help.

Sincerely,

Geoffrey Hackett, M.H.K. candidate

## VITA AUCTORIS

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