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Investigating the Relationships Among Peer Athlete Mentor Leadership Behaviours, Mentoring Functions, and Perceptions of Satisfaction

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Investigating the Relationships Among Peer Athlete Mentor Leadership Behaviours, Mentoring Functions, and Perceptions of Satisfaction

By

Matt D. Hoffmann

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 of Human Kinetics at the University of Windsor

Windsor, Ontario, Canada

2013

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July 23, 2013
DECLARATION OF ORIGINALITY

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication.

I certify that, to the best of my knowledge, my thesis does not infringe upon anyone’s copyright nor violate any proprietary rights and that any ideas, techniques, quotations, or any other material from the work of other people included in my thesis, published or otherwise, are fully acknowledged in accordance with the standard referencing practices. Furthermore, to the extent that I have included copyrighted material that surpasses the bounds of fair dealing within the meaning of the Canada Copyright Act, I certify that I have obtained a written permission from the copyright owner(s) to include such material(s) in my thesis and have included copies of such copyright clearances to my appendix.

I declare that this is a true copy of my thesis, including any final revisions, as approved by my thesis committee and the Graduate Studies office, and that this thesis has not been submitted for a higher degree to any other University or Institution.
The purpose of the present study was twofold. The first purpose was to examine the relationship between peer athlete mentor transformational and transactional leadership behaviours and protégé receipt of Vocational and Psychosocial mentoring functions. The second purpose was to examine the association between peer athlete mentoring functions and protégé satisfaction. The sample comprised 272 varsity athletes. Results of structural equation modeling showed that the transformational leadership behaviours of Inspirational Motivation, Democratic Behaviour, and Social Support were positively related to Psychosocial mentoring. Further, the transformational leadership behaviours of Intellectual Stimulation and Social Support were positively associated to Vocational mentoring. In terms of transactional leadership behaviours, Positive Feedback was positively related to Psychosocial mentoring, while Contingent Reward was positively associated to Vocational mentoring. Additionally, the leadership behaviour of Training and Instruction was positively related to Vocational mentoring. Finally, the results showed that Psychosocial mentoring was positively related to protégé satisfaction.
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RESEARCH ARTICLE

Introduction

Several researchers have highlighted the fact that the empirical examination of mentoring in sport is scarce (Bloom, Durand-Bush, Schinke, & Salmela, 1998; Jenkins, 2013). In particular, the peer-to-peer mentoring that occurs between athletes has yet to be studied in the sport psychology literature. However, mentoring has been found to be related to numerous benefits in organizational contexts showing that mentored individuals experience greater job satisfaction (Weaver & Chelladurai, 2002), receive higher salaries (Chao, Walz, & Gardner, 1992), have increased intentions to remain with their current organization (Viator & Scandura, 1991), and report a greater willingness to mentor others in the future (Ragins & Cotton, 1993) compared to non-mentored individuals. Mentoring is defined as a process in which a more experienced and knowledgeable individual (i.e., the mentor) acts as a role model, provides support and guidance to a novice (i.e., the protégé), and assists in that individual’s development (e.g., Ragins & Cotton, 1999; Weaver & Chelladurai, 1999). The mentoring relationship between the mentor and protégé can either be formal or informal in nature. Formal mentoring relationships are characterized by the assignment of members (i.e., mentor and protégé) to the relationships through their organizations (Ragins, Cotton, & Miller, 2000); whereas informal mentoring relationships are unstructured and characterized by the mutual identification of chemistry and trust between mentor and protégé (Marshall, 2001).

Mentors in organizational contexts assist their protégé’s through the use of two general types of functions: career functions and psychosocial functions (Kram, 1980). Career functions, also known as vocational functions, are aspects of the relationship that help to facilitate a protégé’s career advancement; while psychosocial functions enhance
the protégé’s professional development and personal growth. Within the organizational literature, these two functions have been operationalized primarily using inventories developed by Noe (1988), Ragins and McFarlin (1990), and Scandura (1992). The Noe inventory measures the two general functions of vocational and psychosocial, while Scandura’s scale assesses a vocational, psychosocial, and role modelling function. In contrast, the Ragins and McFarlin inventory, known as the Mentor Role Instrument (MRI), assesses five dimensions related to the vocational functions and six dimensions associated with the psychosocial functions. In particular, the vocational functions assessed by the MRI include sponsorship (nomination for desirable opportunities/promotions), exposure-and-visibility (assignment of responsibilities to develop relationships with figures of higher stature), coaching (knowledge of how to accomplish objectives and achieve career aspirations), protection (shielding from potentially damaging contact with senior individuals), and challenging work assignments (appointment of tasks to acquire competencies). The psychosocial functions measured by the MRI include role modelling (exhibiting desirable values and behaviours), acceptance-and-confirmation (encouraging risk taking that will not lead to rejection should it result in mistakes), counselling (sounding board for personal concerns), friendship (social interactions and support), social (socializing with the mentor outside of work), and parent (mentor serving as a parent figure to the protégé).

In general, research in organizational contexts has examined mentoring from the protégé’s point of view. In particular, one line of research has compared the benefits associated with informal and formal mentoring approaches by examining protégés’ perceptions of the mentoring functions received from mentors (e.g., Chao et al., 1992; Fagenson-Eland, Marks, & Amendola, 1997). This body of research has shown that
protégés in informal mentoring relationships receive more vocational functions, but equal amounts of psychosocial functions, compared to those in formalized relationships (Allen, Day, & Lentz, 2005; Chao et al., 1992; Scandura & Williams, 2001). In contrast, there is also evidence suggesting that informally mentored protégés report more psychosocial functions, yet no difference in terms of vocational functions, compared to protégés engaged in formal relationships (Fagenson-Eland et al., 1997; Sosik, Lee, & Bouquillon, 2005). In a study which used the MRI (Ragins & McFarlin, 1990) with a sample of 614 protégés from various occupations (e.g., journalists, engineers), Ragins and Cotton (1999) found that protégés in informal relationships received significantly more mentoring across all five vocational functions and across four of the six psychosocial functions (i.e., friendship, social, role model, and acceptance). Further, protégés in informal relationships were significantly more satisfied with their mentors and had significantly higher salaries than those in formal mentoring relationships. Although the findings from this body of literature have been unequivocal they do reveal consistent benefits to being informally mentored when compared to a formal mentoring approach.

Although there is some evidence to suggest that informal mentoring relationships are more beneficial than formal mentoring relationships (Chao et al., 1992; Eby & Allen, 2002; Ragins & Cotton, 1999), some authors have alluded to the necessity of instituting a formalized mentoring approach (e.g., Carruthers, 1993; Roberts, 2000; Zey, 1985). Roberts (2000) argued that mentoring relationships that occur by serendipity (i.e., informal), although perhaps beneficial to the protégé, rarely satisfy an organization’s needs. Similarly, Carruthers (1993) opined that a lack of a formalized structure surrounding informal mentoring can reduce opportunities for protégés to be involved in mentored relationships. In an attempt to determine whether a formal or informal
mentoring relationship is most advantageous, Ragins et al. (2000) examined satisfaction with a mentoring relationship and its association with protégés’ positive work attitudes. Results showed that satisfaction with a mentoring relationship had a stronger effect on positive work attitudes than whether the relationship was formal or informal in nature.

Although mentoring research has been associated within the field of organizational psychology, researchers (e.g., Miller, Salmela, & Kerr, 2002; Noe, 1988; Perna, Zaichkowsky, & Bocknek, 1996) have argued the functions of mentoring are applicable to a wide variety of areas including sport. For instance, in a sample of intercollegiate athletes, Perna et al. (1996) found that both vocational and psychosocial mentoring functions were positively associated with athletes’ scores pertaining to comfort with expressing emotions and committing to relationships.

While peer-to-peer mentoring amongst athletes has not been a focus of research in sport psychology, research has examined mentoring in relation to the development of coaches primarily through qualitative methodologies (e.g., Bloom et al., 1998; Jones, Armour, & Potrac, 2003). Using a semi-structured interview format, Bloom et al. (1998) investigated the importance that mentoring had on the development of 21 current and former Canadian Olympic and university team sport coaches. The results showed that the coaches were strongly influenced by mentors (coaches that they had apprenticed with earlier in their coaching career or as an athlete). They received not only tactical and technical skills but also their mentors’ philosophies, values and beliefs about coaching. Further, these coaches expressed that finding a mentoring relationship was the result of identifying a mentor that shared a similar passion for coaching.

It is clear from the coach mentoring literature that coaches in sport develop their leadership skills via the mentoring they receive from other coaches (Bloom, Salmela, &
Schinke, 1995; Gould, Giannini, Krane, & Hodge, 1990; Jones et al., 2003). However, researchers (e.g., Loughead & Hardy, 2005) have recently suggested that athletes are another source of leadership contained within sport teams. This construct has been labeled as athlete leadership and is defined as an athlete who influences teammates towards a common goal (Loughead, Hardy, & Eys, 2006). Recent research findings have shown that one reason why coaches selected an athlete as a leader for their team was the belief that the athlete possessed the leadership behaviours that could be used to mentor younger teammates (Bucci, Bloom, Loughead, & Caron, 2012). Similarly, Voelker, Gould, and Crawford (2011) found that the majority of high school sport captains believed their leadership skills were used to mentor teammates. Further, research with athlete leaders has shown that their leadership behaviours are positively related to a variety of constructs such as collective efficacy (Price & Weiss, 2011), and team cohesion (Callow, Smith, Hardy, Arthur, & Hardy, 2009; Vincer & Loughead, 2010).

This begs the question as to whether there would be any benefit for athletes serving as mentors to use leadership behaviours while mentoring teammates. The answer appears to be yes given research in organizational psychology (e.g., Bass, 1998; Yukl, 1994) has shown that more effective mentors use a variety of leadership behaviours while mentoring their protégés. For instance, Godshalk and Sosik (2000) examined the relationship between protégés’ perceptions of mentors’ transformational leadership behaviours (i.e., concerned with building relationships with followers by displaying support and stimulating challenge) and protégés’ perceptions of mentoring functions received. The results showed that mentors’ transformational leadership behaviours were significantly and positively correlated with mentoring for both vocational and psychosocial functions. Sosik and Godshalk (2000) expanded upon these results when
they investigated mentors’ self-rated use of leadership behaviours and protégés’
perceptions of mentoring functions received from a full range leadership perspective
(Avolio, 1999). In particular, the authors examined mentors’ use of both transformational
and transactional (i.e., characterized by an exchange between leader and followers that is
contingent upon promises of reward or punishment) leadership behaviours. The results
indicated that both transformational and transactional leadership behaviours were related
to increased protégé perceptions of vocational and psychosocial mentoring functions;
however the relationship was stronger for transformational leadership behaviours.
Nonetheless, the results showed that both types of leadership behaviours displayed by the
mentor are important to the protégé’s perception concerning the effectiveness of the
mentoring functions received.

It is evident that the body of literature on mentoring within sport is limited in
comparison to the domain of organizational psychology despite it being viewed in sport
as an essential part of a coach’s development (Bloom et al., 1998). A particular
shortcoming of mentoring research in sport is that the majority has focused on the coach
as the only source of mentorship. However, anecdotal evidence as well as a content
analysis of 448 Sports Illustrated articles by Cope, Eys, Beauchamp, Schinke, and
Bosselut (2011) found that athletes adopted an informal mentor role within sport teams.
In the same study, the authors sampled 101 varsity athletes and found that the percentage
of players occupying a mentor role ranged from 2.5% in baseball to 33.8% in football.
Consequently, it is important to gain a better understanding of the peer mentoring that
occurs between athletes.

Finally, one outcome that has been related to leadership behaviours in both sport
(e.g., Riemer & Chelladurai, 1995) and business (e.g., Podsakoff, MacKenzie, &
Bommer, 1996), as well as mentoring functions in an organizational setting (e.g., Chao et al., 1992) is satisfaction. With regards to sport, it is believed that a satisfied athlete is a prerequisite to optimal performance (Riemer & Chelladurai, 1998). This is not surprising given that individual job satisfaction has been shown to be positively related with individual job performance in several organizational contexts (Petty, McGee, & Cavender, 1984). In addition, athlete satisfaction has been shown to be related to maintained sport participation (Boiché & Sarrazin, 2009) and is viewed as a key variable in frameworks such as the Multidimensional Model of Leadership (Chelladurai, 1978) and Carron’s (1982) conceptualization of cohesion. Insofar as the relationship between mentoring functions and satisfaction is concerned, research in the organizational psychology literature has found positive relationships between both vocational and psychosocial mentoring functions, and protégé job satisfaction (Chao et al., 1992; Weaver & Chelladurai, 2002). Specifically, Chao et al. (1992) found the relationship between vocational functions and job satisfaction was stronger compared to that of psychosocial functions and job satisfaction. Similarly, a meta-analysis examining the strength of the association between mentoring functions and job satisfaction showed a stronger effect size for the vocational-satisfaction relationship compared to the psychosocial-satisfaction relationship (Allen, Eby, Poteet, Lentz, & Lima, 2004).

Thus, the purpose of the current study was twofold with a focus on the mentoring athletes receive from fellow athletes. The first purpose was to examine the relationship between protégés’ perceptions of peer athlete mentor leadership behaviours and mentoring functions received. It was hypothesized that both peer athlete mentor transformational and transactional leadership behaviours would be positively associated with protégé receipt of mentoring functions. However, based on the findings of Sosik and
Godshalk (2000), it was hypothesized that peer athlete mentor transformational leadership behaviours would have a stronger relationship with protégé receipt of mentoring functions than mentor transactional leadership behaviours. The second purpose was to examine the association between protégés’ perceptions of mentoring functions received and protégé satisfaction. The hypotheses concerning this purpose were formulated using research that has examined the influence of mentoring on perceptions of job satisfaction in organizational settings (e.g., Allen et al., 2004). It was predicted that the peer athlete mentoring functions from both vocational and psychosocial perspectives would be positively related to protégé satisfaction. In particular, it was predicted that vocational functions would have a stronger relationship with perceptions of satisfaction than psychosocial functions.

Method

Participants and Procedures

A total of 608 athletes consented to participate in the study. Inspection of the responses revealed that 164 participants either did not answer any questions in the survey or answered very few (i.e., < 20% of the total survey). Consequently, these 164 participants were deleted from the current study. From the remaining 444 participants, 277 were female and 167 were male who were members of both interdependent (e.g., basketball, hockey) and independent (e.g., cross-country, swimming) intercollegiate sport teams. The athletes competed in either Canadian Interuniversity Sport (CIS) or the Canadian Collegiate Athletic Association (CCAA). A total of 367 (83%) athletes competed in the CIS and 77 (17%) athletes played in the CCAA. The mean age of the athletes was 20.59 years ($SD = 2.33$) and they had participated in their sport for 9.85 years ($SD = 4.81$).
The participants were provided with the following definition of a peer athlete mentor that was developed for this study based on the definitions forwarded by Ragins and Cotton (1999) and Weaver and Chelladurai (1999): “A more experienced and knowledgeable teammate who acts as a role model for you, provides support and guidance to you, and assists you in your sport and personal development.” The participants were subsequently asked to reflect on the best peer athlete mentor they had ever had in their sport from either their current team or a past team. Based on this definition, 172 (39%) athletes (106 females and 66 males) reported they had not been mentored. Of these athletes, 144 (84%) competed in the CIS and 28 (16%) played in the CCAA. The mean age of the athletes was 20.76 years ($SD = 2.46$) and they had been involved in their sport for 9.81 years ($SD = 4.89$). Given the purpose of the study was to examine mentored athletes; these participants were excluded from the present study.

As a result, there were a total of 272 athletes (171 females and 101 males) who indicated they were being/had been mentored by another athlete and their data was analyzed in the current study. A total of 223 (82%) of the athletes competed in the CIS, while 49 (18%) competed in the CCAA. Their mean age was 20.48 years ($SD = 2.25$) and they had been involved in their sport for 9.88 years ($SD = 4.76$).

As for the duration of the mentoring relationship, participants reported being mentored for, on average, 2.22 years ($SD = 1.61$). With respect to the difference in age between mentors and protégés, 243 (89%) protégés reported being younger than their mentor, with 22 (8%) protégés indicating they were the same age, and seven (3%) protégés reporting they were older than their mentor. Regarding the gender of mentors and protégés, 97 percent of males were mentored by the same sex, while 90 percent of females had a female mentor. Additionally, 147 (54%) protégés indicated their peer
athlete mentor was from their current team, while 125 (46%) reported they had been mentored on a past team. Finally, of the 235 protégés that provided information regarding their own and their mentor’s playing position, 129 (55%) had the same playing position as their mentor, and 106 (45%) played a different position than their mentor.

Mentored individuals were also provided with definitions regarding the formality of their mentoring relationships. The following definition was provided to describe the nature of formal mentoring relationships:

In order to assist athletes in their development and advancement, some teams have established formal mentoring programs where athletes mentor less experienced teammates. This may be accomplished by the team assigning a peer athlete mentor to a less experienced teammate (or vice versa) or by providing formal opportunities for a less experienced athlete to develop a relationship with a peer athlete mentor.

Further, a definition describing informal mentoring relationships was provided: “These relationships are unstructured and develop spontaneously, without assistance from the team. In other words, informal mentoring occurs naturally because the peer athlete mentor and the less experienced athlete have some type of mutual liking for one another.” These definitions resulted in 244 (90%) athletes indicating they had been informally mentored and 28 (10%) athletes reporting they had been engaged in formal mentoring relationships.

Upon clearance from the University of Windsor’s Research Ethics Board, the CIS was contacted requesting their involvement in the present study. This approach was taken due to ethical obligations which did not permit the author to contact coaches or athletes directly. Thus, athletes were contacted by the CIS (on behalf of the author) via email
requesting their participation in the study. Emails to athletes were accompanied by a description of the study and contained a website link to the online survey (i.e., Fluidsurveys). The survey was emailed to participants during the first week of April, 2013, and a reminder email was sent to the participants during the third week of April, 2013. All athletes had completed their season with their respective teams at the time that the survey was sent to them. Informed consent was implied by the decision on the part of athletes to proceed to the online survey. The entire survey package took participants between 15 to 20 minutes to complete. Upon completion of the survey athletes were afforded the opportunity to enter into a draw to win one of four $50.00 gift cards to an electronics store.

Measures

Mentoring functions. Mentoring functions received from peer athlete mentors was assessed using the Mentor Role Instrument (MRI; Ragins & McFarlin, 1990). The MRI is a 30-item inventory used to assess protégés’ perceptions of mentoring functions in organizational contexts. Research has indicated that the MRI is internally consistent (Ragins & McFarlin, 1990) and demonstrates predictive validity (Ragins & Cotton, 1999). The MRI is a 33-item inventory that measures 11 mentor functions. Each of these functions contains three items and the stem preceding the items reads “My mentor.” For the purpose of the current study, the stem was changed to “My peer athlete mentor” and some items were modified to reflect a sport environment. The 11 mentor functions in the MRI are divided into two general categories: vocational functions and psychosocial functions. Vocational functions are the aspects of the relationship that help to enhance a protégé’s career advancement and are comprised of five specific functions: Sponsor, Coach, Protect, Challenging Assignments, and Exposure. The Sponsor function assesses
the degree to which the mentor actively nominates the protégé for desirable opportunities or promotions (e.g., “Helps me attain a desirable status within my team”). The Coach function examines the extent to which the mentor enhances the protégé’s knowledge of how to navigate effectively, accomplish objectives, and achieve career aspirations (e.g., “Suggests specific strategies for achieving my playing aspirations”). The Protect function assesses the degree to which the mentor shields the protégé from potentially damaging contact with various individuals within the team (e.g., “Protects me from those who are out to get me”). The Challenging Assignments function examines the extent to which the mentor appoints tasks to the protégé, which enables the protégé to acquire particular competencies and experience (e.g., “Provides me with challenging tasks”). Finally, the Exposure function assesses the degree to which the mentor assigns responsibilities which allow the protégé to develop relationships with figures of higher stature within the team (e.g., “Helps me be more visible in the team”).

The other general category of mentoring, psychosocial functions, are the aspects of the relationship that help to enhance a protégé’s professional and personal growth both inside and outside the organization/team and are composed of six specific functions: Friendship, Role Model, Counselling, Acceptance, Social, and Parent. The Friendship function examines the degree to which the mentor engages in social interactions with the protégé that result in enjoyable exchanges regarding sport and life experiences (e.g., “Provides support and encouragement”). The Role Model function assesses the extent to which the mentor exhibits desirable values, attitudes, and behaviours (e.g., “Serves as a role model for me”). The Counselling function examines the degree to which the mentor enables the protégé to explore personal concerns that may interfere with productivity (e.g., “Serves as a sounding board for me to develop and understand myself”). The
Acceptance function assesses the extent to which the mentor encourages the protégé to take risks that will not lead to rejection should they result in mistakes (e.g., “Accepts me as a competent athlete/teammate”). The Social function examines the degree to which the mentor engages in informal activities with the protégé (e.g., “My athlete mentor and I frequently socialize one-on-one outside the team setting”). Finally, the Parent function, which assesses the extent to which the mentor is viewed as a parent figure, was removed from the inventory for the current study for two reasons. First, it was unlikely that there would be large differences in age between mentors and protégés in the population that was studied. Second, the Parent role was developed by Ragins and McFarlin (1990) for their research on cross-gender mentoring relationships. As the majority of athletes in the current study were members of intercollegiate level teams that were of the same gender it was not deemed necessary to examine this role.

All items are scored on a 7-point Likert scale anchored at 1 (strongly disagree) to 7 (strongly agree). Consequently, scores can range from 1 to 7 with higher scores indicating higher perceptions of mentoring. The items for each role were summed and averaged to yield an average frequency. Ragins and McFarlin (1990) reported that each of the subscales showed acceptable internal consistencies: Sponsor ($\alpha=0.88$); Coach ($\alpha=0.75$); Protect ($\alpha=0.77$); Challenge ($\alpha=0.94$); Exposure ($\alpha=0.84$); Friendship ($\alpha=0.79$); Role Model ($\alpha=0.80$); Counselling ($\alpha=0.66$); Acceptance ($\alpha=0.84$); and Social ($\alpha=0.92$).

**Mentor leadership behaviours.** Leadership behaviours received from peer athlete mentors were assessed using two leadership behaviour questionnaires. First, athletes were asked to complete Callow et al.’s (2009) adapted version of the Differentiated Transformational Leadership Inventory (DTLI; Hardy et al., 2010). As the
DTLI (Hardy et al., 2010) was originally developed for use in a military context, it was more appropriate to use a revised version of the instrument by Callow et al. that assessed athlete transformational and transactional leadership behaviours. This adapted version has shown evidence of factorial, discriminant, and predictive validity (Callow et al., 2009). The inventory is composed of 31 items and measures six dimensions of transformational leadership behaviours and one dimension of transactional leadership behaviour. The transformational dimensions include Inspirational Motivation (4 items), Intellectual Stimulation (4 items), High Performance Expectations (5 items), Appropriate Role Model (5 items), Individual Consideration (4 items), and Fostering Acceptance of Group Goals and Promoting Teamwork (3 items). The transactional dimension is Contingent Reward and contains six items.

For the purpose of the present study, the stem preceding the items was changed from “My team leader/captain” to “My peer athlete mentor” and the some of the items were modified to represent a mentoring relationship. The first transformational dimension, Inspirational Motivation, is the extent to which the mentor inspires the protégé and provides a vision of the future (e.g., “Talks in a way that makes me believe I can succeed”). Intellectual Stimulation concerns the mentor’s ability to challenge the protégé’s assumptions and promote creativity (e.g., “Challenges me to think about problems in new ways”). High Performance Expectations is characterized by the expectation for excellence and high performance on the part of the protégé (e.g., “Insists on only the best performance”). Appropriate Role Modeling is the extent to which the mentor sets good examples for the protégé (e.g., “Is a good role model for me to follow”). Due to the nature of a mentoring relationship, the Individual Consideration and Fostering Acceptance of Group Goals and Promoting Teamwork dimensions were not viewed as
relevant to the current study and were therefore not assessed. Specifically, Individual Consideration indicates the degree to which a leader shows respect and concern for followers’ personal feelings/needs (e.g., “Recognizes that different athletes have different needs”). Inspection of the items for this subscale revealed that their emphasis on the needs of several athletes within a team did not appropriately reflect the context of a mentoring relationship. Further, from a theoretical standpoint, it is likely that a mentoring relationship would be inherently based upon the mentor providing a high degree of individual consideration to the protégé. Additionally, the Fostering Acceptance of Group Goals and Promoting Teamwork dimension, which assesses the degree to which cooperation and goal setting amongst teammates is promoted, was removed for the current study as it was believed that peer mentor would be more likely to focus on a protégé’s individual goal achievement rather than the team’s goals and overall degree of teamwork. Finally, with respect to the transactional dimension, Contingent Reward reflects the mentor’s propensity to provide positive reinforcement when the protégé performs as expected (e.g., “Praises me when I show improvement”).

All items are scored on a 5-point Likert scale anchored at 1 (not at all) to 5 (all of the time). Therefore, scores can range from 1 to 5 with higher scores indicating higher perceptions of athlete mentor leadership behaviors. The items for each dimension were summed and averaged to yield an average frequency. Callow et al. (2009) found that the inventory demonstrated adequate internal consistencies: Inspirational Motivation ($\alpha=.75$); Intellectual Stimulation ($\alpha=.82$); High Performance Expectations ($\alpha=.86$); Appropriate Role Model ($\alpha=.81$); and Contingent Reward ($\alpha=.82$).
The second inventory used to measure the leadership behaviours of peer athlete mentors was the Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1980). The 40-item LSS measures five dimensions of leadership behaviour (Training and Instruction, Positive Feedback, Social Support, Democratic Behaviour, and Autocratic Behaviour) and has been used by researchers (e.g., Loughead & Hardy, 2005; Vincer & Loughead, 2010) to measure athlete leadership behaviours. Previous research with athlete leaders has indicated that the LSS is internally consistent (Loughead & Hardy, 2005) and demonstrates predictive and factorial validity (Vincer & Loughead, 2010). Whereas research using the athlete leader version of the LSS has used the stem “The athlete leader(s) on my team,” the current study used the stem “My peer athlete mentor.” When necessary the items in the LSS were modified to reflect the context of a mentoring relationship.

While the DTLI was specifically designed to measure transformational and transactional leadership behaviours, an examination of the items from the LSS show that they could be transformational and transactional in nature. For instance, the dimension of Training and Instruction contains 13 items that appear to be a combination of transformational and transactional leadership behaviors. This dimension assesses the behaviours of the mentor targeted at improving the athletic performance of the protégé, such as teaching skills and tactics of the sport (e.g., “Explains to me the techniques and tactics of the sport”). The Positive Feedback dimension is composed of five items and measures the extent to which the mentor expresses his/her appreciation and rewards the protégé for good performance (e.g., “Compliments me for my performance”). The items from this subscale appear to be more transactional in nature. The Social Support dimension is composed of eight items and assesses the degree to which the mentor is
engaged in satisfying the interpersonal needs of the protégé (e.g., “Looks out for my personal welfare”). The items from this dimension appear to be more transformational in nature. Similarly, the Democratic Behaviour dimension is composed of nine items and also appears to be more transformational in nature. This subscale measure the extent to which the mentor includes the protégé in the decision making process (e.g., “Asks for my opinion on important matters”). It should be noted that one item from this dimension (i.e., “Lets me decide on the plays to be used in a game”) was deleted as it reflects a coach behaviour that would not be under the control of the peer mentor. Finally, the Autocratic Behaviour dimension comprises five items and assesses the degree to which the mentor is independent in his/her decision making (e.g., “Works relatively independent of me”). However, this subscale was not assessed as it is not: a) a desirable behaviour, and b) reasonable to assume that a peer mentor would purposely engage in this manner with his/her protégé.

All items are scored on a 5-point Likert scale anchored at 1 (never) to 5 (always). Thus, scores can range from 1 to 5 with higher scores indicating stronger perceptions of athlete mentor leader behaviour. The items for the dimensions of mentor leadership behaviours were summed and averaged to determine an average score for each dimension. Vincer and Loughead (2010) reported acceptable internal consistencies using the inventory with athlete leaders: Training and Instruction ($\alpha=.88$); Positive Feedback ($\alpha=.84$); Social Support ($\alpha=.86$); and Democratic Behaviour ($\alpha=.79$).

**Protégé satisfaction.** Protégé satisfaction was assessed using two of the 15 dimensions from the Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998). Specifically, the ASQ is a 56-item inventory that assesses 15 facets of athlete
satisfaction including: Individual Performance (3 items), Team Performance (3 items), Ability Utilization (5 items), Strategy (6 items), Personal Treatment (5 items), Training and Instruction (3 items), Team Task Contribution (3 items), Team Social Contribution (3 items), Ethics (3 items), Team Integration (4 items), Personal Dedication (4 items), Budget (3 items), Medical Personnel (4 items), Academic Support Services (3 items), and External Agents (4 items). It should be noted that protégés were asked to reflect on their level of satisfaction during the time that they were being mentored.

Given that one of the purposes of the present study was to examine the satisfaction of the protégé, two of the dimensions were deemed as relevant to this objective: Individual Performance, and Personal Dedication. More specifically, Individual Performance assesses a protégé’s satisfaction with his/her task performance (e.g., “The improvement in my skill level”), while Personal Dedication measures a protégé’s satisfaction with his/her contribution to the team (e.g., “The degree to which I do my best for the team”). All of the items measuring these two dimensions of satisfaction are measured on a 7-point Likert scale with responses that range from 1 (not at all satisfied) to 7 (extremely satisfied). Thus, higher scores reflect greater perceptions of protégé satisfaction. The items for the dimensions that were used were summed and averaged to yield an average frequency. Riemer and Chelladurai (1998) showed that the ASQ was a psychometrically sound instrument with adequate internal consistency values for Individual Performance ($\alpha=.85$) and Personal Dedication ($\alpha=.78$).

**Data Analysis**

Data screening showed that less than 5% of total data points were missing. Tabachnick and Fidell (2007) noted that it is appropriate to estimate missing values when
less than 5% of data in a set are missing. Therefore, a case mean substitution was employed to replace the missing values. Fox-Wasylyshyn and El-Masri (2005) advocated case mean substitution when using self-report measures, suggesting that items representing constructs are believed to be highly and positively correlated.

Given that the current project had two major hypotheses, and to reduce the number of parameters, the data were examined separately using three models. Specifically, the first model examined the relationship between the leadership behaviours measured by the DTLI and mentoring functions. The second model tested the relationship between the leadership behaviours measured by the LSS and mentoring functions. Finally, the third model examined the association between mentoring functions and protégé satisfaction.

The factorial validity of the DTLI and LSS was assessed using a sequential model testing approach forwarded by Jöreskog (1993). This comprehensive approach involved three model testing phases (Callow et al., 2009). The first phase involved testing separate single latent variable models for each of the five factors in the DTLI, and four factors in the LSS. This process is particularly useful in determining convergent validity and does so by assessing whether the indicators underlying a factor are significant (Anderson & Gerbing, 1998). Assessment of model fit for each single factor model was determined through the examination of several different fit indices. The specific indices used are discussed in subsequent paragraphs. Models that showed misspecification were assessed primarily via the examination of modification indices and standardized residuals. As noted by Anderson and Gerbing (1988), large standardized residuals can be reflective of items that are multidimensional (model either underfitted or overfitted). Consequently, problems items were scrutinized and deleted if their removal could be theoretically
justified. For instance, one item from the High Performance Expectations (HPE) factor, HPE1 (i.e., “Insists on only the best performance”), showed a very large standardized residual with HPE2 (i.e., “Will not settle for second best”). HPE1 was removed due to its implied requirement for only the best performance, which runs counter to the fundamental assumption of transformational leadership (i.e., relationship based versus performance based). As another example, one item from the Appropriate Role Model (ARM) factor, ARM3 (i.e., “Leads by example”), had a large standardized residual with ARM5 (i.e., “Leads by ‘doing’ rather than simply ‘telling’”). Examination of the items revealed that ARM3 fails to provide sufficient detail regarding the specific behaviour that is being modelled. In contrast, ARM5 suggests that the mentor engages physically in a positive behaviour instead of simply vocalising his or her desire for the protégé to behave in a particular way. Based on this theoretical argument, ARM3 was removed from further analysis.

In the second phase, each latent factor was assessed in conjunction with every other factor within its given inventory. That is, a series of pairwise comparisons were conducted for all of the factors within the DTLI and LSS, respectively. The purpose of this phase was to detect and remove any items showing ambiguity between latent factors (Anderson & Gerbing, 1988). Cross-loading of items between latent factors was determined through the examination of model fit, modification indices, and standardized residuals. In addition, the discriminant validity of the single latent variable models was assessed by comparing constrained models (where the correlation coefficient between pairs of factors is constrained to 1.00) to unconstrained models. Specifically, discriminate validity was achieved if the results of a $\chi^2$ difference test showed a significantly lower $\chi^2$ for the unconstrained model (Anderson & Gerbing, 1988).
The third phase assessed for the factorial validity of the full measurement models for all four inventories. Unfortunately, each of the 10 factors (i.e., mentoring functions) in the MRI is represented by only three indicators. Thus, in an attempt to retain all of the items, the structural integrity of the 10-factor model was assessed solely at the measurement model level. Similarly, the ASQ was not subjected to such rigorous confirmatory testing due to the fact that it was composed of only two factors. However, the validity of the two-factor structure was also assessed independently prior to its involvement in the structural model. As previously mentioned, three separate structural models were tested to examine the various relationships under investigation.

Factorial validity was determined through analysis of covariance structures with maximum likelihood estimation. This method of analysis was examined using AMOS 21.0 (Arbuckle, 2012). The selection of fit indices to assess model fit was based upon the recommendations of Hu and Bentler (1998), who recommended the use of the Standardized Root Mean Square Residual (SRMR), and to supplement this fit index with one of the ensuing indices: Tucker-Lewis Index (TLI), Bollen’s (1989) Fit Index (BL89), Relative Noncentrality Index (RNI), Comparative Fit Index (CFI), Gamma Hat, McDonald’s Centrality Index (Mc), or Root Mean Square Error of Approximation (RMSEA). Hu and Bentler noted these indices were particularly useful due to their sensitivity in detecting misspecified models. Further, the $\chi^2$ test statistic has historically been considered a primary means for measuring model fit (Biddle, Markland, Gilbourne, Chatzisarantis, & Sparkes, 2001). Consequently, the present study employed $\chi^2$, SRMR, CFI, and RMSEA to assess model fit for the single factor models, pairwise models, measurements models, and structural models.
Hu and Bentler’s (1999) often cited cut-off values were used to determine model fit for the various fit indices. In particular, a SRMR value close to .08 was taken to represent a reasonable fit to the data, with a value equal to or below .06 as good fit. Similarly, a RMSEA value close to .08 was used to indicate reasonable fit, and a value equal to or less than .06 as good model fit. CFI values equal to or exceeding .90 were used to suggest reasonable fit, and values close to .95 or higher to indicate good model fit. Further, a non-significant $\chi^2$ statistic ($p > .05$) was required to confirm the fit between the hypothesized models and the observed data. However, some authors (e.g., Biddle et al., 2001) have cautioned that $\chi^2$ be used as a subjective measure of model fit due to its propensity to reject good models that have large samples. Nonetheless, the $\chi^2$ statistic was examined due to its inclusion in other recent sport psychology studies that have used confirmatory techniques (e.g., Callow et al., 2009; Price & Weiss, 2013).

**Results**

**Descriptive Statistics**

Means, standard deviations, and internal consistencies for all of the variables measured are reported in Table 1. All internal consistencies were above the generally accepted value of .70 (Nunnally & Bernstein, 1994). As noted in detail below, the results of the Confirmatory Factor Analyses showed that the 10 mentoring functions in the MRI were better represented by the two general categories of Vocational and Psychosocial mentoring. Consequently, the Psychosocial function was shown to have a higher mean value compared to the Vocational function. With regard to leadership behaviours, Appropriate Role Model was rated the highest and Social Support was rated the lowest. Finally, the satisfaction facet of Personal Dedication had a higher mean value than the satisfaction facet of Individual Performance.
A summary of the bivariate correlations between all of the variables is displayed in Table 2. With the exception of the relationship between Social Support and Individual Performance, the bivariate correlations among all of the variables were statistically significant. In particular, the Vocational function was most strongly correlated with the leadership behaviours of Inspirational Motivation and Training and Instruction. As for the Psychosocial function, it was most strongly correlated with the leadership behaviours of Social Support, Democratic Behaviour, and Positive Feedback. Of note, there were relatively strong correlations between some of the leadership behaviours measured by the DTLI and some of the leadership behaviours assessed by the LSS. For instance, the transformational leadership behaviours of Intellectual Stimulation and High Performance Expectations, as measured by the DTLI, were highly correlated with the leadership behaviour of Training and Instruction, which is measured by the LSS. In contrast, the transactional leadership behaviour of Contingent Reward, as assessed by the DTLI, was strongly correlated with three leadership behaviours measured by the LSS (Positive Feedback, Democratic Behaviour, and Training and Instruction). The implications of the correlations between leadership behaviours from these two leadership inventories will be commented on in the discussion.

Confirmatory Factor Analyses (Measurement Models)

**Single factor models for DTLI and LSS.**

**DTLI.** An initial examination of the factor loadings and fit statistics for each of the leadership factors showed significant factor loadings \( p < .001 \) and good model fit for the factors of Inspirational Motivation (IM), Intellectual Stimulation (IS), and Contingent Reward (CR). However, the model fit for the remaining two leadership factors of High Performance Expectations (HPE) and Appropriate Role Model (ARM) was not adequate
(see Table 3 for factor loadings and fit statistics). Inspection of the leadership factor of HPE showed that HPE1 (i.e., “Insists on only the best performance”) was problematic. Thus, this item was removed from the factor. Additionally, ARM3 (i.e., “Leads by example”) was identified as a problem item and was removed from its factor. The deletion of items resulted in greatly improved model fit for both the HPE and ARM factor.

**LSS.** As shown in Table 4, the initial examination of the factor loadings and fit statistics for each of the leadership factors measured by the LSS revealed a relatively poor model fit for Training and Instruction (TI), Democratic Behaviour (DB), Social Support (SS), and Positive Feedback (PF). Scrutiny of the leadership factor of TI showed that TI2 (i.e., “Explains to me the techniques and tactics of the sport”) and TI5 (i.e., “Instructs me in the skills of the sport”) were problematic. In terms of the leadership factor of DB, DB5 (i.e., “Lets me set my own goals”) and DB6 (i.e., “Lets me try my own way even if I make mistakes”) were identified as problem items. Further, SS5 (i.e., “Expresses care towards me”), SS6 (i.e., “Encourages me to confide in him/her”), and SS8 (i.e., “Invites me to his/her home”) were deemed problematic within the factor of SS. Finally, PF4 (i.e., “Expresses appreciation when I perform well”) was identified as a problem item within the leadership factor of PF. With the exception of the RMSEA value (.09) for DB, the removal of problematic items from their respective factors resulted in reasonably good model fit for all of the leadership factors. All factor loadings were significant ($p < .001$).

**Pairwise comparisons for DTLI and LSS.**

**DTLI.** In accordance with the suggestions of Jöreskog (1993), each pair of latent variables was assessed for adequacy of goodness of fit. It should be noted that this step occurred after the assessment of fit of single factor models, whereby problem items HPE1
and ARM3 were deleted from their respective factors. Of the 10 pairwise models that were measured, eight revealed reasonable to good model fit statistics. The pairing showing the poorest fit to the data was the combination of IS and ARM. This pairing demonstrated high scores for RMSEA (.09) and SRMR (.09). Examination of the modification indices showed that ARM1 (i.e., “Leads me from the front whenever he/she can”) cross-loaded strongly onto the IS factor. While “leading from the front” may not necessarily reflect an action that one would desire modelling, it may also represent creativity by suggesting that the mentor is willing to lead in his/her own original way. Thus, the removal of the item was considered appropriate due to the ambiguity surrounding its meaning. The deletion of ARM1 improved the model fit not only for the pairing of IS and ARM, but also for each of the additional pairwise models associated with the ARM factor. The other pairing with less than adequate fit was the combination of IM and IS. This pairing showed good model fit for all indices except RMSEA (.09). Scrutiny of the modification indices showed no apparent justification for the removal of items from these two factors. As a result, the full model was tested with nine of the 10 pairwise combinations showing very good model fit.

**LSS.** The model fit of each possible pairwise combination of latent factors was also assessed for the behaviours measured by the LSS. Problem items TI2, TI5, DB5, DB6, SS5, SS6, SS8, and PF4 were not included in this stage of analysis due to their removal during the examination of single factor models. Each of the six pairwise combinations showed acceptable model fit statistics resulting in no additional modifications prior to running the full model.

**Full model for DTLI, LSS, mentoring functions, and protégé satisfaction.**
**DTLI.** After the removal of problems items HPE1, ARM1, and ARM3, the full model was run and showed a reasonably good fit: $\chi^2 (179) = 366.72, p < .05$, RMSEA = .06, SRMR = .05, and CFI = .93. Factor loadings ranged from .55 to .89 and were significant ($p < .001$). Additionally, the discriminant validity of the individual leadership factors was established as all 10 of the unconstrained pairwise models had a significantly lower $\chi^2$ compared to the constrained models.

**LSS.** The deletion of unreliable items TI2, TI5, DB5, DB6, SS5, SS6, SS8, and PF4 resulted in a model that fit the data reasonably well: $\chi^2 (290) = 623.96, p < .05$, RMSEA = .06, SRMR = .06, and CFI = .93. All factor loadings were significant ($p < .001$) and ranged from .63 to .92. Each of the six unconstrained pairwise models demonstrated a significantly lower $\chi^2$ than the constrained models, thus indicating that the discriminant validity of the individual leadership factors was achieved.

**Mentoring functions.** The initial analysis of the 10-factor model resulted in a covariance matrix that was not positive definite. Further inspection of the correlations among mentoring factors showed that four of the Vocational factors (Sponsor, Coach, Protect, Exposure) were strongly correlated with one another ($r = .78 - .96$). In addition, some of the Psychosocial factors were highly correlated (e.g., Friendship and Acceptance). Based on the results, and recommendations made by Byrne (2010), a second-order factor model was tested, with 10 first-order factors (i.e., mentoring functions) and two second-order factors (i.e., Vocational and Psychosocial). From a theoretical standpoint, the decision to test a higher-order factor model (and thereby preserve all of the individual mentoring functions) was more appropriate than simply collapsing several factors together without justification. The results of the second-order
factor model revealed a relatively poor fit to the data: $\chi^2 (394) = 1071.09, p < .05$, RMSEA = .08, SRMR = .08, and CFI = .86.

Scrutiny of the items showed that for the first-order mentoring factor of Counselling (C), C3 (i.e., “Guides my sport development”) was cross-loading heavily onto the higher-order Vocational factor. Theoretically, the emphasis on sport development could suggest it is more of a task-related (i.e., Vocational) function, although the item is intended to represent an individual’s personal development (i.e., Psychosocial function). Further examination of the other two indicators for the Counselling factor showed that both cross-loaded onto several other first-order factors. Consequently, it was deemed reasonable to remove the entire subscale. The deletion of the Counselling factor, along with problem items from the first-order Role Model factor (RM3; “Is someone I identify with”) and first-order Challenging Assignments factor (CA3; “Gives me tasks that require me to learn new skills”) resulted in a model that had improved fit: $\chi^2 (258) = 533.99, p < .05$, RMSEA = .06, SRMR = .06, and CFI = .93 (see Table 5 for first and second-order factor loadings).

Protégé satisfaction. The two-factor model of Individual Performance and Personal Dedication revealed a very good fit, with factor loadings ranging from .68 to .85 and $\chi^2 (12) = 25.88, p < .05$, RMSEA = .06, SRMR = .03, and CFI = .98.

Structural Equation Modeling (Structural Models)

DTLI and mentoring functions. It was hypothesized that both peer athlete mentor transformational and transactional leadership behaviours would be positively related to mentoring functions. Further, it was hypothesized that the transformational leadership behaviours would be more strongly related to the mentoring functions compared to the transactional leadership behaviours. Consequently, the first model was
saturated and examined the influence of mentor transformational and transactional leadership behaviours on the two higher-order factors of Vocational and Psychosocial mentoring. Subsequent to the deletion of non-significant pathways, the model showed a reasonable fit to the data: $\chi^2 (679) = 1298.47, p < .05$, RMSEA = .05, SRMR = .06, and CFI = .90. All factor loadings were significant ($p < .001$). Results showed that the transformational leadership behaviour of Inspirational Motivation was positively related to protégé receipt of Psychosocial mentoring. Further, the transformational leadership behaviour of Intellectual Stimulation, and the transactional leadership behaviour of Contingent Reward were positively associated to protégé receipt of Vocational Mentoring (Table 6, Model 1). As hypothesized, the transformational leadership behaviours had a stronger relationship to mentoring functions than the transactional leadership behaviour (i.e., Contingent Reward). Overall, the model accounted for 48% of the variance in Psychosocial mentoring, and 43% of the variance in Vocational mentoring.

**LSS and mentoring functions.** Similarly, it was hypothesized that both peer athlete mentor transformational and transactional leadership behaviours would be positively related to mentoring functions. Further, it was hypothesized that the transformational leadership behaviours would have stronger relationships to the mentoring functions compared to the transactional leadership behaviours. Thus, the second model was saturated and examined the effect of different mentor leadership behaviours on the two higher-order factors of Vocational and Psychosocial mentoring. The model, after deletion of non-significant pathways, showed reasonable goodness of fit statistics: $\chi^2 (1193) = 2214.15, p < .05$, RMSEA = .05, SRMR = .06, and CFI = .90. All factor loadings were significant ($p < .001$). The findings indicated that Democratic Behaviour, Positive Feedback, and Social Support had a positive relationship to protégé
receipt of Psychosocial mentoring. Moreover, the results showed that Training and Instruction, as well Social Support, were positively related to protégé receipt of Vocational mentoring (Table 6, Model 2). Taken together, the results partially supported the hypotheses. On the one hand and in relation to Psychosocial mentoring, the leadership behaviours of Democratic Behaviour and Social Support (two behaviours viewed as more transformational in nature) were more strongly related to this mentoring function than the more transactional leadership behaviour of Positive Feedback. On the other hand and in relation to Vocational mentoring, the leadership behaviour of Training and Instruction, which contained a mixture of transformational and transactional items, was more strongly related to this mentoring function than the more transformational leadership behavior of Social Support. The model explained approximately 55% of the variance in both Psychosocial and Vocational Mentoring.

**Mentoring functions and protégé satisfaction.** It was hypothesized that both Vocational and Psychosocial mentoring functions would be positively related to protégé satisfaction with Vocational mentoring being more strongly related. Consequently, in the third saturated model the two higher-order factors of Vocational and Psychosocial mentoring were specified as predictors of protégés’ satisfaction with both Personal Dedication and Individual Performance. After the deletion of non-significant pathways, the model revealed a good fit to the data: $\chi^2 (126) = 242.49$, $p < .05$, RMSEA = .05, SRMR = .05, and CFI = .96. All factor loadings were significant ($p < .001$). Psychosocial mentoring was shown to be positively related to protégé satisfaction with Personal Dedication and Individual Performance, explaining 18% and 6% of the variance respectively (Table 6, Model 3). Examination of the factor loadings showed that the first-order mentoring factors contributing the most to the second-order Psychosocial factor
were Friendship (.95) and Acceptance (.91), followed by Social (.69) and Role Model (.68). Taken together, the results showed partial support for the hypothesis as only Psychosocial mentoring was found to be related to protégé satisfaction.

Discussion

The purpose of the present study was twofold. The first purpose was to examine the relationship between peer athlete mentor leadership behaviours and protégé receipt of mentoring functions. It was hypothesized that peer athlete mentor transformational and transactional leadership behaviours would have positive relationships to mentoring functions received; however it was predicted there would be a stronger relationship with transformational leadership behaviours compared to transactional leadership behaviours. For the most part, this hypothesis was supported with transformational leadership behaviours a stronger predictor of mentoring functions than transactional leadership behaviours. Thus, peer athlete mentors who were concerned with building close and personal relationships with their protégés based on inspirational and stimulating exchanges (transformational), and who also offered praise or rewards contingent on the protégé’s performance (transactional), had protégés who felt they received more mentoring targeted at improving their sport (Vocational) and personal development (Psychosocial). These findings are congruent with Sosik and Godshalk (2000) who reported that protégés in organizational contexts received elevated levels of mentoring functions when their mentors used transformational and transactional leadership behaviours. Further, the results are somewhat consistent to those of Sosik and Godshalk in that they typically showed stronger relationships between transformational leadership behaviours and mentoring functions compared to transactional leadership behaviours and mentoring functions. Thus, it would appear that a mentor transactional style of leadership
that emphasizes promises of reward or punishment is beneficial to a protégé’s
devvelopment, yet does not carry the same influence as a more nurturing and supportive
transformational approach. In fact, the finding that transformational leadership behaviours
generally showed stronger associations to mentoring functions is not surprising given that
they are viewed as the most effective form of leadership within the Full Range Model of
Leadership (Avolio, 1999).

The present study also extended research from organizational psychology by
assessing the individual leadership behaviours within transformational and transactional
leadership. While previous research (i.e., Godshalk & Sosik, 2000; Sosik & Godshalk,
2000) assessed transformational and transactional leadership in global terms, the current
study delineated between specific transformational and transactional leadership
behaviours as measured by the DTLI and LSS. With respect to the DTLI, the
transformational leadership behaviour of Inspirational Motivation was related to
Psychosocial mentoring. It is possible that providing an inspiring vision of the future
fosters increased trust and a greater bond between the mentor and protégé, which satisfies
the psychosocial aspect of mentoring and enables the protégé to view the mentor as a
person he/she would like to become (Kram, 1988). In addition, both the transformational
behaviour of Intellectual Stimulation and the transactional behaviour of Contingent
Reward were related to Vocational mentoring. Intellectual Stimulation focuses on
challenging a protégé to view obstacles in sport differently, and this promotion of
creativity could theoretically affect the task-related aspects of mentoring which underlie
the Vocational function. Given the items for Contingent Reward focus exclusively on
performance, it is not surprising that a mentor’s use of this leadership behaviour would
relate to the protégé receiving increased levels of mentoring designed to improve their
development in sport.

In terms of the LSS, the more transformational leadership behaviours of
Democratic Behaviour and Social Support, and the transactional leadership behaviour of
Positive Feedback showed positive relationships to Psychosocial mentoring. Given that a
goal of transformational leadership is to develop an individual to their fullest potential
(Avolio, 1999), it makes sense that a democratic style of leadership focused on allowing a
protégé to make his/her own decisions would relate to a protégé experiencing elevated
levels of mentoring aimed at personal growth and development. Similarly, it is logical
that a mentor’s use of Social Support would lead to increased protégé receipt of
Psychosocial mentoring as both constructs are inherently socially orientated and geared
towards fulfilling the interpersonal needs of a protégé. Perhaps surprising was the finding
that Positive Feedback, which is heavily contingent upon good performance, showed a
positive relationship to Psychosocial mentoring which is not theoretically concerned with
task achievement. In addition, the behaviours of Social Support (more transformational in
nature) and Training and Instruction (combination of transformational and transactional)
showed positive associations to Vocational mentoring. Whereas the relationship between
a leadership style aimed at teaching the skills and tactics of a sport (i.e., Training and
Instruction) and Vocational mentoring is not unexpected, it is interesting that the socially
orientated behaviour of Social Support was also related to this task-directed function.
This latter result, however, is likely a positive one as mentors who satisfy both the task
and personal development aspects of mentoring tend to have greater interpersonal bonds
with their protégés (Kram, 1988). Taken together it would appear that a variety of
transformational and transactional leadership behaviours (from both the DTLI and LSS) contribute to the Vocational and Psychosocial mentoring that protégés receive.

The second purpose was to examine the association between protégés’ perceptions of mentoring functions received and protégé satisfaction. It was hypothesized that both Vocational and Psychosocial mentoring functions would be positively related to protégé satisfaction. In particular, it was predicted that the Vocational functions would have a stronger relationship with perceptions of satisfaction than Psychosocial functions. The results partially supported the hypothesis showing that only Psychosocial mentoring was positively related to the protégé satisfaction dimensions of Personal Dedication and Individual Performance. That is, protégés reported increased satisfaction with their contribution to their team and their task performance when their mentors provided guidance that focused on personal growth both inside and outside of sport. In contrast to research in organizational contexts (e.g., Allen et al., 2004; Chao et al., 1992; Weaver & Chelladurai, 2002), peer athlete mentors’ use of Vocational mentoring was not associated with increased satisfaction on the part of protégés. However, as noted by Kram (1988), mentoring relationships are affected by the organizational context within which they are situated. Features of a group which can influence individuals’ behaviour include its culture, task objectives, and reward system (Kram, 1988). Thus, based on the structure of sport teams, it is plausible the Vocational aspects of mentoring that impact protégé satisfaction are provided more so by a coach or a formal team captain, whereas the psychosocial elements tend to be exhibited by a peer athlete mentor and therefore tap into a protégé’s level of satisfaction. Additional research is needed to examine this possibility.

Beyond the results that were related directly to the study’s two purposes, there are other findings which shed light on the nature of peer-to-peer mentoring relationships in
intercollegiate sport. For instance, the results showed that approximately 90% of protégés were informally mentored — a ratio notably similar to what has been reported in organizational settings (Chao et al., 1992; Godshalk & Sosik, 2000; Ragins & Cotton, 1999). Given that previous research has highlighted the benefits associated with informal mentoring when compared to formal mentoring (e.g., Allen et al., 2005; Fagenson-Eland et al., 1997; Ragins & Cotton, 1999), the results appear to suggest that protégés in sport are also deriving a benefit from being informally mentored. However, the results also showed that a significant portion (i.e., 39%) of varsity athletes had never been mentored by a teammate. This finding may indicate that athletes and/or coaches are not aware of the benefits associated with peer mentoring relationships.

Another interesting finding concerned the age of mentors and protégés. Although it has been argued that mentors can be younger in age compared to protégés but more experienced in a particular area (Busen & Engebretson, 1999), the results clearly showed that peer athlete mentors were generally older than their protégés — a finding that is in accordance with early theoretical conceptualizations of mentoring relationships (e.g., Kram, 1980). Finally, one feature of a mentoring relationship which is unique to the context of sport is the playing position of mentors and protégés. While it is reasonable to assume that a protégé would seek out a mentor who plays the same position, results showed a relatively even split between those protégés who played the same position as their mentor and those who played a different position. This evidence shows that athletes can be guided by teammates who play the same position or who play a different position.

From an applied perspective the results suggest that peer athlete mentors should use a variety of both transformational and transactional leadership behaviours when supporting their protégés. Moreover, peer athlete mentors should focus on providing a
high level of Psychosocial mentoring in order to increase the degree to which their protégés are personally satisfied. Coaches and sport psychology practitioners may want to consider implementing programs whereby all athletes on teams are provided with information regarding the benefits of peer mentoring. This would involve identifying and teaching the specific leadership behaviours and mentoring functions that should be used by mentors. Another issue concerns the large percentage of athletes that are not receiving any peer mentoring. Is there a way for these athletes to enter a formal mentoring relationship but receive the same benefits as they would in an informal one? In order to derive the benefits of both formal and informal mentoring in sport, the Coaching Association of Canada has endorsed a system known as facilitated mentoring for coaches. According to Marshall (2001), this approach involves the facilitated matching of coaches (i.e., mentors and protégés) within a planned mentoring program. The formal design incorporates developmental training for both the mentor and the protégé yet also includes elements of an informal relationship such as a “no-fault” termination clause which allows either party to end a relationship at any time. It may be beneficial to institute a similar approach with athletes on sport teams.

Although this study is the first to examine peer-to-peer mentoring in sport, there are a few limitations which warrant discussion. First, the cross-sectional design of the study does not permit for the assertion of causality. Rather, the relationships between the variables can only be viewed as correlational in nature. Second, confirmatory factor analyses of the MRI revealed that the 10-factor model had poor psychometric properties. Fortunately the higher-order factor model showed reasonable model fit; although achieving model fit came at the expense of deleting a few items, in addition to deleting an entire subscale (i.e., Counselling) which cross-loaded onto its opposing higher-order
factor. Given the limitations of the MRI with a sport population it may be beneficial to develop a sport-specific inventory designed to assess the mentoring functions provided by peer athlete mentors. Third, protégés in the present study were asked to reflect on their best peer athlete mentor and to respond to the questions that followed accordingly. While this design provided valuable information concerning protégés’ experiences with their finest mentor, it did not allow for an examination of the number of mentors (and their various roles) that protégés may have had. Although Godshalk and Sosik (2007) noted that having multiple mentors in organizational settings may lead to different perspectives, these scholars cautioned that having too many sources of mentorship has also been related to negative consequences such as increased role conflict (Baugh & Scandura, 1999). This issue clearly warrants investigation in sport. Another limitation to the current study that presents avenues for future research includes determining which party (protégé or mentor) initiated the mentoring relationship, and why or if the relationship was terminated.

A final aspect of the study that warrants discussion is the strength of the correlations between the leadership behaviours assessed by the DTLI and LSS. Although the individual leadership behaviours in both the DTLI and LSS were separately subjected to extensive statistical analyses, their empirical distinctiveness was not examined in conjunction with one another. In fact, an examination of the bivariate correlations suggests there may be some redundancy between certain subscales from the DTLI and LSS. For instance, the transactional behaviour of Contingent Reward from the DTLI and the transactional behaviour of Positive Feedback from the LSS were highly correlated. Further, the behaviour of Training and Instruction from the LSS showed moderate to strong correlations with the transformational subscales as well as the transactional
subscale from the DTLI. Given the correlations among some of the subscales it may be wise for future researchers to examine the item redundancy between the DTLI and LSS. Although this issue was beyond the scope of the current study, it is clearly a research question worth addressing in the future.

Results of the present study confirm Cope et al.’s (2011) suggestion that some athletes adopt an informal mentor role in sport teams. In addition, the results extend our knowledge of mentoring in sport by showing that peer athlete mentors’ use of both transformational and transactional leadership behaviours positively relates to protégé receipt of Vocational and Psychosocial functions. Further, the extent to which protégés are satisfied with their Personal Dedication and Individual Performance is positively influenced by the Psychosocial mentoring provided by peer athlete mentors. It is hoped that coaches and sport psychology practitioners will use the information gleaned from this study to promote the development of peer-to-peer mentoring relationships in sport teams.
References


Table 1

Descriptive Statistics for Leadership Behaviours, Mentoring Functions, and Protégé Satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Function&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.87</td>
<td>1.09</td>
<td>.92</td>
</tr>
<tr>
<td>Psychosocial Function&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>0.89</td>
<td>.89</td>
</tr>
<tr>
<td>Inspirational Motivation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.34</td>
<td>0.55</td>
<td>.78</td>
</tr>
<tr>
<td>Intellectual Stimulation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.85</td>
<td>0.75</td>
<td>.82</td>
</tr>
<tr>
<td>High Performance Expectations&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.21</td>
<td>0.65</td>
<td>.79</td>
</tr>
<tr>
<td>Appropriate Role Model&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>0.59</td>
<td>.76</td>
</tr>
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<td>Contingent Reward&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>0.64</td>
<td>.87</td>
</tr>
<tr>
<td>Training and Instruction&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>0.77</td>
<td>.93</td>
</tr>
<tr>
<td>Democratic Behaviour&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>0.82</td>
<td>.89</td>
</tr>
<tr>
<td>Social Support&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.58</td>
<td>0.98</td>
<td>.90</td>
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<td>Positive Feedback&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>Individual Performance&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>1.14</td>
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<tr>
<td>Personal Dedication&lt;sup&gt;c&lt;/sup&gt;</td>
<td>6.16</td>
<td>0.82</td>
<td>.84</td>
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</tbody>
</table>

<sup>Note</sup>. Descriptive statistics represent values obtained subsequent to item deletion. <sup>a</sup>Scores for the mentoring functions can range from 1-7. <sup>b</sup>Scores for the leadership behaviours can range from 1-5. <sup>c</sup>Scores for the dimensions of satisfaction can range from 1-7.
Table 2

**Bivariate Correlations Between Leadership Behaviours, Mentoring Functions, and Protégé Satisfaction**

<table>
<thead>
<tr>
<th>Variable</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
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<th>6.</th>
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<td>.45**</td>
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<td>.34**</td>
<td>.19**</td>
<td>.49**</td>
<td>.69**</td>
<td>.46**</td>
<td>.43**</td>
<td>.51**</td>
<td>.14*</td>
<td>.20**</td>
</tr>
<tr>
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<td>.51**</td>
<td>.46**</td>
<td>.27**</td>
<td>.31**</td>
<td>.49**</td>
<td>.39**</td>
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<tr>
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<td>.25**</td>
<td>.30**</td>
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<td>.13*</td>
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<td>.23**</td>
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<td>.60**</td>
<td>.50**</td>
<td>.79**</td>
<td>.19**</td>
<td>.24**</td>
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<td>.57**</td>
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<td>.21**</td>
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<td>PF</td>
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</tbody>
</table>

*Note.* Bivariate correlations represent values obtained subsequent to item deletion. Voc = Vocational Function; Psych = Psychosocial Function; IM = Inspirational Motivation; IS = Intellectual Stimulation; HPE = High Performance Expectations; ARM = Appropriate Role Model; CR = Contingent Reward; TI = Training and Instruction; DB = Democratic Behaviour; SS = Social Support; PF = Positive Feedback; IP = Satisfaction with Individual Performance; PD = Satisfaction with Personal Dedication. *p < .05. **p < .01.
Table 3

*Standardized Factor Loadings and Fit Statistics for Single Factor Models for DTLI*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>$\chi^2$ (df)</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspirational Motivation</td>
<td>.80* (2)</td>
<td>.00</td>
<td>.01</td>
<td>1.00</td>
<td></td>
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<tr>
<td>1. Talks in a way that makes me believe I can succeed</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Talks optimistically about the future</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Talks enthusiastically about what needs to be accomplished</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Expresses confidence that my goals will be achieved</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Stimulation</td>
<td>.79* (2)</td>
<td>.00</td>
<td>.01</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>1. Gets me to re-think the way I do things</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Challenges me to think about problems in new ways</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Shows me how to look at difficulties from a new angle$^a$</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Tries to help me work out how to solve problems$^a$</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Performance Expectations$^b$</td>
<td>34.60 (5)</td>
<td>.15</td>
<td>.05</td>
<td>.94</td>
<td></td>
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<tr>
<td>1. Insists on only the best performance$^c$</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Will not settle for second best</td>
<td>.67 (.60)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Expects me to achieve high standards$^a$</td>
<td>.78 (.82)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Expects a lot from me$^a$</td>
<td>.67 (.68)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Always expects me to do my best$^a$</td>
<td>.76 (.76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Factor Loading</td>
<td>$\chi^2$ (df)</td>
<td>RMSEA</td>
<td>SRMR</td>
<td>CFI</td>
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<td>----------------------------------------------------------------------</td>
<td>----------------</td>
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<td>-----</td>
</tr>
<tr>
<td><strong>Appropriate Role Model</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td>38.37 (5)</td>
<td>.16</td>
<td>.06</td>
<td>.91</td>
</tr>
<tr>
<td>1. Leads me from the front whenever he/she can&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.23 (.20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Is a good role model for me to follow</td>
<td>.75 (.76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Leads by example&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. Always sets a good example</td>
<td>.83 (.87)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Leads by “doing” rather than simply “telling”</td>
<td>.61 (.54)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Contingent Reward</strong></td>
<td>10.36* (9)</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.99</td>
</tr>
<tr>
<td>1. Praises me when I show improvement&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Personally praises me when I do outstanding work</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Always recognizes my achievements&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Gives me positive feedback when I perform well</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Gives me praise when I do good work&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Gives me special recognition when I do very good work</td>
<td>.62</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<sup>Note</sup>. Factor loadings and fit statistics in boldface represent values obtained subsequent to item deletion.<br>
<sup>a</sup>Items that were modified to reflect a mentoring relationship.<br>
<sup>b</sup>Inadequate fit according to Hu and Bentler’s (1999) recommendations.<br>
<sup>c</sup>Items that were deleted following single factor confirmatory factor analyses.<br>

*<sup>p</sup> > .05.
### Table 4

*Standardized Factor Loadings and Fit Statistics for Single Factor Models for LSS*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>$\chi^2$ (df)</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Training and Instruction</strong></td>
<td></td>
<td>318.22 (65)</td>
<td>.12</td>
<td>.06</td>
<td>.89</td>
</tr>
<tr>
<td>1. Sees to it that I work to my capacity</td>
<td>.62 (.63)</td>
<td><strong>136.75 (44)</strong></td>
<td>.08</td>
<td>.03</td>
<td>.95</td>
</tr>
<tr>
<td>2. Explains to me the techniques and tactics of the sport</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Pays special attention to correcting my mistakes</td>
<td>.76 (74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Makes sure that my role on the team is understood</td>
<td>.74 (74)</td>
<td></td>
<td></td>
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<tr>
<td>5. Instructs me in the skills of the sport</td>
<td>.71</td>
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<td></td>
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<tr>
<td>6. Figures ahead on what should be done</td>
<td>.72 (70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Explains to me what I should and should not do</td>
<td>.79 (.77)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. Expects me to carry out my assignments to the last detail</td>
<td>.72 (74)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9. Points out my strengths and weaknesses</td>
<td>.77 (.78)</td>
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<td></td>
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<tr>
<td>10. Gives me specific instructions as to what I should do in</td>
<td>.73 (.73)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>certain situations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Sees to it that my efforts are coordinated</td>
<td>.82 (.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Explains how my contributions fit into the big picture</td>
<td>.68 (.70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Specifies in detail what is expected of me</td>
<td>.81 (.82)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Democratic Behaviour</strong></td>
<td></td>
<td>209.18 (20)</td>
<td>.19</td>
<td>.11</td>
<td>.84</td>
</tr>
<tr>
<td>1. Asks for my opinion on strategies for specific competitions</td>
<td>.80 (.81)</td>
<td><strong>32.77 (9)</strong></td>
<td>.09</td>
<td>.03</td>
<td>.97</td>
</tr>
<tr>
<td>Item</td>
<td>Factor Loading</td>
<td>$\chi^2$ (df)</td>
<td>RMSEA</td>
<td>SRMR</td>
<td>CFI</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>2. Gets my approval on important matters before going ahead$^b$</td>
<td>.83 (.85)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Lets me share in decision making$^b$</td>
<td>.84 (.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Encourages me to make suggestions for ways of developing my skills$^b$</td>
<td>.75 (.74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Lets me set my own goals$^b,c$</td>
<td>.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Lets me try my own way even if I make mistakes$^b,c$</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Asks for my opinion on important matters$^b$</td>
<td>.84 (.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Lets me work at my own speed$^b$</td>
<td>.48 (.45)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Support$^a$</strong></td>
<td></td>
<td>202.67 (20)</td>
<td>.18</td>
<td>.06</td>
<td>.88</td>
</tr>
<tr>
<td>1. Helps me with my personal problems$^b$</td>
<td>.89 (.92)</td>
<td>14.29 (5)</td>
<td>.08</td>
<td>.02</td>
<td>.99</td>
</tr>
<tr>
<td>2. Helps me settle my conflicts$^b$</td>
<td>.85 (.89)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Looks out for my personal welfare$^b$</td>
<td>.74 (.75)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does personal favors for me$^b$</td>
<td>.77 (.76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Expresses care towards me$^b,c$</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Encourages me to confide in him/her$^b,c$</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Encourages close and informal relations$^b$</td>
<td>.79 (.72)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Invites me to his/her home$^b,c$</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Positive Feedback$^a$</strong></td>
<td></td>
<td>67.75 (5)</td>
<td>.22</td>
<td>.05</td>
<td>.92</td>
</tr>
<tr>
<td>1. Compliments me for my performance$^b$</td>
<td>.88 (.88)</td>
<td>2.41* (2)</td>
<td>.02</td>
<td>.01</td>
<td>1.00</td>
</tr>
<tr>
<td>2. Tells me when I do a particularly good job$^b$</td>
<td>.92 (.94)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sees that I am rewarded for a good performance$^b$</td>
<td>.66 (.61)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Expresses appreciation when I perform well$^b,c$</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Factor Loading</td>
<td>$\chi^2$ (df)</td>
<td>RMSEA</td>
<td>SRMR</td>
<td>CFI</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
<td>--------------</td>
<td>-------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>5. Gives me credit when credit is due$^b$</td>
<td>.65 (.62)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Factor loadings and fit statistics in boldface represent values obtained subsequent to item deletion.
$^a$Inadequate fit according to Hu and Bentler’s (1999) recommendations. $^b$Items that were modified to reflect a mentoring relationship. $^c$Items that were deleted following single factor confirmatory factor analyses.

* $p > .05.$
Table 5

First and Second-Order Standardized Factor Loadings for Mentoring Functions

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocational Functions</strong></td>
<td></td>
</tr>
<tr>
<td>Sponsor</td>
<td>.98 (.98)</td>
</tr>
<tr>
<td>1. Helps me attain a desirable status in my team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.57 (.55)</td>
</tr>
<tr>
<td>2. Uses his/her influence in the team for my benefit&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.72 (.74)</td>
</tr>
<tr>
<td>3. Uses his/her influence to support my advancement in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.81 (.82)</td>
</tr>
<tr>
<td>Coach</td>
<td>.94 (.95)</td>
</tr>
<tr>
<td>1. Suggests specific strategies for achieving my playing aspirations&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.46 (.44)</td>
</tr>
<tr>
<td>2. Gives me advice on how to attain recognition in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.78 (.78)</td>
</tr>
<tr>
<td>3. Helps me learn about other aspects of the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.74 (.76)</td>
</tr>
<tr>
<td>Protect</td>
<td>.89 (.89)</td>
</tr>
<tr>
<td>1. “Runs interference” for me in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.62 (.60)</td>
</tr>
<tr>
<td>2. Shields me from damaging contact with important people in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.82 (.83)</td>
</tr>
<tr>
<td>3. Protects me from those who are out to get me</td>
<td>.81 (.80)</td>
</tr>
<tr>
<td>Exposure</td>
<td>.99 (.96)</td>
</tr>
<tr>
<td>1. Helps me be more visible in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.68 (.67)</td>
</tr>
<tr>
<td>2. Creates opportunities for me to impress important people in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.82 (.83)</td>
</tr>
<tr>
<td>3. Brings my accomplishments to the attention of important people in the team&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.77 (.78)</td>
</tr>
<tr>
<td>Challenging Assignments</td>
<td>.65 (.61)</td>
</tr>
<tr>
<td>1. Provides me with challenging tasks&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.69 (.70)</td>
</tr>
<tr>
<td>2. Assigns me tasks that push me into developing new skills</td>
<td>.90 (.90)</td>
</tr>
<tr>
<td>3. Gives me tasks that require me to learn new skills&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Psychosocial Functions</strong></td>
<td></td>
</tr>
<tr>
<td>Friendship</td>
<td>.88 (.95)</td>
</tr>
<tr>
<td>1. Is someone I can confide in</td>
<td>.80 (.80)</td>
</tr>
<tr>
<td>2. Provides support and encouragement</td>
<td>.61 (.63)</td>
</tr>
<tr>
<td>3. Is someone I can trust</td>
<td>.83 (.81)</td>
</tr>
<tr>
<td>Item</td>
<td>Factor Loading</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td>1. My athlete mentor and I frequently have one-on-one,</td>
<td>.71 (.69)</td>
</tr>
<tr>
<td>informal social interactions outside the team setting(^a)</td>
<td></td>
</tr>
<tr>
<td>2. My athlete mentor and I frequently socialize one-on-one</td>
<td>.91 (.91)</td>
</tr>
<tr>
<td>outside the team setting(^a)</td>
<td></td>
</tr>
<tr>
<td>3. My athlete mentor and I frequently get together</td>
<td>.94 (.94)</td>
</tr>
<tr>
<td>informally after competition or practice by ourselves(^a)</td>
<td></td>
</tr>
<tr>
<td>Role Model</td>
<td>.83 (.68)</td>
</tr>
<tr>
<td>1. Serves as a role model for me</td>
<td>.65 (.75)</td>
</tr>
<tr>
<td>2. Represents who I want to be</td>
<td>.74 (.71)</td>
</tr>
<tr>
<td>3. Is someone I identify with(^b)</td>
<td>.81</td>
</tr>
<tr>
<td>Counselling</td>
<td>.89</td>
</tr>
<tr>
<td>1. Guides my personal development(^b)</td>
<td>.71</td>
</tr>
<tr>
<td>2. Serves as a sounding board for me to develop and</td>
<td>.76</td>
</tr>
<tr>
<td>understand myself(^b)</td>
<td></td>
</tr>
<tr>
<td>3. Guides my sport development(^a,b)</td>
<td>.59</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.86 (.92)</td>
</tr>
<tr>
<td>1. Accepts me as a competent athlete/teammate(^a)</td>
<td>.68 (.71)</td>
</tr>
<tr>
<td>2. Thinks highly of me</td>
<td>.84 (.82)</td>
</tr>
<tr>
<td>3. Sees me as being competent</td>
<td>.73 (.73)</td>
</tr>
</tbody>
</table>

*Note.* All factor loadings were significant \((p < .001)\). Factor loadings in boldface represent values obtained subsequent to item deletion. \(^a\)Items that were modified to represent a sport context. \(^b\)Items that were deleted following initial run of second-order factor model.
Table 6

*Standardized Regression Coefficients*

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspirational Motivation → Psychosocial</td>
<td>.69**</td>
</tr>
<tr>
<td>Intellectual Stimulation → Vocational</td>
<td>.51**</td>
</tr>
<tr>
<td>Contingent Reward → Vocational</td>
<td>.22*</td>
</tr>
</tbody>
</table>

Model 2: LSS and Mentoring Functions

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic Behaviour → Psychosocial</td>
<td>.32**</td>
</tr>
<tr>
<td>Positive Feedback → Psychosocial</td>
<td>.27**</td>
</tr>
<tr>
<td>Social Support → Psychosocial</td>
<td>.29**</td>
</tr>
<tr>
<td>Training and Instruction → Vocational</td>
<td>.64**</td>
</tr>
<tr>
<td>Social Support → Vocational</td>
<td>.18**</td>
</tr>
</tbody>
</table>

Model 3: Mentoring Functions and Protégé Satisfaction

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosocial → Personal Dedication</td>
<td>.43**</td>
</tr>
<tr>
<td>Psychosocial → Individual Performance</td>
<td>.25**</td>
</tr>
</tbody>
</table>

*Note.* Non-significant standardized regression coefficients not included in table.

*p < .005. **p < .001.*
LITERATURE REVIEW

The purpose of the proposed thesis is to investigate the relationships among mentor leadership behaviours, mentoring functions, and perceptions of protégé satisfaction. Thus, the literature review will be composed of three sections: (a) athlete leadership, (b) mentoring, and (c) athlete satisfaction.

Athlete Leadership

The construct of athlete leadership will be defined and its characteristics briefly described. Next, two relevant models of leadership pertinent to the proposed study will be discussed in relation to the study of effective leader behaviours. Generally accepted measurement tools and techniques for the assessment of athlete leadership will be subsequently reviewed in depth. Further, pertinent findings in the study of athlete leadership will be explored. This section will conclude with an examination of the burgeoning area of athlete leadership development.

Athlete Leadership Defined

Coaches of sport teams have typically been considered as an important source of leadership (Chelladurai, 1993; Chelladurai & Reimer, 1998). Though coaches undoubtedly assume leadership positions within sport environments, there is another source from which leadership may arise – the athletes. In fact, research has shown that leadership is vital for effective team functioning (Zaccaro, Rittman, & Marks, 2001) and athletic success (Gould, Hodge, Peterson, & Petlichkoff, 1987). Despite these early assertions, research examining athlete leadership has been sparse and sporadic. One plausible reason for the scarcity of athlete leadership research may be due to a lack of definitional clarity surrounding the construct (Loughead, Hardy, & Eys, 2006). In an attempt to remedy this shortcoming, Loughead et al. (2006) defined athlete leadership as
“an athlete occupying a formal or informal role within a team who influences a group of team members to achieve a common goal” (p. 144). This definition was guided by the theoretical arguments offered by Northouse (2001), which highlights some of the key characteristics of leadership. First, leadership is a process that transpires as a result of an interactive event between the leader(s) and the follower(s). Thus, leadership should not simply be constituted as a trait reflecting innate ability. Second, leadership occurs when one individual influences other individuals. Third, leadership occurs within a group setting. Fourth, leadership entails the achievement of a group’s common goals. The Loughead et al. (2006) definition of athlete leadership also highlights two different athlete leadership roles that can exist within sport. The first role mentioned is the formal athlete leader, which is a role purposely prescribed by an organization or team (e.g., team captain). The second role is of the informal athlete leader, which is a role that develops via the interactions and/or communications between group members.

Models of Athlete Leadership in Sport

Despite a plethora of research on leadership in organizational psychology in the seventies, Chelladurai (1984) opined that “the study of leadership in an athletic context has been sporadic and peripheral” (p. 27). Chelladurai and Saleh (1980) argued that leadership in sport was unique from leadership in other fields such as business for several reasons. For example, athletes spend more of their time training than competing, whereas individuals in business settings follow a reverse schedule. The uniqueness of sport is further exemplified by the fact that only one team can win at a particular time, whereas many professionals within a business organization or between business organizations can be successful at the same time. Finally, players on sport teams tend to be assembled for short durations of time (e.g., 6 month season) in comparison to groups in business
environments, who are together on a daily basis over extended periods of time. In line with these assumptions, Chelladurai (1978) proposed a theoretical framework focused on the varying behaviours of sport leaders in different situational contexts. More specifically, Chelladurai (1978) advanced the Multidimensional Model of Leadership (MML), which suggested that leadership is effective when the leader’s behaviours are compatible with the preferences of the team members and the situational requirements.

The MML, as seen in Figure 1, is a linear paradigm composed of antecedents, leadership behaviours, and consequences (Chelladurai, 1993). The antecedents are composed of situational characteristics, leader characteristics, and member characteristics. Situational characteristics pertain to any specific demands of a situation, such as group norms, group goals, or the type of sport. Leader characteristics are those that refer to the leader’s personal attributes, including but not limited to age, gender, and personality. The final antecedent, member characteristics, is composed of a group member’s characteristics, such as maturity level, nationality, and experience in the sport.

The next component of the model, leader behaviour, is considered the throughput of the MLL. Leader behaviour is divided into three possible categories: required behaviour, actual behaviour, and preferred behaviour. The required behaviours are the behaviours in which a leader should engage as determined by both situational aspects as well as team member characteristics. The actual behaviours are those that the leader actually performs or is perceived as performing. Actual behaviours are the result of several influences including leader characteristics, required behaviours, and preferred behaviours. Finally, preferred behaviours are the behaviours that athletes covet from a leader and are affected by situational characteristics as well as member characteristics (Chelladurai, 1993). It is expected that team members will experience the highest level of
performance and satisfaction when the leader behaves in accordance with athletes’ preferences and the needs of the situation (Weinberg & Gould, 2007). In fact, Chelladurai (1978) posited group member performance and satisfaction as two likely outcomes of effective leadership (see Figure 4). To date, the MML has been used as a theoretical framework in several athlete leadership studies (e.g., Bucci, Bloom, Loughead, & Caron, 2012; Dupuis, Bloom, & Loughead, 2006).

Another theoretical framework recently used to examine athlete leadership is transformational leadership, which is encompassed in the Full Range Model of Leadership (FRML; Avolio, 1999). According to the FRML (see Figure 5) effective leadership includes three classifications of leadership behaviours: transformational, transactional, and non-leadership. Transformational leadership is based upon the principle that leaders can develop their followers into leaders. These leaders are concerned with building relationships with followers by displaying support, stimulating challenge, and exhibiting a moral perspective, which can lead to increased trust, commitment, and loyalty in others. Transformational leadership is viewed as the most effective and active form of leadership (Avolio, 1999).

Transactional leadership is characterized by an exchange between leader and followers that is contingent upon promises of reward or punishment (Avolio, 1999). Specifically, these leaders offer inducements for cooperation and good performance, but disciplinary action for lack of compliance. This style is thought to satisfy the interests of followers most of the time and is reasonably effective in producing the leader’s desired level of performance. Transactional leadership can be passive or active and is considered more effective than non-leadership. Finally, individuals who engage in non-leadership behaviours exhibit an absence of leadership. This non-leadership style is characterized by
avoiding responsibility, not caring what happens, and waiting for others’ initiatives (Avolio, 1999). This category of leadership is described as the most ineffective and passive form of leadership (Avolio, 1999).

Taken together, transformational leadership has shown to result in higher levels of cohesion and team efficacy, while transactional leadership is more salient in regards to performance and effort (Hargis, Watt, & Piotrowski, 2011). Not surprisingly, FRML theory proposes that every leader should exhibit both transformational and transactional leadership behaviours to some extent (Avolio, 1999). Lastly, it should be noted that some aspects of the FRML have recently been used to guide research on athlete leadership (e.g., Callow, Smith, Hardy, Arthur, & Hardy, 2009).

**Measurement of Athlete Leadership Behaviours**

The advancement of the MLL (Chelladurai, 1978) gave rise to the development of the Leadership Scale for Sports (LSS; Chelladurai, 1980). The LSS is a questionnaire composed of 40 items that measures five different dimensions of leader behaviour. These dimensions are labelled: Training and Instruction (13 items), Democratic Behaviour (9 items), Autocratic Behaviour (5 items), Social Support (8 items), and Positive Feedback (5 items). Training and Instruction reflects the behaviours of a leader targeted at improving the athletic performance of players, such as teaching skills and tactics of the sport. Democratic Behaviour indicates the degree to which a leader includes others in the decision making process. Autocratic Behaviour reflects the degree to which a leader is independent in his/her decision making. Social Support indicates the degree to which a leader is engaged in satisfying the interpersonal needs of others. Finally, Positive Feedback assesses the degree to which a leader expresses his/her appreciation and rewards others for good performance.
While the LSS was originally developed to measure coaching behaviours, it has been recently employed to assess the behaviours of intercollegiate athlete leaders. Loughead and Hardy (2005) were the first authors to modify the LSS with the purpose of utilizing the inventory to assess athlete leadership. These authors used the same 40 items, however, the stem that preceded each item was altered from “My coach…” to “My peer leader(s)...”, in order to relate the questions to the context of athlete leadership. The computation of Cronbach alpha’s demonstrated acceptable scores: Training and Instruction ($\alpha = .87$); Positive Feedback ($\alpha = .85$); Social Support ($\alpha = .86$); Democratic Behaviour ($\alpha = .81$); and Autocratic Behaviour ($\alpha = .75$).

Vincer and Loughead (2010), in their study examining the relationship between athlete leadership behaviours and team cohesion, conducted a Confirmatory Factor Analysis to assess the factorial validity of the five-factor model (i.e., Training and Instruction, Positive Feedback, Social Support, Democratic Behaviour, and Autocratic Behaviour) measured in this athlete leadership version. The results suggested that the model provided a reasonably good fit ($\text{CFI} = .99$, $\text{TLI} = .98$, and $\text{RMSEA} = .05$) with the data and thus provided evidence of factorial validity with a sample of varsity athletes.

Although originally developed for use in a military context, the Differentiated Transformational Leadership Inventory (DTLI; Hardy et al., 2010) is another measure that has been used recently to study athlete leadership behaviours. The DTLI assesses transformational leadership behaviours consisting of 26 items that measures six dimensions of transformational leadership behaviours and one transactional leadership behaviour. The transformational dimensions are labeled Individual Consideration (4 items), Inspirational Motivation (4 items), Intellectual Stimulation (3 items), Fostering
Acceptance of Group Goals (4 items), High Performance Expectations (4 items), and Appropriate Role Modelling (3 items). Finally, the transactional dimension is labeled Contingent Reward (4 items). The first transformational dimension, Individual Consideration, indicates the degree to which a leader shows respect and concern for individuals’ feelings and needs. Inspirational Motivation is the extent to which leaders inspire others and provide a vision of the future. Intellectual Stimulation concerns a leader’s ability to challenge teammates’ assumptions and promote creativity. Fostering Acceptance of Group Goals assesses the degree to which a leader promotes cooperation and goal setting amongst teammates. High Performance Expectations is characterized by the expectation for excellence and high performance on the part of followers. Appropriate Role Modelling is the extent to which leaders set good examples for teammates. Finally, with respect to the transactional dimension, Contingent Reward reflects the leader’s propensity to provide positive reinforcement when followers perform as expected.

The DTLI’s seven dimensions yielded reasonable Cronbach alpha values ranging from .62 (Inspirational Motivation) to .86 (Contingent Reward). The results of Hardy et al.’s (2010) Confirmatory Factor Analysis also provided evidence of the instrument’s factorial validity: RMSEA = .05, SRMR = .06, CFI = .98, and NNFI = .97).

Research Examining Athlete Leadership

The following section will be divided into three different areas of athlete leadership research: (1) the characteristics of athlete leaders, (2) the quantity of athlete leaders, and (3) athlete leadership behaviours.

Characteristics of athlete leaders. One line of athlete leadership research has focused on identifying the personal attributes of athlete leaders. For example, in their study examining the leadership behaviours of male collegiate soccer and baseball teams,
Yukelson, Weinberg, Richardson, and Jackson (1983) found that players rated high in leadership by their teammates were typically the better and more skilled athletes within their team. The results further showed that these athlete leaders had a higher internal locus of control and were usually upperclassmen (i.e., 3rd and 4th year players). Research by Loughead et al. (2006) on 258 varsity athletes (140 males, 118 females) from seven different sports (e.g., rugby, lacrosse, volleyball) also showed that team leaders were typically third year players and rarely first year players. The findings led these authors to speculate that first year players do not understand their teams’ dynamics and as a result are seldom viewed as leaders.

Another line of research has examined the playing positions of athlete leaders. Early work by Lee, Coburn, and Partridge (1983) suggested that athlete leaders in soccer were more likely to play in centrally located positions. Glenn and Horn (1993), in their study of female soccer players, also found that athletes playing central positions (e.g., center forward, center midfield) scored higher on self and coach ratings of leadership tendencies than their non-central playing teammates. Glenn and Horn argued that leaders are placed in central positions in order to communicate with teammates and to direct play. In contrast, Tropp and Landers (1979) found that with intercollegiate field hockey, athlete leaders played in task independent positions (e.g., goaltenders) rather than in centrally located positions. As such, these authors discounted the notion that “spatial centrality” or “high interaction” influenced an athlete leader’s playing position.

Finally, several studies have also shown that psychosocial characteristics play an important role in predicting athlete leadership. While teammates and coaches tend to associate the emergence of athlete leaders with skill and ability, athlete leaders instead tend to self-rate themselves high in perceived competence (Glenn & Horn, 1993; Moran
& Weiss, 2006). Furthermore, Moran and Weiss (2006) found that athletes rated themselves higher in leadership when they perceived themselves as being accepted by their teammates and believed they had strong friendships on the team. Price and Weiss (2011) found that athlete leaders demonstrated higher levels of intrinsic motivation, perceived collective efficacy, and perceived task and social cohesion. Taken together, the literature suggests that athlete leadership comprises numerous psychological and social characteristics.

**Quantity of athlete leaders.** Research examining the quantity of athlete leaders on sport teams has garnered recent attention (e.g., Crozier, Loughead, & Munroe-Chandler, 2012; Loughead & Hardy, 2005; Loughead et al., 2006). This newly found interest in studying the number of athlete leaders in sport may be attributed to comments made by Glenn and Horn (1993), such that coaches believe only one or two individuals are needed to effectively direct and motivate teammates.

To extend our understanding regarding the quantity of athlete leaders, Loughead and Hardy (2005) asked intercollegiate athletes to list the teammates on their teams that provided leadership. The results showed that 65.1% of participants considered both captains (i.e., formal leaders) and teammates (i.e., informal leaders) as sources of leadership on their teams. Approximately 32.4% of the athletes sampled reported that only team captains were sources of leadership, while 2.5% of athletes indicated that only teammates served as sources of leadership. Insofar as the absolute number of athlete leaders per team is concerned, Loughead and Hardy found that approximately 27% of athletes held a leadership position (formal or informal) within teams.

Given the aforementioned findings, Eys, Loughead, and Hardy (2007) were interested in determining how perceptions of athlete leader dispersion were related to
athlete satisfaction. More specifically, intercollegiate athletes were asked to indicate the task, social, and external leaders within their respective teams. The athletes subsequently responded to particular dimensions of a satisfaction questionnaire. The results showed that athletes were most satisfied with team performance when they perceived that all three leadership functions (i.e., task, social, external) were represented equally by athlete leaders. In sum, teams should attempt to ensure that all three leadership functions are being represented to the same degree.

Though Loughead and Hardy (2005) reported that over one-quarter of players on sports teams occupied leadership roles, it was not clear whether this number reflected the ideal or appropriate number of athlete leaders that a team should contain. To answer this question, Crozier et al. (2012) surveyed varsity athletes (N=104) on their preferences with respect to the quantity of athlete leaders on their teams. The results indicated that participants expressed having high athlete leadership dispersion, approximately 85% of a team, would benefit several group dynamic variables. One of these positive outcomes, labeled team attributes, suggested that optimal leadership dispersion allowed teammates to experience the various leadership approaches of several leaders. Another finding was that athlete leaders helped to clarity teammates’ roles and responsibilities, establish expected group norms, and maintain appropriate group status (i.e., ensuring one person does not hold all the power). Having an optimal number of athlete leaders also helped to increase team unity, direct a team’s goals and objectives, increase team productivity, and enhance communication between leaders and teammates.

**Behaviours of athlete leaders.** Another relatively new area of research related to athlete leadership is the study of athlete leader behaviours. Loughead and Hardy (2005) contributed to this domain when they empirically examined the specific leadership
behaviours of athlete leaders. One purpose of their study was to compare and contrast the behaviours of coaches and athlete leaders. Their sample consisted of 238 Canadian athletes from various levels of competition who completed two versions of the LSS (Chelladurai & Saleh, 1980). In one version, athletes rated the behaviours they perceived of their coaches. In the other version, athletes rated the behaviours they perceived of their athlete leaders. The results of the study revealed some interesting differences between the leadership behaviours of coaches and athlete leaders. First, participants perceived that coaches provided more Training and Instruction and engaged in more Autocratic Behaviour than their athlete leader counterparts. Second, participants perceived that athlete leaders exhibited higher levels of Positive Feedback, Social Support, and Democratic Behaviour than coaches did.

While Loughead and Hardy (2005) examined perceived athlete leader behaviours, Holmes, McNeil, Adorna, and Pricaccino (2008) compared the preferences of intercollegiate male and female athletes in regards to athlete leadership behaviours. The main finding indicated that male intercollegiate athletes preferred Autocratic behaviours from their athlete leaders to a significantly higher degree than did females athletes. Further, no significant gender differences were found for any of the other athlete leadership behaviours measured (i.e., Social Support, Positive Feedback, Training and Instruction, Democratic Behaviour, and Situational Consideration). As a secondary analysis in their study, the authors asked the participants to nominate three athlete leaders on their team and to indicate why they were chosen. Both male and female participants overwhelmingly indicated that “hard work” was the most important factor in their selection of an athlete leader.
With respect to the influence of athlete leadership on perceptions of cohesion, Vincer and Loughead (2010) found that athletes’ perceptions of Social Support and Positive Feedback were positively associated with both task and social cohesion. Furthermore, the results showed that Democratic Behaviour was positively related to task cohesion. Finally, the athlete leader behaviour of Autocratic Behaviour negatively influenced the four dimensions within task and social cohesion. Vincer and Loughead’s findings suggest that, apart from Autocratic Behaviour, the athlete leader behaviours measured by the LSS have a positive impact on cohesion.

The association between athlete leadership and perceptions of cohesion has also been studied from a transformational leadership perspective. Using an adapted version of the DTLI (Hardy et al., 2010), Callow et al. (2009) investigated how the transformational leadership behaviours of team captains influenced the perceptions of cohesion in 309 ultimate Frisbee players from the United Kingdom. The findings suggested that the captains’ leadership behaviours of Fostering Acceptance of Group Goals and Promoting Team Work, Individual Consideration, and High Performance Expectations significantly predicted task cohesion. Moreover, social cohesion was significantly predicted by the leadership behaviour of Fostering Acceptance of Group Goals and Promoting Team Work.

All of the above mentioned studies primarily used quantitative methodologies. However, there is another line of athlete leadership research that has examined leadership behaviours using qualitative methods. Crozier et al. (2012) provided further support that athlete leadership has a positive influence on cohesion. Through an open-ended questionnaire, varsity basketball, volleyball, and hockey players highlighted that formal
and informal athlete leaders engage in behaviours that help their teams to work together, have chemistry, and remain focused on the task at hand.

Through individual semi-structured interviews, Dupuis et al. (2006) also found that six former male hockey captains (i.e., athlete leaders) felt they could promote team chemistry/cohesion by engaging in positive relationships with assistant captains and veterans on the team. The former captains also believed they were responsible for communicating with teammates, leading by example on and off the ice, and setting team norms or rules. In a similar study, Holmes, McNeil, and Adorna (2010) reported findings that were very consistent with those of Dupuis et al. Using a focus group format, student athletes indicated which qualities they felt best suited athlete leaders. The athletes noted that athlete leaders should act as role models, be vocal, trustworthy, and exhibit appropriate interpersonal skills (e.g., being respectful and confident). Interestingly, male athletes stressed the importance of being an experienced leader, while female athletes noted the value in being a sensitive leader. In sum, it would appear that athlete leaders perform a variety of beneficial behaviours.

**Athlete Leadership Development**

Based on the positive findings reported to this point, it would be beneficial for athletes to receive some type of athlete leadership training. Unfortunately, research regarding the development of athlete leaders is sparse. One view regarding the development of athlete leaders posits that leadership qualities evolve when athletes are afforded *opportunities* to lead (Grandzol, Perlis, & Draina, 2010). In their examination of NCAA athletes, these authors found that team members (i.e., non-captains) experienced improvements in leadership practices to a lesser extent than did captains over the course of one season. As such, the authors argued that captains’ leadership practices improved
not as a result of training (because they received none), but rather due to the challenging opportunity in which they were put. Voelker, Gould, and Crawford (2011) found support for this suggestion when 12 of the 13 captains in their study reported they received little to no training for their position. Thus, it would appear that athlete leaders are receiving insufficient leadership training.

Another perspective pertaining to athlete leadership development is that athlete leaders need to be put into decision making situations. In a recent study by Bucci et al. (2012), coaches stated that they developed their athlete leaders by empowering them to make their own decisions. The coaches suggested that “letting their leaders learn on the fly” while providing support, was the only way they would grow and develop.

In an attempt to improve the current state of athlete leadership development, Gould and Voelker (2010) introduced a program aimed at teaching high school captains how to be effective leaders. Over the course of a one-day workshop, current and future captains are taught major components of leadership (e.g., communication, cohesion), instructed how to deal with team problems, and encouraged to ask questions. Participants also receive a captain’s study guide containing leadership lessons and exercises. As Gould and Voelker noted that participants consistently enjoyed the workshop and found it helpful, future researchers and coaches should consider adopting similar leadership programs.

**Mentoring**

In this section of the literature review, the origins of mentoring will be briefly discussed. This will be followed by various definitions and descriptions of mentoring. The characteristics of mentoring, including the mentoring functions and phases of mentoring, will be examined. Next, a conceptual model depicting the numerous factors
involved in the mentoring process will be considered. Following this, research concerned with the measurement of mentoring functions will be presented and discussed. Finally, literature on mentoring in organizational and sport contexts will be explored.

**History of Mentoring**

Merriam (1983) noted that the word *mentor* has its roots in Greek mythology. More specifically, when Odysseus departed on a ten-year journey, he entrusted his son Telemachus to an elder man named “Mentor”. The two developed a father-son relationship as Mentor provided guidance and advice to the young Telemachus. In fact, Telemachus once used Mentor’s wise advice to save himself from death.

**Definitions of Mentoring**

In her review of the mentoring literature, Merriam (1983) contended that “a precise definition of mentoring – at least one that all could agree upon – was not to be found” (p. 162). Although there does not appear to be any gold standard definition of mentoring, several authors have introduced various conceptualizations. For example, Noe (1988a) defined a mentor in the business setting as:

A senior, experienced employee who serves as a role model, provides support, direction, and feedback to the younger employee regarding career plans and interpersonal development, and increases the visibility of the protégé to decision-makers in the organization who may influence career opportunities. (p. 458)

This definition assumes that a mentor is typically older than a protégé. It may, however, be premature to accept this conclusion as a mentor could be younger in age compared to the protégé but more experienced in a particular area (Busen & Engebretson,
1999) or the junior mentor may possess insights that could be useful to the senior protégé (Klasen & Clutterbuck, 2002).

Roberts (2000) advanced a similar definition of mentoring that does not make reference to any age difference between the mentor and protégé: “A formalised process whereby a more knowledgeable and experienced person actuates a supportive role of overseeing and encouraging reflection and learning within a less experienced and knowledgeable person, so as to facilitate that person’s career and personal development” (p. 162). Roberts’ definition explicitly suggests that the mentoring process is a *formal* one. Formal mentoring relationships are characterised by the assignment of members (i.e., mentor and protégé) to the relationships through organizational assistance or intervention (Ragins, Cotton, & Miller, 2000). In addition, Bozeman and Feeney (2008) provided an alternative conceptualization that stressed the *informal* nature of mentoring relationships:

A process for the reciprocal, informal transmission of knowledge, social capital, and psycho-social support perceived by the recipient as relevant to work, career, or professional development; mentoring entails informal communication, usually face to face and over a sustained period of time, between a person who is perceived to have greater relevant knowledge, wisdom, or experience, (the mentor), to a person who is perceived to have less (the protégé). (p. 469)

Informal mentoring relationships are characterised by the unofficial, mutual identification of chemistry and trust between two individuals (Marshall, 2001). In other words, mentors select protégés whom they perceive as younger images of themselves while protégés choose mentors whom they perceive as role models (Ragins et al., 2000).
Insofar as sport is concerned, Bloom, Durand-Bush, Schinke, and Salmela (1998) did not advance a definition per se, but provided a general description of what constitutes mentoring based on the findings of several studies:

Mentoring occurs when there is a trusting relationship between the teacher/coach and the student/athlete, when there is an interest on the part of the coach in the personal development of the athlete, when the coach purposefully allocates his/her time to fulfill the needs of the athlete, and when imitation of behaviour takes place. (p. 268)

**Characteristics of Mentoring**

Research on mentoring has proliferated over the past few decades with more than 500 articles being published in the fields of education and management between the late eighties and late nineties (Allen & Johnston, 1997). According to Bozeman and Feeney (2008), it could be argued that Kram’s (1980) dissertation provided the basis for contemporary research on mentoring. In this dissertation, Kram examined the experiences of protégés and mentors at a large American business. After 18 biographical interviews with both the protégés and the mentors, several essential characteristics of mentoring relationships, termed mentoring functions, were identified.

**Mentoring functions.** According to Kram (1988), the functions provided by a mentor can be divided into two broad categories: career and psychosocial. On one hand, career functions, also known as vocational functions, are the aspects of the relationship that help to enhance a protégé’s career advancement. Vocational functions include sponsorship, exposure-and-visibility, coaching, protection, and challenging work assignments. Sponsorship refers to the active nomination of an individual for desirable opportunities or promotions. Exposure-and-visibility involves the assignment of
responsibilities which would allow a protégé to develop relationships with figures of higher stature within an organization. The coaching function enhances a protégé’s knowledge of how to navigate effectively in a given setting, accomplish objectives, and achieve career aspirations. Protection pertains to the shielding of a protégé from potentially damaging contact with various senior individuals within an organization. Finally, the challenging assignment function is characterized by the appointment of work, supported with training and feedback from a mentor, which enables a protégé to acquire particular competencies and experience.

On the other hand, psychosocial functions are the aspects of the relationship that help to enhance a protégé’s sense of identity, competence, and effectiveness both inside and outside the organization. The results showed a mentor’s functions include role modelling, acceptance-and-confirmation, counselling, and friendship. Role modelling refers to the identification and emulation of a mentor’s desirable values, attitudes, and behaviours. Acceptance-and-confirmation is characterized by trust that encourages a protégé to take risks that will not lead to rejection should they result in mistakes. The counselling function enables a protégé to explore personal concerns (e.g., anxieties, fears) that may interfere with productivity. Counselling is achieved through the exploration of alternative perspectives and active listening. Lastly, friendship pertains to the social interactions between mentor and protégé that result in mutual liking and enjoyable exchanges regarding work and life experiences. Interestingly, Kram (1980) found that every mentor involved in the 18 relationships provided vocational functions, while 15 of the mentor’s provided psychosocial functions. Several factors can influence which functions are administered in a mentoring relationship such as individuals’ needs, interpersonal skills, and the organizational context (Kram, 1988).
**Phases of the mentoring relationship.** Kram (1983, 1988) examined the phases of the mentoring relationship by investigating 18 developmental relationships as they were occurring between younger and older managers in a business setting. The results showed that mentoring relationships proceeded through four phases: initiation, cultivation, separation, and redefinition.

The initiation phase is a period during which the mentor and protégé have initial positive interactions with one another. In this phase the protégé views the mentor as an admired and respected individual, and the mentor considers the protégé as someone with potential. As the relationship progresses it gradually becomes more important to both members. The cultivation phase is characterized as a period in which the range of mentoring functions provided reaches a maximum. In other words, the mentor exhibits more career and psychosocial mentoring in this phase than in any other phase. The protégé continues to develop competence while the mentor gains more trust in the protégé’s abilities. Following this, the separation phase occurs in which the protégé experiences independence and autonomy. This can be the result of a significant structural change in the organizational context, such as the protégé receiving a promotion. Typical reactions include anxiety, if the protégé feels abandoned, or excitement, if the protégé feels a personal sense of accomplishment. Finally, the redefinition phase is described as a period of time whereby the relationship takes on different characteristics and is likely to become more like a friendship. Both individuals have informal discussions and occasional mentoring may continue. Although this phase may be marked by discomfort as both members adjust to new roles, the protégé is likely to experience gratitude for earlier support and the once mentor feels pride in regard to the protégé’s advancement.

**Conceptual Model of Mentoring**
Weaver and Chelladurai (1999) noted that researchers had placed little emphasis on the mentoring process, and given this gap in the literature, advanced a linear framework (see Figure 6) based on the findings of several studies (e.g., Hunt & Michael, 1983; Kram, 1980; Kram, 1983; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Noe, 1988b). The framework is composed of antecedents that affect the emergence of the mentoring relationship as well as consequences for the mentor, protégé, and organization, that result from effective mentoring.

Briefly, it is assumed that mentor-protégé compatibility is based upon the degree of similarity between a mentor’s and protégé’s characteristics (e.g., gender, traits, age). Therefore, mentor and protégé characteristics are considered the antecedents of the model. Compatibility is subsequently thought to result in a mentoring relationship in which the mentor provides particular mentoring functions to the protégé. These functions were adopted from Kram (1980) concerning mentoring relationships in which it was proposed that mentors provided two general categories of functions: vocational development functions (i.e., the aspects of the relationship that help to enhance a protégé’s career advancement) and psychosocial functions (i.e., the aspects of the relationship that help to enhance a protégé’s sense of identity, competence, and effectiveness both inside and outside the organization). It is further suggested that both vocational and psychosocial functions are enacted throughout Kram’s (1983) four mentoring phases: initiation, cultivation, separation, and redefinition. Next, it is assumed that there are consequences associated with successful mentoring for not only the protégé (e.g., career advancement) but also for the mentor (e.g., intrinsic satisfaction) and organization (e.g., reduced employee turnover). Finally, the model presents two intervening variables (i.e., moderators), which are believed to potentially hinder a
protégé’s ability to benefit from a mentoring relationship. The first intervening variable, labelled barriers, moderates the relationship between mentor-protégé compatibility and the mentoring relationship. Examples of barriers include the availability of the mentor and the proximity between the mentor and the protégé. The second intervening variable, labelled organizational practices, moderates the association between the mentoring relationship and the consequences of mentoring. Examples of organizational practices include organizational politics and seniority based progress.

Measurement of Mentoring Functions

The advancement of Kram’s (1980, 1983, 1988) mentor role theory led to the development of inventories that measured mentor functions. Noe (1988a) was one of the first to develop an instrument, called the Mentor Functions Scale (MFS), to assess Kram’s (1980) vocational (sponsorship, exposure-and-visibility, coaching, protection, and challenging work assignments) and psychosocial functions (role modelling, acceptance-and-confirmation, counselling, and friendship). However, as only one or two items were used to measure some of the nine mentor functions in the MFS, Noe (1988a) collapsed the functions into two main subscales: vocational and psychosocial factors. As a result of this, it was impossible to associate specific mentor functions with the outcomes measured.

Recognizing the limitations with the MFS, Ragins and McFarlin (1990) developed the Mentor Role Instrument (MRI) to assess perceptions of vocational development and psychosocial mentor functions. Two additional functions (Parent and Social) were also assessed as they can emerge in cross-gender relationships (Ragins & McFarlin, 1990). Therefore, the final version of the MRI is comprised of 33 items that assess 11 mentoring functions. The items are measured on a 7-point Likert scale with responses that range from 1 (strongly disagree) to 7 (strongly agree). The subscales within the vocational
development dimension are labelled Sponsor, Coach, Protect, Challenging Assignments, and Exposure. Each subscale is measured by three items. The subscales within the psychosocial dimension are labelled Friendship, Role Model, Counsel, Acceptance, Parent, and Social. Again, each subscale is measured by three items.

Internal consistencies for the vocational development dimension of the MRI (Ragins & McFarlin, 1990) are as follows: Sponsor (α=.81), Coach (α=.81), Protect (α=.77), Challenging Assignments (α=.92), and Exposure (α=.80). With respect to the psychosocial dimension, adequate internal consistencies were also found: Friendship (α=.82), Role Model (α=.84), Counsel (α=.83), Acceptance (α=.89), Parent (α=.89), and Social (α=.93). While the stem for the original version of the MRI reads “My mentor…”, Weaver and Chelladurai (2002) used the stem “If I were to have a mentor, I would prefer my mentor to…” to measure the preferences of respondents without a mentor. The MRI has been used to study mentoring functions in organizational (e.g., Ragins & Cotton, 1999) and sport management (e.g., Weaver & Chelladurai, 2002) settings.

**Research on Mentoring**

The following section will be divided into two branches of mentoring research: (1) mentoring in organizations, and (2) mentoring in sport.

**Mentoring in organizations.** As noted earlier, formal mentoring is the “forced” matching of two individuals; whereas informal mentoring is the unstructured and natural pairing of two individuals. There has been some debate in the organizational literature over which method of mentoring (i.e., formal or informal) is most effective.

Kram (1988) reported that mentoring relationships have the potential to become destructive. Specifically, mentoring relationships that were once mutually beneficial can
become plagued by resentment, jealousy, and dissatisfaction. It has been suggested that such dysfunctional relationships might occur as a result of assigned, formal mentoring programs (Scandura, 1998). In support of the notion that formal mentoring may cause more harm than good, Eby and Allen (2002), in their examination of 242 protégés in accounting-related jobs, found that protégés in formal mentoring relationships experienced significantly higher turnover intentions and stress due to the most negative mentoring experience than did protégés in informal mentoring relationships.

Another line of research has focused on the positive outcomes associated with informal compared to formal mentoring. In a study of 614 protégés from various occupations (e.g., journalists, social workers, engineers), Ragins and Cotton (1999) found that informally mentored individuals reported receiving more mentoring functions than did formally mentored individuals. Specifically, protégés in informal relationships received significantly more mentoring across all five vocational development functions and across four of the six psychosocial functions (friendship, social, role model, and acceptance). Furthermore, protégés in informal mentoring relationships were more satisfied with their mentors and had higher salaries than those in formal mentoring relationships. In explaining these results, Ragins and Cotton suggested that feelings of trust and closeness are difficult to develop in protégés involved in formal relationships as they may perceive that their mentors provide support not because they want to, but rather due to obligations associated with formal mentoring programs.

Despite the evidence suggesting that informal mentoring relationships are more beneficial than formal mentoring relationships, there are some who argue that a formalized mentoring approach is better. Roberts (2000) rationalized that mentoring relationships that occur by serendipity (i.e., informal) rarely satisfy an organization’s
needs. From this perspective, it is argued that informal mentoring, although perhaps beneficial to the protégé, may not be advantageous to the protégé’s organization. Roberts further argued that informal relationships are difficult to analyze as protégés’ recollections of the relationships may be marked by inaccuracies, especially surrounding the “fondness” for past mentors. In an attempt to determine whether a formal or informal mentoring relationship is most advantageous, Ragins et al. (2000) examined satisfaction with a mentoring relationship and its association with positive work attitudes while controlling for the type of mentoring (i.e., formal vs. informal). The results showed that satisfaction with a mentoring relationship had a stronger effect on positive work attitudes than whether the relationship was formal or informal in nature. Taken together, these findings indicated that positive outcomes for a protégé were determined by the quality of a mentoring relationship.

Mentoring in sport. Research explicitly investigating mentoring in sport is scarce (Bloom et al., 1998; Pitney & Ehlers, 2004). Furthermore, mentoring in sport has not been empirically examined from the mentor role theory (Kram, 1980) that has dominated research in business. Instead, mentoring in sport has been investigated primarily through grounded theory approaches using qualitative methodologies (e.g., Bloom et al., 1998; Bloom, Salmela, & Schinke, 1995; Gould, Giannini, Krane, & Hodge, 1990).

The findings of qualitative studies involving mentoring in sport have produced notable findings. Bloom et al. (1998) empirically investigated the importance that mentoring had on the development of 21 current and former Canadian Olympic and university team sport coaches. The results of individual interviews with these expert coaches showed that they were strongly influenced by mentors (coaches that they had apprenticed with earlier in their coaching career or as an athlete). They received not only
tactical and technical skills but also their mentors’ philosophies, values, and beliefs about coaching. The coaches also expressed that they were mentored by more knowledgeable coaches throughout their own careers as coaches. According to the coaches, finding a mentoring relationship was the result of identifying a mentor that shared a similar passion for coaching. As the coaches progressed through their careers they began to mentor and nurture the development of their athletes. Finally, the results suggested coaches were honored and willing to mentor developing coaches once they were viewed as reaching “expert status” themselves.

By broadening our view of mentoring relationships, another line of research has focused on coaching education. Gould et al. (1990) examined the educational needs of 130 American coaches (e.g., Olympic, Pan American) from a variety of sports. The results showed that coaches learned not from coaching classes or coaching textbooks but rather from experience and from other successful coaches (i.e., mentors). Moreover, the coaches expressed that a mentoring program/apprenticeship with top coaches was among the best ways to prepare an individual for elite level coaching. Another study by Jones, Armour, and Potrac (2003) also found that mentoring was influential in the development of coaches. Using a case study approach, the authors interviewed a professional male soccer coach who worked at Middlesbrough Football Club (UK). The purpose of the study was to identify the ways in which he acquired his coaching knowledge. The results showed that the coach learned largely through the observation of other coaches’ work. Specifically, the coach developed his own strategies based on observations from others that he admired and from those that he did not admire.

In one of the few studies investigating mentoring in sport quantitatively, Perna, Zaichkowsky, and Bocknek (1996) examined whether the incidence of mentoring was
greater among athletes than non-athletes, and examined the influence of mentoring (i.e., psychosocial and career functions) on athletes’ and non-athletes’ psychosocial development (i.e., identity and intimacy). The results showed that athletes reported being mentored more frequently than non-athletes. Furthermore, 73% of athletes reported a coach as their mentor. Other mentors included an academic advisor, professor, or an alumnus. In addition, the results showed that psychosocial and vocational functions were significantly associated with intimacy (i.e., comfort with expressing emotions and committing to relationships), but not identity (i.e., extent of self-knowledge and degree to which career or life choices reflect internal versus external reasons).

In order to derive the benefits of both formal and informal mentoring in sport, the Coaching Association of Canada has endorsed a system known as facilitated mentoring. According to Marshall (2001), this approach involves the facilitated matching of mentors and protégés within a planned mentoring program. The formal design incorporates developmental training for both the mentor and the protégé yet also includes elements of an informal relationship such as a “no-fault” termination clause which allows either party to end a relationship at any time.

Interestingly, as demonstrated in the aforementioned studies, researchers have generally taken the approach that the coach is the mentor in mentoring relationships. However, the results of a recent study by Cope, Eys, Beauchamp, Schinke, and Bosselut (2011) examining informal roles in sport found that athletes fulfilled 10 different informal roles with one being the role of a mentor in a content analysis of 448 Sports Illustrated articles. Next, in order to validate the above findings concerning these 10 informal roles, the authors sampled 101 varsity athletes. In regard to mentoring, the results showed that the percentage of players occupying this role ranged from 2.5% (baseball) to 33.8%
(football). Furthermore, of the 10 informal roles identified, the mentoring done by athletes was perceived as the most beneficial to a team.

Similar to Cope et al.’s (2011) findings, other research has shown that coaches and athletes either implicitly or explicitly express that mentoring is a component of athlete leadership development. In their interviews with six coaches of elite high performance male hockey teams, Bucci et al. (2012) found that coaches selected experienced and mature athlete leaders that could serve as role models to younger teammates. That is to say, athlete leaders were chosen because they were viewed by coaches as having the capability to mentor teammates. The results of Dupuis et al.’s (2006) study of team captains also highlighted the importance of mentoring. Specifically, hockey captains explained that they acquired their own leadership skills from various sources including previous captains of theirs and other respected individuals. The captains further conveyed that they currently helped young players assimilate themselves with hockey, academics, and other situations. Lastly, Voelker et al. (2011) examined the experiences of high school sport captains and found that the majority of captains (i.e., 8 of 13) explicitly reported that it was their duty to mentor teammates. Despite the findings that athletes can play a prominent role by mentoring fellow teammates, very little is known regarding the relationship between mentoring and athlete leadership.
Athlete Satisfaction

This section of the literature review will begin with a definition of athlete satisfaction. This will be followed by a description of an instrument which assesses perceptions of athlete satisfaction. Lastly, findings pertaining to the study athlete satisfaction will be briefly discussed.

Definition of Athlete Satisfaction

According to Riemer and Chelladurai (1998), satisfaction has been a variable of great interest to researchers and practitioners in many domains, including sport. This is not surprising given that individual job satisfaction has been shown to be positively correlated with individual job performance in several organizational contexts (Petty, McGee, & Cavender, 1984). In fact, theoretical frameworks such as the Multidimensional Model of Leadership (Chelladurai, 1978) and Conceptual Model of Cohesion (Carron, 1982) contain the construct of satisfaction as an outcome variable. To clarify the meaning of satisfaction within an athletic context, Chelladurai and Riemer (1997) defined athlete satisfaction as “a positive affective state resulting from a complex evaluation of the structures, processes, and outcomes associated with the athletic experience” (p. 135). Specifically, the authors contended that level of satisfaction is reflected in an athlete’s reactions regarding the degree to which the athletic experience reaches one’s personal standards.

Measurement of Athlete Satisfaction

The Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998) is a sport specific questionnaire that assesses perceptions of athlete satisfaction. The inventory is comprised of 56 items and measures 15 dimensions of athlete satisfaction. These dimensions are labelled: Individual Performance (3 items), Team Performance (3 items),
Ability Utilization (5 items), Strategy (6 items), Personal Treatment (5 items), Training and Instruction (3 items), Team Task Contribution (3 items), Team Social Contribution (3 items), Ethics (3 items), Team Integration (4 items), Personal Dedication (4 items), Budget (3 items), Medical Personnel (4 items), Academic Support Services (3 items), and External Agents (4 items).

Individual Performance assesses an athlete’s satisfaction with his/her task performance. Team Performance assesses an athlete’s satisfaction with his/her team’s performance level. Ability Utilization assesses an athlete’s satisfaction regarding the coach’s use of the athlete’s talents and abilities. Strategy assesses an athlete’s satisfaction with the coach’s strategic and tactical decisions. Personal Treatment assesses an athlete’s satisfaction with the coach’s behaviours that affect the athlete directly and team development indirectly. Training and Instruction assesses an athlete’s satisfaction with the coach’s behaviours pertaining to training and instruction. Team Task Contribution assesses an athlete’s satisfaction with the actions made by teammates that serve as a substitute for leadership. Team Social Contribution assesses an athlete’s satisfaction with teammates’ contributions to the athlete as an individual. Ethics assesses an athlete’s satisfaction with teammates’ ethical positions. Team Integration assesses an athlete’s satisfaction with teammates’ efforts and contributions towards accomplishing the team’s task. Personal Dedication assesses an athlete’s satisfaction with his/her contribution to the team. Budget assesses an athlete’s satisfaction regarding the amount of funding given by the athletic department to the team. Medical Personnel assesses an athlete’s satisfaction with the team’s medical personnel. Academic Support Services assesses an athlete’s satisfaction with the academic services provided to the team. Finally, External Agents assesses an athlete’s satisfaction with the agents outside of the organization that
contribute to the team. All of the items are measured on a 7-point Likert scale with responses that range from 1 (*not at all satisfied*) to 7 (*extremely satisfied*). The stem preceding the items reads “I am satisfied with…”.

The ASQ (Riemer & Chelladurai, 1998) demonstrated acceptable internal consistency coefficients that ranged from .78 to .95 ($M = .88$). Results of Reimer and Chelladurai’s Confirmatory Factor Analysis provided further evidence of the instruments construct validity: TLI = .93, IFI = .94, and RMSEA = .05. The ASQ has been used to assess perceptions of athlete satisfaction in both youth (e.g., Jeffery-Tosoni, Eys, Schinke, & Lewko, 2011) and adult (e.g., Bray, Beauchamp, Eys, & Carron, 2005) populations.

**Research on Athlete Satisfaction**

In an early study on satisfaction, Rail (1987) was interested in identifying which characteristics predicted role satisfaction among 60 executives from amateur sport federations. The results showed that competence, autonomy, role significance, and recognition were strong determinants of satisfaction with one’s role in these sport executives. With regard to satisfaction among athletes, Riemer & Chelladurai (1995) investigated the congruence of athletes’ preferred and perceived leadership from coaches and its effect on athlete satisfaction. Specifically, 201 male NCAA football players completed both the preferred and perceived versions of the LSS (Chelladurai & Saleh, 1980) and a scale of general athlete satisfaction. Findings showed that preferences for Training and Instruction, Social Support and Positive Feedback, as well as perceptions of Training and Instruction and Positive Feedback, were significantly related to athlete satisfaction. With respect to congruence, the results showed that satisfaction was highest when congruence was found in the behaviour of Social Support.
The development of the ASQ (Riemer & Chelladurai, 1998) was a welcomed addition to the literature as it allowed researchers to examine the relationship between particular facets of athlete satisfaction and other constructs. For example, Riemer and Toon (2001) investigated the congruence of tennis players’ preferred and perceived coach leadership behaviours and its impact on athlete satisfaction as measured by the ASQ. While leadership congruence was not found to have an effect on athlete satisfaction, perceptions of Training and Instruction, Democratic Behaviour, Social Support, and Positive Feedback were shown to predict the satisfaction dimension of Training and Instruction. Furthermore, perceptions of Training and Instruction, Democratic Behaviour, Autocratic Behaviour, Social Support, and Positive Feedback were found to predict the satisfaction dimension of Personal Treatment. Finally, perceptions of Positive Feedback were predictive of satisfaction regarding Team Performance, while perceptions of Democratic Behaviour were predictive of satisfaction regarding Individual Performance.

The ASQ has also been utilized to study the relationship between athlete satisfaction and role ambiguity. In their study on club and intercollegiate soccer players, Eys, Carron, Bray, and Beauchamp (2003) examined the association between athlete satisfaction and perceptions of role ambiguity in two contexts (offence and defence) at both the beginning and end of a season. While no significant relationships were found within the defensive context, the results showed that in an offensive context and at the beginning of the year, there were lower perceptions of the role ambiguity dimension concerning Scope of Responsibilities (i.e., the extent to which athletes know their responsibilities) that was significantly related to the athlete satisfaction dimensions of Ability Utilization, Strategy, Personal Treatment, Training and Instruction, Team Task Contribution, and Team Integration. Further, in an offensive context and at the end of the
year, there were lower perceptions of the role ambiguity dimension concerning Scope of Responsibilities that was significantly associated with the athlete satisfaction dimensions of Ability Utilization, Strategy, and Training and Instruction.

More recently, Jeffery-Tosoni et al. (2011) examined the relationship between starting status and perceptions of six dimensions of satisfaction as measured by the ASQ in youth participants (N = 61) from interdependent sport teams. Specifically, 43 athletes reported that they were starters and 18 reported that they were not. The results indicated that starters perceived significantly greater satisfaction than non-starters with regard to Ability Utilization, Team Social Contribution, and Personal Dedication, but not Personal Treatment, Training and Instruction, and Team Task Contribution. Overall, the results suggested that non-starting athletes were less satisfied on their teams than starting athletes.
References


doi:10.1080/10413200903204754


Adapted from:

Adapted from:

Adapted from:

The following questions are designed to assess your opinions about the best PEER ATHLETE MENTOR you ever had. This person would be a teammate from either your current team or one of your past teams. There are no right or wrong answers. Please take your time to complete the questionnaire and remember to answer the questions honestly. Thank you!

Please tell us a little about your background by answering the questions below.

Age: ___ yrs.

Gender: Male___ Female___

What sport are you currently participating in? (e.g., hockey, basketball):________

What level does your team compete at? (e.g., university, college): ________

What position do you play on your team? (e.g., point guard, running back): ________

How many years have you been involved in your sport? __ yrs.

This section deals with your perceptions of the best peer athlete mentor you ever had in your sport. Your peer athlete mentor would be a teammate from your current team or from one of your past teams.

A peer athlete mentor is a more experienced and knowledgeable teammate who acts as a role model for you, provides support and guidance to you, and assists you in your sport and personal development.

Do you have/have you had a peer athlete mentor? Yes___ No___

Also, your relationship with your peer athlete mentor could be described as either formal or informal in nature.

Formal Mentoring Relationship: In order to assist athletes in their development and advancement, some teams have established formal mentoring programs where athletes mentor less experienced athletes. This may be accomplished by the team assigning a peer athlete mentor to a less experienced athlete (or vice versa) or by providing formal opportunities for a less experienced athlete to develop a relationship with a peer athlete mentor.

OR
Informal Mentoring Relationship: Informal mentoring relationships are unstructured and develop spontaneously, without assistance from the team. In other words, informal mentoring relationships occur naturally because the peer athlete mentor and the less experienced athlete have some type of mutual liking for one another.

How would you describe your relationship with your peer athlete mentor? Formal___ Informal___

Is your peer athlete mentor from your current team or a past team? Current___ Past___

Your peer athlete mentor is: Older than you___ Younger than you___ Same age as you____

What is the gender of your peer athlete mentor? Male___ Female___

How long have you been/were you mentored by this individual? ____ yrs.

What is your peer athlete mentor’s playing position (e.g., point guard): ______

************************************************************************

Using the following scale, please circle a number from 1-7 to indicate your level of agreement with each of the statements regarding your PEER ATHLETE MENTOR.

My peer athlete mentor…

1. Helps me attain a desirable status in my team.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

2. Suggests specific strategies for achieving my playing aspirations.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

3. “Runs interference” for me in the team.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

4. Provides me with challenging tasks.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

5. Helps me be more visible in the team.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

6. Is someone I can confide in.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)

7. My athlete mentor and I frequently have one-on-one, informal social interactions outside the team setting.
   (Strongly Disagree) 1  2  3  4  5  6  7 (Strongly Agree)
8. Serves as a role model for me.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

9. Guides my personal development.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

10. Accepts me as a competent athlete/teammate.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

11. Uses his/her influence in the team for my benefit.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

12. Gives me advice on how to attain recognition in the team.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

13. Shields me from damaging contact with important people in the team.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

14. Assigns me tasks that push me into developing new skills.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

15. Creates opportunities for me to impress important people in the team.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

16. Provides support and encouragement.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

17. My athlete mentor and I frequently socialize one-on-one outside the team setting.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

18. Represents who I want to be.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

19. Serves as a sounding board for me to develop and understand myself.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

20. Thinks highly of me.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

21. Uses his/her influence to support my advancement in the team.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

22. Helps me learn about other aspects of the team.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

23. Protects me from those who are out to get me.
    (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
24. Gives me tasks that require me to learn new skills.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

25. Brings my accomplishments to the attention of important people in the team.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

26. Is someone I can trust.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

27. My athlete mentor and I frequently get together informally after competition or practice by ourselves.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

28. Is someone I identify with.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

29. Guides my sport development.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

30. Sees me as being competent.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
Appendix B
Differentiated Transformational Leadership Inventory (DTLI)
(Callow et al., 2009)

Using the following scale, please circle a number from 1 to 5 to indicate your level of agreement with each of the statements regarding your PEER ATHLETE MENTOR.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All</td>
<td>Seldom 25% of the time</td>
<td>Occasionally 50% of the time</td>
<td>Often 75% of the time</td>
<td>All of the Time</td>
</tr>
</tbody>
</table>

My peer athlete mentor…

1. Talks in a way that makes me believe I can succeed.
   (Not at all) 1  2  3  4  5 (All of the time)

2. Gets me to re-think the way I do things.
   (Not at all) 1  2  3  4  5 (All of the time)

3. Insists on only the best performance.
   (Not at all) 1  2  3  4  5 (All of the time)

4. Leads me from the front whenever he/she can.
   (Not at all) 1  2  3  4  5 (All of the time)

5. Praises me when I show improvement.
   (Not at all) 1  2  3  4  5 (All of the time)

6. Talks optimistically about the future.
   (Not at all) 1  2  3  4  5 (All of the time)

7. Challenges me to think about problems in new ways.
   (Not at all) 1  2  3  4  5 (All of the time)

8. Will not settle for second best.
   (Not at all) 1  2  3  4  5 (All of the time)

9. Is a good role model for me to follow.
   (Not at all) 1  2  3  4  5 (All of the time)
10. Personally praises me when I do outstanding work.
   (Not at all) 1  2  3  4  5 (All of the time)

11. Talks enthusiastically about what needs to be accomplished.
   (Not at all) 1  2  3  4  5 (All of the time)

12. Shows me how to look at difficulties from a new angle.
   (Not at all) 1  2  3  4  5 (All of the time)

13. Expects me to achieve high standards.
   (Not at all) 1  2  3  4  5 (All of the time)

14. Leads by example.
   (Not at all) 1  2  3  4  5 (All of the time)

15. Always recognizes my achievements.
   (Not at all) 1  2  3  4  5 (All of the time)

16. Expresses confidence that my goals will be achieved.
   (Not at all) 1  2  3  4  5 (All of the time)

17. Tries to help me work out how to solve problems.
   (Not at all) 1  2  3  4  5 (All of the time)

18. Expects a lot from me.
   (Not at all) 1  2  3  4  5 (All of the time)

19. Always sets a good example.
   (Not at all) 1  2  3  4  5 (All of the time)

20. Gives me positive feedback when I perform well.
   (Not at all) 1  2  3  4  5 (All of the time)

21. Always expects me to do my best.
   (Not at all) 1  2  3  4  5 (All of the time)

22. Leads by “doing” rather than simply “telling”.
   (Not at all) 1  2  3  4  5 (All of the time)

23. Gives me praise when I do good work.
   (Not at all) 1  2  3  4  5 (All of the time)
24. Gives me special recognition when I do very good work.
   (Not at all) 1   2   3   4   5 (All of the time)
Appendix C
Leadership Scale for Sports (LSS)
(Chelladurai & Saleh, 1980)

Using the following scale, please circle a number from 1 to 5 to indicate your level of agreement with each of the statements regarding your PEER ATHLETE MENTOR.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>Never</td>
<td>Seldom</td>
<td>Occasionally</td>
<td>Often</td>
<td>Always</td>
</tr>
<tr>
<td>25% of the time</td>
<td>50% of the time</td>
<td>75% of the time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

My peer athlete mentor…

1. Sees to it that I work to my capacity.
   (Never) 1 2 3 4 5 (Always)

2. Explains to me the techniques and tactics of the sport.
   (Never) 1 2 3 4 5 (Always)

3. Pays special attention to correcting my mistakes.
   (Never) 1 2 3 4 5 (Always)

4. Makes sure that my role on the team is understood.
   (Never) 1 2 3 4 5 (Always)

5. Instructs me in the skills of the sport.
   (Never) 1 2 3 4 5 (Always)

6. Figures ahead on what should be done.
   (Never) 1 2 3 4 5 (Always)

7. Explains to me what I should and should not do.
   (Never) 1 2 3 4 5 (Always)

8. Expects me to carry out my assignments to the last detail.
   (Never) 1 2 3 4 5 (Always)

9. Points out my strengths and weaknesses.
   (Never) 1 2 3 4 5 (Always)

10. Gives me specific instructions as to what I should do in certain situations.
    (Never) 1 2 3 4 5 (Always)

11. Sees to it that my efforts are coordinated.
12. Explains how my contributions fit into the big picture.
   (Never) 1 2 3 4 5 (Always)

13. Specifies in detail what is expected of me.
   (Never) 1 2 3 4 5 (Always)

   (Never) 1 2 3 4 5 (Always)

15. Gets my approval on important matters before going ahead.
   (Never) 1 2 3 4 5 (Always)

16. Lets me share in decision making.
   (Never) 1 2 3 4 5 (Always)

17. Encourages me to make suggestions for ways of developing my skills.
   (Never) 1 2 3 4 5 (Always)

18. Lets me set my own goals.
   (Never) 1 2 3 4 5 (Always)

19. Lets me try my own way even if I make mistakes.
   (Never) 1 2 3 4 5 (Always)

20. Asks for my opinion on important matters.
   (Never) 1 2 3 4 5 (Always)

21. Lets me work at my own speed.
   (Never) 1 2 3 4 5 (Always)

22. Helps me with my personal problems.
   (Never) 1 2 3 4 5 (Always)

23. Helps me settle my conflicts.
   (Never) 1 2 3 4 5 (Always)

24. Looks out for my personal welfare.
   (Never) 1 2 3 4 5 (Always)

25. Does personal favors for me.
   (Never) 1 2 3 4 5 (Always)

26. Expresses care towards me.
   (Never) 1 2 3 4 5 (Always)

27. Encourages me to confide in him/her.
28. Encourages close and informal relations.
(Never) 1 2 3 4 5 (Always)

29. Invites me to his home.
(Never) 1 2 3 4 5 (Always)

30. Compliments me for my performance.
(Never) 1 2 3 4 5 (Always)

31. Tells me when I do a particularly good job.
(Never) 1 2 3 4 5 (Always)

32. Sees that I am rewarded for a good performance.
(Never) 1 2 3 4 5 (Always)

33. Expresses appreciation when I perform well.
(Never) 1 2 3 4 5 (Always)

34. Gives me credit when credit is due.
(Never) 1 2 3 4 5 (Always)
Appendix D
The Athlete Satisfaction Questionnaire (ASQ)
(Riemer & Chelladurai, 1998)

This portion of the survey measures your level of satisfaction with your sport experience with your current team. However, if your peer athlete mentor is from the past you would indicate your level of satisfaction with your sport experience with that past team.

I am (was) satisfied with…

1. The degree to which I do my best for the team.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

2. The degree to which I have reached my performance goals during the season.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

3. My dedication during practices.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

4. The improvement in my performance over the previous season.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

5. My enthusiasm during competitions.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

6. The improvement in my skill level.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

7. My commitment to the team.
   (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
Appendix E

RECRUITMENT LETTER TO ATHLETES

My name is Matt Hoffmann 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 Loughead, I am currently conducting an online study examining peer athlete mentoring and its relationship with athlete leadership behaviours and athlete satisfaction. The CIS has kindly forwarded this email to you on my behalf.

With clearance from the University of Windsor Research Ethics Board, I am requesting your participation in this research.

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 how mentoring amongst athletes can help to increase individual team member satisfaction. As athletes you will have the opportunity to reflect on your mentoring experiences with other athletes and hopefully gain a greater understanding of the effects of athlete mentoring if you partake in the current study.

Participation will take approximately 20 minutes, in addition to each participant having a chance to enter into a draw to win one of four $50 Best Buy gift cards. Individual comments and information provided by 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/peer-athlete-mentoring/

Your assistance and cooperation with this research is greatly appreciated. Please feel free to contact me via email (hoffmannm@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,

Matt Hoffmann

B. A. (Hons) in Sport Psychology, Current M. H. K Student
Appendix F

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Investigating the Relationships Among Peer Athlete Mentor Leadership Behaviours, Mentoring Functions, and Perceptions of Satisfaction

You are asked to participate in a research study conducted by Matt Hoffmann (H. B. A., M. H. K. student) and Dr. Todd Loughead (Ph.D., Faculty Supervisor), from the Department of Kinesiology at the University of Windsor. The results of this study will contribute to the completion of a Master’s thesis in sport psychology.

If you have any questions or concerns about the research, please feel free to contact either Mr. Matt Hoffmann at 519-253-3000 ext. 4997 or hoffmann@uwindsor.ca, or Dr. Todd Loughead at 519-253-3000 ext. 2450 or loughead@uwindsor.ca.

PURPOSE OF THE STUDY

To examine how peer athlete mentors use various behaviours to influence individual team member satisfaction.

PROCEDURES

If you volunteer to participate in this study you will be asked to complete an online questionnaire that may take up to 20 minutes to complete.

POTENTIAL RISKS AND DISCOMFORTS

There are no foreseeable psychological or physical risks or discomforts associated with participation in this study.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The information gained from this study will help advance knowledge in the field of sport psychology. The results will help to better understand how peer athlete mentors affect team variables such as satisfaction. This knowledge can be used by sport psychology consultants to enhance the development of athlete mentors.

COMPENSATION FOR PARTICIPANTS

You will not be compensated for your participation in this study. However, if you choose, you can enter your name into a draw to win one of four $50 Best Buy gift cards.
CONFIDENTIALITY

Responses to the questionnaires will remain anonymous while the information from the draw will remain confidential. All data will be kept in a password protected file which will only be accessible by the primary investigators. Potentially the data may also be utilized in subsequent studies conducted by the researchers. Data will be kept secured for five years after which it will be destroyed.

PARTICIPATION AND WITHDRAWAL

Participation in this study is voluntary. If you volunteer to be in this study, you may withdraw at any time while you are completing the surveys, without consequences of any kind. However, once you have submitted the completed survey, this will be considered as your consent to participate and it is not possible to withdraw because the surveys are anonymous. You may also refuse to answer any questions and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

The results will be posted at the University of Windsor’s Research Ethics Board website by September 1, 2013 (http://www.uwindsor.ca/reb). If you have any additional concerns or questions, you can call the investigators at the numbers above.

SUBSEQUENT USE OF DATA

This data may be used in subsequent studies.

RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact; Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; email: ethics@uwindsor.ca.

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Matt D. Hoffmann

Jan. 1st – Aug. 1st, 2013

__________________________________________________________

Signature of Investigator

Date
VITA AUCTORIS

<table>
<thead>
<tr>
<th>NAME:</th>
<th>Matt D. Hoffmann</th>
</tr>
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<tbody>
<tr>
<td>PLACE OF BIRTH:</td>
<td>Toronto, ON</td>
</tr>
<tr>
<td>YEAR OF BIRTH:</td>
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</tr>
<tr>
<td>EDUCATION:</td>
<td>Malvern Collegiate Institute, Toronto, ON, 2006</td>
</tr>
<tr>
<td></td>
<td>Laurentian University, B. A. (Hons) Sport Psychology, Sudbury, ON, 2011</td>
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