Enoksen, E., Fahlström, P. G., Johansen, B. T., Hageskog, C.-A.,
    Christensen, J. B., Høigaard, R. (2014). Perceptions of leadership
    behavior and the relationship to athletes among Scandinavian coaches.
    Scandinavian Sport Studies Forum, 5, 131-147.

Perceptions of leadership behavior and the relationship to athletes among Scandinavian coaches

Eystein Enoksen Norwegian School of Sport Sciences, Norway
   <eystein enoksenz@nih.no>
Per Göran Fahlström Linnaeus University, Sweden
Bjørn Tore Johansen University of Agder, Norway
Carl-Axel Hageskog Linnaeus University, Sweden
Jens Behrend Christensen University of Aarhus, Denmark
Rune Høigaard University of Agder, Norway

Abstract

The purpose of this study was to investigate the relationship between the perceptions of leadership behavior and coach–athlete relationship in Scandinavian coaches. A secondary purpose was to investigate if differences in national sport education, level of coaching and coaching experiences in individual or team sport have an influence on leadership behavior and coach–athlete relationships. One hundred and forty nine coaches at international level or national top level from Denmark, Norway and Sweden participated in this study (134 male and 15 female). The methods of investigation were Chelladurai's Leadership scale of sport (LSS) (Chelladurai & Saleh, 1980) and Jowett's coach–athlete relationship perspective (Jowett & Wyllemann, 2006). The results showed that the most frequent self-reported behavioral components between the described coach–athlete relationship subscales and preferred leadership behavior among Scandinavian top-level coaches were training and instructions, positive feedback and democratic behavior, respectively. The study also revealed a positive coach–athlete relationship between (1) commitment and training and instruction, (2) positive feedback and social support, and (3) between complementarities and training and instruction behavior. A significant difference was found between top coaches in Denmark and Sweden on commitment and complementarity, and more experienced coaches used significantly more training and instruction and social support in their coaching than did less experienced coaches. Coaches in team sports reported more autocratic behavior and less democratic behavior than coaches in individual sports.

Key words: coaching behavior, coach–athlete relationship, Scandinavian sport coaches

Introduction

In the field of sport coaching, leadership behavior concepts have been researched extensively and systematically for more than 20 years (Chelladurai, 1990, Chelladurai & Saleh, 1980; Horn, 2008; Smith & Smoll, 2007; Trudel & Gilbert, 1995). The relationship between coaches' leadership style and various dimensions of athletes' psychosocial responses consistently support the notion that coach behavior have a significant impact on athletes' performance (Carlson, 1991; Enoksen, 2011) as well as their psychological and emotional welfare (Chelladurai & Reimer, 1998; Horn, 2008; Sullivan & Hodge, 1991). In the context of elite sport, the demands on improving the relationship between coaches and athletes are high and improvements are needed continuously (Chelladurai and Reimer, 1998; Gould, Hodge, Peterson, & Giannini, 1989).

In order to be a successful coach extensive knowledge is required regarding coaches' perception of their leadership behavior and interaction with athletes in different situational contexts (Jowett, 2008). One of the most frequently used theoretical models of leadership in sport is "The Multidimensional Leadership Model" (Chelladurai, 1984; Chelladurai, 1990; Chelladurai, 1993). According to this model, leadership effectiveness is a function of three interacting aspects of leader behavior: Actual, preferred and required behavior. Antecedents include; (a) situational characteristics, e.g., competitive level, goal for the team, type of task (individual vs. team) and the social and cultural contexts for the group; (b) leader characteristics, e.g., personality, ability, education, level of experience and motivation; (c) athlete characteristics, e.g., gender, experience, ability related to the task, personality, need for achievement, need for affiliation and cognitive structure. With reference to this model, athletes will experience optimal performance and satisfaction if their coaches' leadership behaviors are congruent with the leadership behaviors that the athletes prefer and appropriate for their particular sport (Chelladurai, 1990).

Previous research using "The Multidimensional Leadership Model" (Chelladurai, 1990) also supports the link between athletes' perceptions of their coaches' leadership style and the athletes' level of performance, especially for athletes at a high competitive level, e.g., national top level and international level (Chelladurai & Reimer, 1998; Høigaard, Jones, & Peters, 2008; Isberg, 1992). The majority of coach leadership behavior research has focused on the athletes' perception of their coaches' leader-

ship styles. Fahlström (2001) showed that leadership practice is not just a product of the interplay between individuals in a context-less concatenation, but is influenced by the cultural context in which the leadership is formed and executed. In order to more fully understand the nature of coaching leadership behavior, research investigating contextual factors (e.g., situational characteristics) such as national culture, national sport culture, and national educational culture in relation to coaching behavior, is warranted (Côté, 1998; Jones, Armour, & Potrac, 2003; 2004).

In Scandinavian countries, sport education programs are studied on 1- university level (elementary level, bachelor level, masters level and PhD level) and 2 - certified educational courses linked to the Sport Federations based on their democratic and voluntary tradition. These courses are often based on demands from clubs or federations, rather than proactive planning (Böhlke & Robinson, 2009). Annerstedt (2006) found that Swedish top coaches were influenced by a typical national tradition formed by the national voluntary sport system, coach education programs, and so on. According to Isberg (1992) and Enoksen (2011) coaches in Scandinavian countries are, in general, educated, qualified and dedicated, but many have multiple jobs, multiple funders, multiple supervisors, and in many sports are minimally compensated for the work they do. The similarities between these countries may have developed a Scandinavian coaching tradition. However, research into coaching and leadership behavior in the Scandinavian sporting context is limited.

In conjunction with "The Multidimensional Leadership Model", Chelladurai and Saleh (1980) developed the "Leadership Scale of Sport (LSS)". LSS has been used to investigate coaches' perceptions of their own leadership behaviors over the last two decades (Chelladurai, 1990; Chelladurai, 1993; Chelladurai & Reimer, 1998; Høigaard et al., 2008). The LSS covers five different dimensions of leader behavior; (1) training and instruction behavior; (2) social support; (3) positive feedback; (4) democratic behavior; and (5) autocratic behavior. Previous research has found that most preferred coach behavior is associated with leadership behaviors, with dimensions such as training and instruction, positive feedback, and social support. Moreover, these behaviors are typically also highly correlated with athlete satisfaction (Chelladurai & Reimer, 1998; Jowett & Wyllemann, 2006; Høigaard et al., 2008).

The Multidimensional Leadership Model and the LSS do not explicitly focus on the emotional bond between coach and athlete. Studies with that particular focus have been conducted (Jowett & Cockerill,

2003; Jowett & Ntoumanis, 2004; Poczwardowski, Barott, & Jowett, 2006), and have defined the unique interpersonal relationship between the coach and athlete, and highlighted that emotions, thoughts, and behaviors are mutually interconnected. Moreover, the bond between athletes and coaches has a significant impact on the quality of the coaching process, athlete satisfaction and performance. Jowett and Ntoumanis (2004) have identified the major constituents of coach–athlete relationships and their inter-relation through the constructs of the 3 C-model containing Closeness (e.g., coaches' and athletes' feeling of trust, respect and interpersonal liking), Commitment (e.g., coaches' and athletes' intention to maintain an athletic relationship), and Complementarity (e.g., coaches' and athletes' cooperation). In the coaching process, coach and athlete will often operate in different situational contexts where there are different needs for closeness, commitment, social support, enjoyment, and the possibility for self-fulfillment. Increasingly, athletes wish to play a greater role in the decision-making process, and, hence, coaches should be willing to understand and meet these demands (Deci & Ryan, 1985; Høigaard et al., 2008; Jowett, 2008). Moreover, it becomes important to identify the different psychological factors that allow coaches to develop high quality relationships with their athletes. Emotional bonding between coach and athlete may represent such a psychological factor. Indeed, if coaches in Scandinavian countries recognize the importance of emotional bonding, this could contribute to a high quality coach–athlete relationship given that they would be entirely devoted to their athletes (Lafrenière, Jowett, Vallerand, & Carbonneau, 2011). Further, according to Lorimer and Jowett (2010) empathetic coaches can play a fundamental function in athletes' performance accomplishments and success, especially at higher levels, as competition amplifies the need for coaches and athletes to work closely together. It has been suggested that, working so closely together, coaches and athletes will form significant relationships and become involved in aspects of each other's lives both within and outside of the sport context (Jowett, 2007; Jowett & Cockerill, 2003). Lorimer and Jowett (2010) have found that the empathetic accuracy of both the coaches and the athletes is influenced by situational characteristics of the sport context. For example, coaches in team sports display significantly less empathetic accuracy than coaches in individual sports. Additionally, Lorimer and Jowett (2010) found that coaches and athletes in team sports more frequently displayed a divergence in thoughts and feelings compared to coaches and athletes in individual sports. Conse-

quently, we wished to include coaches from both team sports and individual sports in this study. Furthermore, research has documented that the coaching experience is an individual factor that influences coaches' empathetic accuracy and is thereby related to how effective and successful coaches are in their interactions with athletes. In fact, coaches and athletes who do not report high levels of empathy will typically have less effective and successful interactions (Lorimer & Jowett, 2010).

Based on the sport coaching literature, this paper proposes that a fundamental dimension of coaching is coaches' and athletes' ability to accurately perceive each other's thoughts and feelings. Individuals in positions of perceived authority and power, such as coaches at a high level, have, according to Fiske (1993), less need to be empathetically accurate due to higher levels of control and a decreased dependency on understanding their athletes. Hence, the main purpose of this study was to investigate the relationship between Scandinavian coaches' perceptions of their actual leadership behavior and their perception of the coach–athlete relationship. A secondary purpose of the study was to investigate how differences in national sport education, level of coaching and coaching experiences in individual or team sports influence coaches' perception of their leadership behavior and the coach–athlete relationship.

Methods

Participants

One hundred and forty nine coaches from Denmark (n=50), Norway (n=50) and Sweden (n=49) participated in the study (134 male, mean age 38.3 ± 9.8 yrs.; 15 female, mean age 39.1 ± 8.4 yrs.). 56.4% of the coaches were from individual sports (e.g., judo, rowing, cross-country skiing, biathlon, tennis, track and field) and 43.6% were coaches of team sports (e.g., soccer, basketball, football, handball and volleyball). All of the coaches were former athletes, with 21% having competed at an elite national level and a further 44% having previously competed at full international level. Half of the coaches had more than 15 years of coaching experience. 42% were national team coaches, 10% were coaching an athlete at international level (e.g., athletes who had participated in international competitions such as the Olympics, World championships or other world tournaments) and 29% were coaching athletes performing at a high national level (e.g., among the 5 best in their sport). 59% of par-

ticipants had at some point undertaken academic study related to sport at university level.

Procedure

A questionnaire package was distributed to coaches participating in elite coach seminars arranged by each country. The first page of the questionnaire informed the coach of the purpose of the study and emphasized that participation was voluntary. The study was conducted, observing appropriate ethical standards, by the University of Agder.

Instruments

The first section of the questionnaire required coaches to provide demographic information (country, age, gender) and details relating to the main sport they coached, their coaching experience, sport education and current coaching level. The type of sport they coached was dichotomized into 'team sport' and 'individual sport'. Coaching experience was assessed from one item (how many years have you practiced as a coach?) with 5 possible response categories (one year or less; 2 to 4 years; 5 to 9 years; 10 to 15 years; more than 15 years). Coaching experience was then dichotomized into 'less than 10 years' and '10 years or more'. Sport education was assessed from one item (have you studied sport at university level?) with 5 response categories: no, elementary level (n=61); 1 year (n=41); bachelor level, 3 years (n=37); master level (n=9); PhD level (n=1). Sport education was then dichotomized to 'no sport education' and 'sport education'. Coaching level was assessed from one item (At what level do you coach?) with 4 response categories (national team coach; coach athletes at international level; coach athletes at national level; coach junior athletes). Coaching level was then dichotomized into 'national team / international' and 'national athletes / junior athletes'.

Leadership behavior: Coaches self-reported their perceptions of their own leadership behaviors using the Leadership Scale for Sport (Chelladurai & Saleh, 1980). The LSS is a 40-item inventory that assesses five dimensions of leadership behavior; (1) Training and instruction (thirteen items), assesses leadership behaviors that have the objective of improving athletic performance in a particular sport. An example item is 'I see to it that every team member is working to his/her capacity'; (2) Positive feedback (five items), assesses leadership behaviors that reinforce the

athlete by recognizing and rewarding good performance. An example item is 'I tell a team member when he/she does a particularly good job'; (3) Social support (eight items), assesses leadership behaviors that are characterized by a concern for the welfare of team members, having a positive group atmosphere and having good interpersonal relations with team members. An example is 'I look out for the personal welfare of the athletes'; (4) Democratic behavior (nine items), assesses leadership behaviors allowing team member participation in decisions that relate to the team's goals, practice methods, game tactics and strategies. An example item is 'I get group approval on important matters before going ahead'; (5) Autocratic behavior (five items), assesses leadership behavior that involves the coach's independence in decision-making. An example item is 'I work relatively independently of the athletes'. The stem 'my kind of optimal leadership behavior' preceded each item. Responses are provided on a five-point scale anchored at the extremes by 'never' (1) and 'always' (5). Thus, higher scores reflect stronger perceptions of the use of each behavior. The Cronbach's alpha for self-reported leadership behavior was: 0.79 training and instruction, 0.59 positive feedback, 0.66 social support, 0.78 democratic behavior, and 0.46 autocratic behavior.

Coach–athlete relationship: The nature of the coach–athlete relationship was evaluated using the 13-item Nordic Coach–Athlete Relationship Questionnaire (NOR-CART-Q; Jowett & Ntoumanis, 2004). The NOR-CART-Q measures coaches' direct perspective of closeness (4 items, example item: 'I respect my athlete'), commitment (4 items, example item:' I am appreciative of the sacrifices my athlete makes in order to improve performance') and complementarities (5 items, example item: 'When I coach my athlete, I am ready to do my best') in the coach–athlete relationship. The items are assigned a score ranging from 1 (strongly disagree) to 7 (strongly agree). Sound psychometric properties of this instrument were documented in the Jowett and Ntoumanis (2004) study, and are further supported in the current study with Cronbach's alpha for closeness, commitment, and complementarities of 0.83, 0.72 and 0.67, respectively.

Statistics

Descriptive statistics and correlation analyses were computed for all dependent variables. Multilevel logistic regression analyses were performed using different leadership behavior and coach–athlete relationship per-

spectives as the dependent variables. All regression models included country, gender, age, sport education, sport type, level of coaching and coaching experience as independent variables. Estimated means with confidence interval (95%) were calculated for each independent variable.

Results

Pearson correlation coefficients between the coach–athlete relationship subscales and preferred leadership behavior subscales can be seen in table 1. Positive feedback, training and instruction, and democratic behavior were the most frequent self-reported behavior subscales amongst the coaches. Moreover, there was a positive relationship between commitment and training and instruction ($r = 0.25$, $p < 0.01$), positive feedback ($r = 0.22$, $p < 0.01$), and social support behavior ($r = 0.31$ $p < 0.01$). Complementarities were positively related to training and instruction behavior ($r = 0.17$, $p < 0.01$).

__Table 2 shows how the proposed determinants relate to each dependent variable based on multi-level logistic regression analyses. As indicated in table 2, there was a significant difference between coaches in Denmark and Sweden on commitment (5.39 vs. 5.95) and complementarities (5.82 vs. 6.26). Coaches educated in sport used more positive feedback (4.25 vs. 4.41). Moreover, coaches with more than 10 years experiences in coaching used significantly more training and instruction (3.65 vs. 3.82) and offer more social support (3.02 vs. 3.23) than coaches with less experience. Furthermore, coaches in individual sports reported more democratic behavior (3.80 vs. 3.23) and less autocratic behavior (2.56 vs. 2.78) than coaches in team sports.

Table 1 *Mean, standard deviation and correlation among all dependent variables (N=148)*

Variable		M	SD	2	3
Coach–athlete relationship					
1.	Commitment	5.63	1.00	0.56**	0.50**
2.	Closeness	6.14	0.82		0.69**
3.	Complementarities	6.04	0.76		
Leadership behaviors					
4.	Training and instruction	3.81	0.43		
5.	Positive feedback	4.29	0.46		
6.	Social support	3.12	0.51		
7.	Democratic behavior	3.49	0.53		
8.	Autocratic behavior	2.70	0.53		

Note: * $p < .05$; * $p < .01$

Discussion

The purpose of this study was twofold. First, to investigate Scandinavian coaches' perceptions of their actual leadership behavior and their relationship to their athletes, and second, to investigate how differences in national sport education, level of coaching and coaching experience in individual vs. team sports influence leadership behavior and the coach–athlete relationship. For the coaches' preferred leadership behavior, a positive relationship was found between commitment and training instruction, positive feedback and social support and between complementarities and training and instruction behavior. The most frequently self-reported behavioral components (Table 1) were positive feedback, instruction and training, and democratic behavior, and they are also reported in several studies as the most preferred coaching behavior subscales amongst athletes in top-level sport (Chelladurai, Imamura, Yamaguchi, Oinuma, & Miyauchi , 2001; Chelladurai & Reimer, 1998; Horn, 2008). According to Chelladurai's (1993) congruence hypothesis, optimal coaching behavior occurs when there is a balance between the demands imposed by the situation and the athlete's preferences. The multidimensional model (Chelladurai, 1990; 1993) also underlines the significance of a dynamic coaching interaction process with athletes in order to develop a strong relationship, where the main focus should be on the athlete's need for satisfaction and athletic perfection. Carlson (1991), Carlson and Engström (1986), and Enoksen (2011) indicate that democratic coaching behavior is important in order to develop a stimulating and challenging coach–athlete atmosphere.

The results from the present study indicate a positive relationship between the coaches' commitment and training and instruction, positive

4	5	6	7	8
0.25**	0.22**	0.31**	0.06	-0.15
0.08	0.16	0.13	0.16	-0.16
0.17*	0.08	0.08	0.34	-0.14
	0.41**	0.43**	0.17	0.22**
		0.25**	0.03	-0.06
			0.44**	-0.12
				-0.37**

Table 2 *Multilevel logistic regression analyses of all independent variables on all dependent variables*

		Commitment			Closeness		Complementarity		Instruction and training
	n	*M*	(95% CI)	*M*	(95% CI)	*M*	(95% CI)	*M*	(95% CI)
Country									
Denmark	50	5.39	(5.01, 5.76)	6.00	(5.70, 6.31)	5.82	(5.53, 6.10)	3.81	(3.65, 3.97)
Norway	50	5.76	(5.40, 6.13)	6.38	(5.94, 6.54)	5.93	(5.64, 6.21)	3.64	(3.48, 3.79)
Sweden	49	5.95	(5.60, 6.30)	6.24	(6.10, 6.67)	6.26	(5.99, 6.53)	3.77	(3.61, 3.91)
Sport education									
No sport education	60	5.72	(5.73, 6.06)	6.27	(5.98, 6.55)	5.96	(5.70, 6.23)	3.69	(3.54, 3.84)
Sport education	88	5.68	(5.38, 5.99)	6.15	(5.90, 6.41)	6.04	(5.80, 6.27)	3.79	(3.66, 3.92)
Sport									
Individual	84	5.64	(5.31, 5.96)	6.19	(5.92, 6.46)	5.94	(5.69, 6.19)	3.70	(3.56, 3.84)
Team sport	61	5.76	(5.43, 6.10)	6.23	(6.95, 6.50)	6.06	(5.81, 6.32)	3.77	(3.63, 3.91)
Level of coaching									
National	76	5.70	(5.38, 6.02)	6.24	(5.92, 6.46)	6.02	(5.77, 6.27)	3.75	(3.62, 3.89)
High international /	70	5.70	(5.36, 6.04)	6.18	(6.95, 6.50)	5.98	(5.72, 6.24)	3.72	(3.58, 3.87)
Coaching experience									
Under 10 years	68	5.54	(5.22, 5.86)	6.16	(5.89, 6.43)	5.86	(5.61, 6.11)	3.65	(3.51, 3.79)
More than 10 years	80	5.86	(5.51, 6.21)	6.26	(6.97, 6.55)	6.14	(5.87, 6.41)	3.82	(3.68, 3.97)

feedback and social support (Table 1). All three coach–athlete subscales were over the mean value of the scale, indicating that the coaches perceive that they have a close relationship to their athletes (Table 1). According to the 3C-model (Jowett & Wyllemann, 2006), a close relationship between coach and athlete is characterized by the need for openness, care, confidence, honesty and mutual respect. Mutual respect and recognition are built upon good coaching philosophy, coaching competence, communication skills, and personal closeness (Carlson, 1991; Carlson & Engström, 1986; Lyle, 1999). In the research literature, lack of humanity and openness, and introverted behavior are some of the most negative characteristics of a coach (Molinero, Salguero, Tuero, Alvarez, Marques, & Molinero, 2006). Athletes should get the same support on good as on bad days, and the coach should also show an interest in the athletes personal needs, educational progress, work situation, and social welfare (Carlson, 1991; Enoksen, 2011). At the same time, the question arises as to whether it is possible for a coach to have extensive knowledge regarding the athlete's social environment. The athlete's performance and mental focus is often colored by a lack of balance in their daily life, such as family problems, problems at school or at work, or in other settings. If the coach is not aware of this and therefore is not able to show the empathetic accuracy required, this may result in a style of leadership which does not stimulate or channel the athletes' energy towards a certain goal (Hellstedt, 1995). Among Norwegian top-level athletes, the majority wished a closer supervision and more stimulating motivational climate in the daily coaching process, working with mastery goals perspectives (Pensgaard

Positive feedback		Social support		Democratic		Autocratic	
M	(95% CI)	M	(95% CI)	M	(95% CI)	M	(95% CI)
4.33	(4.16, 4.50)	3.05	(2.86, 3.25)	4.41	(3.23, 3.58)	2.76	(2.56, 2.97)
4.34	(4.17, 4.51)	3.17	(3.98, 3.36)	3.58	(3.41, 3.75)	2.70	(2.50, 2.90)
4.32	(4.16, 4.48)	3.14	(3.96, 3.32)	3.57	(3.40, 3.73)	2.55	(2.36, 2.74)
4.25	(4.09, 4.40)	3.10	(2.93, 3.29)	3.51	(3.35, 3.67)	2.70	(2.51, 2.89)
4.41	(4.27, 4.55)	3.14	(2.98, 3.30)	3.53	(3.38, 3.67)	2.64	(2.48, 2.81)
4.27	(4.12, 4.42)	3.24	(3.07, 3.40)	3.80	(3.65, 3.96)	2.56	(2.39, 2.74)
4.39	(4.24, 4.55)	3.01	(2.84, 3.18)	3.23	(3.08, 3.39)	2.78	(2.60, 2.96)
4.34	(4.20, 4.49)	3.04	(2.87, 3.20)	3.55	(3.40, 3.70)	2.69	(2.10, 2.86)
4.32	(4.16, 4.47)	3.21	(3.03, 3.38)	3.48	(3.32, 3.64)	2.66	(2.47, 2.84)
4.27	(4.13, 4.42)	3.02	(2.85, 3.19)	3.53	(3.38, 3.68)	2.65	(2.47, 2.82)
4.39	(4.27, 4.55)	3.23	(3.05, 3.41)	3.51	(3.34, 3.67)	2.69	(2.50, 2.88)

& Roberts, 1992). This could indicate that commitment would be even stronger if and when the coach–athlete relationship is based on real and deliberate proximity.

In this study, complementarities in the coach–athlete relationship were also positively correlated to training and instruction behavior. The coach–athlete relationship is recognized as the foundation of coaching and is a major force in promoting the coach's ability to develop stimulating working partnerships and enhance optimal performance in elite athletes (Jowett & Wyllemann, 2006). Many coaches in elite sports are strongly dedicated to the holistic coaching process, e.g., the ability to administrate, plan, execute and evaluate the yearly training for a team or individual athletes according to defined performance goals (Enoksen, 2011). To obtain an optimal learning process and positive performance development, the coaches spend large amounts of time working together with the athletes to fulfill the training work training sessions required to improve performance in a specific sport. According to Johansen and Svela (2009), top athletes typically spend more time with their teammates and coaches than they do with their closest family. Hence, it is vital for them to be able to function and be satisfied by all aspects of the sporting context. Many coaches are minimally compensated and not all "sectors" are equal, and not all sports are equal. Coaches must therefore attempt to organize their everyday situation alongside sport commitments in order to ensure an adequate income.

In Scandinavia, as in many other parts of the world, sports coaching is slowly but surely being accepted as a profession and a potential career path. For the coaches' leadership behavior the same pattern is typical for all the Scandinavian countries (Table 2). There is, however, a significant difference between coaches in Denmark and Sweden in commitment and complementarities. This may be seen as an unexpected finding considering the similarities between these countries. One explanation may be that these dimensions are often represented in coaches' and athletes' long-term orientation to the relationship. These dimensions also involve a coach's and an athlete's intention to stay attached to one another while maintaining their relationship over time (Jowett & Cockerill, 2003). In Sweden, Carlson (1991) and Carlson and Engström (1986) have documented that such relationships are quite common in elite sport. One may also argue that these differences between Denmark and Sweden on commitment and complementarities have a historical and organizational explanation. Elite sport in Denmark is organized differently from Sweden, and, in contrast to Sweden, was separated from a single dominant federation already in the late 1980s. Due to this different organizational model of elite sport, it is possible that elite sport and the elite coaches in Denmark operate to a greater degree in a top-down system, while the elite sport system in Sweden is more often organized bottom-up. In line with Annerstedt (2006) the difference may also be explained by culturally acknowledged and interactive leadership practices and differences in the sport education at university level and the certification of coaches in the Sport Federations in the two countries. Böhlke and Robinson (2009) have shown that the sport leadership style in Sweden is characterized by informal and delegated behavior.

The results of the current study show that coaches that are educated in sport use more positive feedback (Table 2). Research indicates that in general, higher educated people behave more democratic, while less educated individuals are characterized by a more authoritative leadership style (Jones, Armour, & Potrac, 2003; 2004). Coaches who have an extensive base of knowledge often see similarities across contexts and develop effective feedback strategies, democratic management and a supporting climate (Bloom, Durant-Bush, & Salmela, 1997; Jones, Armour, & Potrac, 2004). A positive mastery coaching climate will enhance the athletes' self-efficacy (Bandura, 1986) while a negative coaching climate will lead to poorer self-esteem, demotivation and lower estimation of potential possibilities for success (Sarrazin, Vallerand, Guillet, Pelletier,

& Cury, 2002). There is reason to believe that a problematic coach–athlete relationship, and, in particular, conflicts with authoritarian coaches with less empathetic accuracy, can be a very decisive reason for dropping out of competitive sport (Augustini & Trabal, 1999). Thus the coach's psychological and pedagogical competence, expert qualifications and knowledge of sport-specific training will likely be very important elements, and should therefore be strongly emphasized in all institutions where the coaching skills are taught (Enoksen, 2011).

The results of the current investigation reveal that coaches with more than 10 years' experience reported significantly more use of training and instruction and social support in their coaching than coaches with less experience. In the light of the great demands for time, effort and the pressure of competition in today's elite sport, it is unremarkable that many athletes have to be continually supervised by experienced coaches in order to prioritize the hard training regime required to succeed in top-level sport. According to Carlson and Engström (1986), Carlson (1991), and Jowett and Wyllemann (2006) a close and personal relationship and positive support from expert coaches over time is indispensable in order to maintain inner motivation to meet the required training and competition demands of specific sport events. Coaching in team sports represents an equally challenging problem for the indifferent coach (Carron, 1986; Gilbert & Trudel, 2004). In team sports the coaches must rely on his/her competency and coaching experience when building motivation and psycho-social well-being in athletes (Horn, 2008).

The results from the present study show that coaches in team sports reported a more autocratic leadership style than coaches in individual sports. This may be due to the greater demands related to organizing different groups of players in a team and in developing team cohesion and the specific skills of individual players (Carron, 1986). In team sports, the interaction of the players and their individual uniqueness and skills differ from player to player. This means that the coaches should vary behaviors related to different team members (Hersey & Blanchard, 1982). Furthermore, club structure, traditions, status, expectancy and organization of the teams is usually quite different than in individual sport. Chelladurai and Saleh's (1980) research on preferred leadership behavior in team sport suggests that behavior is dictated by member's preferences (athlete's attitudes). Hence, coaches of male athletes (typically male coaches) would differ from coaches of female athletes (typically female coaches). On an international level, however, success in team sport is known to

have been obtained by coaches representing a comprehensive leadership style (Gilbert & Trudel, 2004). Whether a particular coach prefers democratic or autocratic leadership behavior, however, is likely to be a function of his/her coaching philosophy, dedication and personality (Smith & Smoll, 2007).

In individual sports, leadership behavior is usually more democratic, focusing on the development of deliberate practice routines, inner motivation, autonomy, and individual performance outcome (Baker, Côté, & Abernethy, 2003; Bloom, 1985; Ericsson, 1996). The daily communication, commitment and co-operation with a personal coach (closeness) and frequent contact with other expert coaches, doctors, physical therapists and masseurs (complementarities) will be important to be aware of (Enoksen, 2011), so that various measures and attempts to find solutions are tried out and processed in developing an athlete's potential in sport.

Conclusion and practical implications

The present study confirms that the combination of qualitative and quantitative data contributes to a better evaluation and understanding of coaches' perceptions of their actual leadership behavior and their relationship to their athletes. It further demonstrates that a balance between the demands imposed by the situation and the athlete's preferences, attended to the athlete's personal needs, educational progress, work situation and social welfare, and having the proper training and instruction behavior, can contribute to a better balance in the coach–athlete relationship.

In line with previous research, this study indicates that coaches' most frequent self-reported behavioral components are (1) positive feedback; (2) training and instruction; and (3) democratic behavior. The study further revealed a positive correlation between coaches' commitment and training and instruction, positive feedback and a socially supportive behavioral climate. Moreover, complementarity was positively related to training and instruction behavior.

The study demonstrates that coach education and experience could significantly influence the coach–athlete relationship and provide a positive training environment. However, the present study also indicates that coaching leadership behavior and style is related to the type of sport (team sport vs. individual sport). A significant difference was found be-

tween top coaches in Denmark and Sweden with regards to commitment and complementarity, and more experienced coaches used significantly more training and instruction and social support than did less experienced coaches. Coaches in team sports reported more autocratic and less democratic behavior than coaches in individual sports.

Only coaches' perspectives were investigated, which must be considered a limiting factor in providing a complete picture of such a complex and interwoven phenomenon as the coach–athlete relationship. Therefore, to achieve a better description and understanding of the nature of the coach–athlete relationship, future research should investigate coach–athlete relationship from the athlete perspective, thus providing a comprehensive evaluation of the coach–athlete relationship.

Since situational behavior is not present in the Leadership Scale of Sport, longitudinal or prospective studies are warranted in the future to determine the role of the coaches' behavior in predicting changes in athletes' perceptions of the relationship quality and well-being.

Finally, this study makes a modest but important contribution to the literature of sport coaching by highlighting important aspects of Scandinavian coaches' perceptions of their behavior and the coach–athlete relationship. Future research should focus on predictors, processes and consequences of the coach–athlete relationship and their impact on individual characteristics (e.g., gender, age and talent potential) as well as different contextual settings (national cultures, different teams and individual sports) in order to gain a better understanding of coaches' behavior and the coach–athlete relationship.

References

Annerstedt, C. (2006). *Framgångsrikt ledarskap inom elitidrott* [Successful leadership in elite sport]. Institutionen för pedagogik och didaktik, Göteborgs universitet.

Augustini, M., & Trabal P. (1999). A case study of withdrawal from French Boxing. *International Review for the Sociology of Sport, 34*, 69-74.

Baker, J., Côte, J., & Abernethy, B. (2003). Sport specific training, deliberate practice and the development of expertise in team ball sports. *Journal of Applied Sport Psychology, 15*, 12-25.

Bandura, A. (1986). *Social foundation of thought and action. A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Bloom, B. S. (1985). *Developing talent in the young people*. New York: Ballantine Books;.

Bloom, G. A., Durant-Bush, N., & Salmela, J. H. (1997). Pre- and post-competition routines of expert coaches of team sports. *The Sport Psychologist, 11*, 127-141.

Böhlke, N., & Robinson, L. A. (2009). Benchmarking of elite sport systems. *Management Decision-, 47*, 67-84.

Carlson, R. (1991). *Vägen till landslaget: En retrospektiv studie av framgångsrika ungdomar i sju idrotter* [The road to the national team. A retrospective study of a group of promising young talents in seven different sports]. Stockholm: Högskolan för lärarutbildning

Carlson, R., & Engström, L. M. (1986). *80-talets svenska tennisunder. En analys av spelarnas bakgrund och utveckling* [The Swedish tennis success in the eigthies. An analysis of the players background and development]. Stockholm: Högskolan för lärarutbildning.

Carron, A. V. (1986). The sport team as an effective group. In J. M. Williams (Ed.), *Applied sport psychology* (pp. 75-88). Palo Alto: Mayfield Publishing.

Chelladurai, P. (1984). Leadership in sport. In J. M. Silva, & R. S. Weinberg (Eds. *Psychological foundations of sport* (pp. 329-339). Champaign Ill: Human Kinetics.

Chelladurai, P. (1990). Leadership in sport. A review. *International Journal of Sport Psychology*, *21*, 328-354.

Chelladurai, P. (1993). Leadership. In R. N. Singer, M. Murphey, & L. K. Tennant (Eds.), *Handbook of research on sport psychology* (pp. 647-672). New York: Macmillan.

Chelladurai, P., & Reimer, H. A. (1998). Measurement of leadership in sport. In J. Duda (Ed.), *Advances in sport and exercise psychology measurement* (pp. 227-253). Morgantown WV: Fitness Information Technology.

Chelladurai, P., Imamura, H., Yamaguchi, Y., Oinuma, Y., & Miyauchi, T. (2001). Sport Leadership ina Cross-National Setting. The Case of Japanese and Canadian University Athletes. *Journal of Sport and Exercise Psychology,10*, 374-389.

Chelladurai, P., & Saleh, D. S. (1980). Dimensions of leader behavior in sports: Development of a Leadership style. *Journal of sport psychology*, *2*, 34-35.

Côté, J. (1998). Coaching research and intervention. An introduction to the special issue. *Coaching Research, Special issue., 4*(3)*, 1-15.*

Deci, E. L., & Ryan, R. M. (1985). M*otivation and self determination in human behaviour*. New York: Plenum Press.

Enoksen, E. (2011). Drop-out rate and Drop-out Reasons among promising Norwegian Track and Field Athletes. A 25 Year Study. *Scandinavian Sport Studies Forum, 2*, 19-43.

Ericsson, K. A. (1996). The acquisition of expert performance: An introduction to some of the issues. In K. A. Ericsson (Ed.), *The road to excellence: The acquisition of expert performance in the arts and sciences, sport and games* (pp. 1-50). Mahwah, NJ: Lawrence Erlbaum.

Fahlström, P. G. (2001). *Ishockeycoacher: en studie om rekrytering, arbete och ledarstil.* [Ishockey coaches. A study of recruitment and leadership]. Umeå: Pedagogiska Institutonen.

Fiske, S. T. (1993). Controlling other people: the impact of power on stereotyping. *American psychologist*, *48*, 621-628.

Gilbert, W. D., & Trudel, P. (2004). Analysis of coaching science research published from 1970–2001. *Research Quarterly for Exercise and Sport*, *75*, 388-399.

Gould, D., Hodge, K., Peterson, K., & Giannini, J. (1989). An exploratory examination of strategies used by elite coaches to enhance self-efficacy in athletes. *Journal of Sport and Exercise Psychology, 11*, 128-140.

Hellstedt, J. C. (1995). Invisible players. A family system model. In S. M. Murphy-(Ed.), *Sport psychology interventions* (pp. 117-146). Champaign Ill: Human Kinetics.

Hersey, P., & Blanchard, K. H. (1982). *Management of Organizational Behavior. Utilizing Human Resources*. New Jersey: Prentice-Hall.

Horn, T. S. (2008). Coaching effectiveness in the sport domain. In T. S. Horn (Ed.), *Advances in Sport Psychology* 3rd ed. (pp.239-263). Champaign Ill: Human Kinetics.

Høigaard, R, Jones, G, W., & Peters, D. M. (2008). Preferred Coach Leadership Behaviour in. Elite Soccer in Relation to Success and Failure. *International Journal of Sports Science & Coaching, 3*, 241-250.

Isberg, L. (1992). *Varför slutade det så illa? En analys av elitcoaches arbetsvillkor*. [Why did it stop so badly. An analysis of the working dispositions of an elite coach]. *Pedagogisk forskning i Uppsala*, nr.105.

Johansen, B. T., & Svela, A. E. (2009).The Meeting in A Successfully Coach–athlete Relationship. *Proceedings of 14th European College of Sport Science Congress*; 24-27 June, Oslo, Norway.

Jones, R. L., Armour, K. M., & Potrac, P. (2003). Constructing expert knowledge: A case study of a top- level professional soccer coach. *Journal of Sport, Education and Society, 8*, 213-229.

Jones, R. L., Armour, K. M., & Potrac, P. (2004). *Sport coaching cultures. From practise to theory*. London: Routledge.

Jowett, S. (2008). What makes coaches tick. The influence of coaches' intrinsic and extrinsic motives on satisfaction. *Scandinavian Journal of sport Medicine and Science in Sport, 18*, 664-673.

Jowett, S. (2007). Expanding the interpersonal dimensions of closeness in the coach–athlete relationship. A commentary. *International Journal of Sport Science and Coaching, 2*, 513-517.

Jowett, S., & Wyllemann, P. (2006). Interpersonal relationships in sport. Crossing the chasm. *Psychology in Sport and Exercise, 7*, 119-123.

Jowett, S., & Ntoumanis, N. (2004). The coach–athlete Relationships Questionairre (CART- Q) development and initial validation. *International Journal of sport Psychology, 34*, 101-134.

Jowett, S., & Cockerill, I. (2003). Olympic medallists' perspective of the athlete-coach relationship. *Psychology of Sports and Exercise, 4*, 313-331.

Lafrenière, M. A. K., Jowett, S., Vallerand, R. J., & Carbonneau, N. (2011). Passion for coaching and the quality of the coach–athlete relationship: The mediating role of coaching behaviors. *Psychology of Sport and Exercise, 12*, 144-152.

Lorimer, R., & Jowett, S. (2010). Feedback of information in the empathetic accuracy of sport coaches. *Psychology of Sport and Exercise, 11*, 12-17.

Lyle J. (1999). Coaching philosophy and coaching behaviour. In N. Cross, & J. Lyle (Eds.), *The coaching process. Principles and practice for sport* (pp. 25-46). Oxford: Butterworth-Heinemann.

Molinero, O., Salguero, A., Tuero, C., Alvarez, E., & Marques, S. (2006). Reasons in young Spanish athletes: Relationships to gender, type of sport and level of competition. *Journal of Sport Behavior, 29*, 255-269.

Pensgaard, A. M, & Roberts, G. (2002). Elite athletes' experiences of the motivation climate. The coach matters. *The Scandinavian Journal of Medicine and Sport,12*, 54-59.

Poczwardowski, A., Barott, J. E., & Jowett, S. (2006). Diversing approaches to research on athlete-coach relationship. *Psychology of Sport and Exercise,7*,125-142.

Sarrazin, P., Vallerand, E., Guillet, E., Pelletier, L., & Cury, F. (2002). Motivation and dropout in female handballers: a 21-month prospective study. *European Journal of Social Psychology, 32*, 395-418.

Smith, R. E., & Smoll, F. L. (2007). Social-cognitive approach to coaching behaviors. In S. Jowett, & D. Lavallee (Eds.), *Social Psychology in Sport* (pp. 75-90). Champaign IL: Human Kinetics.

Sullivan, J., & Hodge, K. P. (1991). A survey of coaches and athletes about sport psychology in New Zealand. *The Sport Psychologist, 5*, 140-151.

Trudel, P., & Gilbert, W. (1995). Research on coaches' behaviour. Looking beyond the refereed journals. *Avante, 11*, 94-104.